

**Vol. 12, 2023/2 No. 24**

**Multidisciplinary  
Journal of  
School Education**

**Communication and Social Change**

**Thematic Editor**

Aneta M. Kochanowicz

**Language Editor**

Eric Hilton





## **Multidisciplinary Journal of School Education**

Multidisciplinary Journal of School Education is a biannual scholarly journal co-edited by the Ignatianum University in Cracow and the Abat Oliba CEU University in Barcelona

Ignatianum University in Cracow  
Abat Oliba CEU University in Barcelona



*Universitat  
Abat Oliba CEU*

### **Editors in Chief**

Paweł Kaźmierczak – Ignatianum University in Cracow (Poland)  
Marcin Kaźmierczak – Abat Oliba CEU University, Barcelona (Spain)

### **Deputy Editor**

Dominika Ruszkiewicz – Ignatianum University in Cracow (Poland)

### **Secretary of Editorial Board**

Ewa Dybowska – Ignatianum University in Cracow (Poland)

### **Editorial Board**

Jarosław Charchuła – Ignatianum University in Cracow (Poland)  
Renata Jasnos – Ignatianum University in Cracow (Poland)  
Aneta Kamińska – Ignatianum University in Cracow (Poland)  
Aneta Kochanowicz – WSB University, Dąbrowa Górnicza (Poland)  
Joanna Łukasiewicz-Wieleba – The Maria Grzegorzewska University, Warsaw (Poland)  
Irena Pulak – Ignatianum University in Cracow (Poland)  
Olena Protsenko – Ignatianum University in Cracow (Poland)  
Irmína Rostek – Ignatianum University in Cracow (Poland)  
Katarzyna Szewczuk – Ignatianum University in Cracow (Poland)

### **International Scientific Board**

Stefano Abbate – Abat Oliba CEU University, Barcelona (Spain)  
Irena Adamek – University of Bielsko-Biala (Poland)  
Josu Ahedo – International University of La Rioja (Spain)  
Beáta Akimjaková – Catholic University in Ružomberok (Slovakia)  
Varinthorn Boonying – Naresuan University (Thailand)  
David Carr – University of Edinburgh (United Kingdom)  
Cintia Carreira Zafra – Abat Oliba CEU University, Barcelona (Spain)  
Iwona Czaja-Chudyba – Pedagogical University of Krakow (Poland)  
Inger Enkvist – Lund University (Sweden)  
Marina Fernández Andújar – Abat Oliba CEU University, Barcelona (Spain)  
Stanisław Gałkowski – Ignatianum University in Cracow (Poland)  
Arturo González de León – Abat Oliba CEU University, Barcelona (Spain)  
Ján Gunčaga – Comenius University in Bratislava (Slovakia)  
Walter Van Herck – University of Antwerp (Belgium)  
Beatriz Hoster Cabo – University of Seville (Spain)  
Galena Ivanova – Plovdiv University Paisii Hilendarski (Bulgaria)  
Elżbieta Jaszczyszyn – University of Białystok (Poland)

Jolanta Karbowniczek – Ignatianum University in Cracow (Poland)  
Attila B. Kis – Szent István University (Hungary)  
Anna Klim-Klimaszewska – Siedlce University of Natural Sciences and Humanities (Poland)  
Imre Lipcsei – Szent István University (Hungary)  
Enrique Martínez – Abat Oliba CEU University, Barcelona (Spain)  
Jorge Martínez – Abat Oliba CEU University, Barcelona (Spain)  
Bożena Muchacka – Pedagogical University of Krakow (Poland)  
Ivana Rochovská – Matej Bel University, Banská Bystrica (Slovakia)  
Rafael Rodríguez-Ponga Salamanca – Abat Oliba CEU University, Barcelona (Spain)  
María Teresa Signes – Abat Oliba CEU University, Barcelona (Spain)  
Eva Šmelová – Palacký University Olomouc (Czech Republic)  
Dariusz Stępkowski – Cardinal Stefan Wyszyński University in Warsaw (Poland)  
Władysław Szulakiewicz – Nicolaus Copernicus University in Toruń (Poland)  
Bogusław Śliwerski – University of Łódź (Poland)  
Conrad Vilanou – University of Barcelona (Spain)

#### **Editorial address**

The main seat of the editorial board is placed at Ignatianum University in Cracow (Poland)

#### **Contact:**

Editorial Board of the Multidisciplinary Journal of School Education  
Ignatianum University in Cracow  
ul. Mikołaja Kopernika 26  
31-501 Kraków, Poland

<https://czasopisma.ignatianum.edu.pl/jpe>

**e-mail:** [journal@ignatianum.edu.pl](mailto:journal@ignatianum.edu.pl)

**ISSN** 2543-7585

**e-ISSN** 2543-8409

The journal is supported by funds from the Ministry of Education and Science under the program “Development of Scientific Journals” – Contract No RCN/SN/0393/2021/1



Ministry of Education and Science  
Republic of Poland

---

#### **Cover Design & Layout**

Lesław Sławiński – PHOTO DESIGN

#### **Typesetting**

Piotr Druciarek

*Multidisciplinary Journal of School Education* is published semi-annually.

The original version is the electronic version.

Articles in the *Multidisciplinary Journal of School Education* are available under a license Creative Commons Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0)

Anti-plagiarism policy: all articles have been checked for originality with iThenticate.

Information for Authors and Reviewers: <https://czasopisma.ignatianum.edu.pl/jpe>

Print run of 45 copies

# Table of Contents

---

<b>Editorial</b> .....	9
------------------------	---

## **Thematic Articles**

Shu-Nu Chang Rundgren <i>Demonstrating Didactic Models for ESD and Bildung in School Education</i> .....	15
Teresa Parczewska, Justyna Sala-Suszyńska, Ewa Sosnowska-Bielicz <i>Assessment of the Quality of Education and Care in Selected Polish Preschools During the COVID-19 Pandemic Using the ECERS-E Scale</i> .....	33
Marta Wiatr <i>Contexts of Extraordinary Parental Involvement in Children's Education During the First Wave of COVID-19: A Case Study of a Public Elementary School in Poland</i> .....	57
Anna Kwaterra, Mariusz Dzięglewski <i>Implementation of the Good Behavior Game in Polish Elementary Schools Under COVID-19 Restrictions</i> .....	79
Magdalena Kolber <i>Learned Helplessness of Secondary-School Students Learning English During Covid-19 Distance Education: a Research Report</i> .....	105
Lucián Líviusz Olteanu <i>The Adaptation of the Career Decision-Making Difficulties Questionnaire (CDDQ) to a Sample of Hungarian Secondary-School Students</i> .....	125
Jacek Pyżalski, Natalia Walter, Agnieszka Iwanicka <i>Understanding Age-Related Differences in the Development of Digital Communication and Information Skills in Polish Adolescents</i> .....	145

Aleksandra Błachnio, Ryszarda Cierzniewska, Hasan Mosazadeh, Zofia Szarota <i>Measurement and Pedagogical Diagnosis of Phonoholism Among Adolescents</i> .....	165
Estera Twardowska-Staszek, Izabela Zych <i>Social and Emotional Competencies of Polish Pupils: Psychometric Properties of the Polish Version of the Social and Emotional Competencies Questionnaire (SEC-Q)</i> .....	187
Agnieszka Weiner <i>Ontological (In)Security - Art Students' Experience of Agency in the Educational Reality During the Pandemic</i> .....	203
Agata Cudowska <i>School in the Cultural Discourse of Real Virtuality</i> .....	223
Alina Dworak, Agata Rzymelka-Fraćkiewicz, Teresa Wilk <i>Does Today's School/Education Respond to Society's Needs and Expectations of Reality and the Future?</i> .....	243
Tamara Cierpiałowska <i>Action Research as a Path to Change in the Teaching/Learning Process</i> .....	257
Dallel Sarnou, Hanane Sarnou <i>Teaching Algerian Third-Year Elementary-School Pupils English Vocabulary Through Songs: An Effective Instructional Tool to Enliven English Classes</i> .....	277
Benjamin Eni-itan 'F. Afolabi, Tolulope Aduke Falusi <i>Skits and Comic Illustrations: Means of Transmedia Storytelling and a Platform for Social Change through Healthy Learning</i> .....	297

## Miscellaneous Articles

Krzysztof Gerc, Jean M. Novak, Marta Furman <i>Functioning of the Family System With an Autistic Child: A Com- parative Study Between Poland and California, USA</i> .....	321
Monika Adamczyk, Piotr Majewicz, Jakub Wolny <i>Supporting the Development of Competences Necessary for the Independent Living of People With Profound Disorders of Intellectual Development: An Empirical Study</i> .....	357

Ewelina Sobocha, Małgorzata Pietrzak <i>Contemporary Educational Space for University Students and Young People With Intellectual Disabilities: Integration Through Social Interaction</i> .....	377
Martyna Szczotka, Katarzyna Szewczuk <i>Outdoor Education in the Perception of Polish Preschool Teachers: A Focus Group Study</i> .....	395
Ewa Piwowarska, Jolanta Karbowniczek, Urszula Ordon <i>Early Childhood Education Teachers' Encounters With Art Presented in Museums and Galleries: Selected Aspects</i> .....	419
Agnieszka Szymańska, Joanna Świdarska <i>Childhood Experiences and Needs: Parental Goals, Mistakes, and Personality Traits and Their Adult Daughters' Ability to Meet Their Needs</i> .....	437





## Editorial

(pp. 9–11)

---

In the realm of communication studies, the exploration of persuasive discourse and the dynamics of societal change have been deeply rooted in the works of eminent scholars across different epochs. Aristotle, a towering figure in ancient Greek philosophy, laid the foundation for understanding communication in his seminal work *Rhetoric* during the 4th century B.C. His insights into persuasive communication have endured through the centuries, leaving an indelible mark on the study of rhetoric and discourse.

Fast forward to the contemporary landscape, where the German sociologist and philosopher Jürgen Habermas made a profound impact with his extensive research on the theory of communicative action and the concept of communicative rationality. Habermas's influential work – particularly his magnum opus from 1981, *The Theory of Communicative Action* – resonates across the fields of sociology, philosophy, and communication studies. His ideas about communicative action, ideal speech situations, and the public sphere have not only shaped academic discourse, but have also played a pivotal role in discussions surrounding the role of communication in building and sustaining democratic societies.

Against the backdrop of societal changes in education, this issue delves into the pivotal role of communication in shaping, implementing, and responding to transformations within the education system. Education, as both a reflection and driver of societal values and norms, undergoes continual evolution – be it through policy shifts, technological advancements, cultural transformations, or changes in teaching pedagogy. Effective communication emerges as the linchpin, ensuring that all stakeholders are not only informed, but also actively engaged in and supportive of the educational metamorphosis that is underway.

In the articles presented in this issue, researchers explore communication in the context of societal change, emphasizing the exchange of information, ideas, thoughts, and emotions among individuals and groups

---

in society. Communication emerges as a dynamic force influencing social dynamics, behaviors, and attitudes – an essential mechanism through which societal transformations manifest.

Understanding the pivotal role of communication in societal change is paramount for navigating and adapting to the evolving nature of societies. Effective communication facilitates positive change and promotes inclusion, contributing to the overall well-being of communities. It is imperative, however, to recognize the dual nature of communication: it can catalyze a positive transformation or be a source of conflict and resistance, underscoring the intricacies of social interactions.

As the articles in this issue elucidate, communication strategies that foster student engagement and participation are integral to effective learning. The landscape of education is witnessing a shift toward student-centered approaches, project-based learning, and collaborative activities. Clear, open communication is instrumental in ensuring that students comprehend the rationale behind these changes, which fosters their active participation. Moreover, establishing effective communication channels between parents and teachers becomes pivotal for cultivating a supportive learning environment.

The unprecedented challenges posed by the COVID-19 pandemic have accelerated societal changes in education, compelling a re-evaluation of teaching and learning methodologies. Technological advancements, particularly in communication tools and platforms, are reshaping the educational landscape. Online learning, collaborative projects, and information dissemination have become integral components of education, emphasizing the need for flexibility and adaptability in the face of uncertainty.

The globalization of education stands as a significant societal change, fostering increased collaboration and the exchange of ideas on a global scale. Communication emerges as a key facilitator in connecting educational institutions worldwide, promoting the sharing of best practices and preparing students to be global citizens. In an era of growing diversity, cultural competence and inclusivity in education are emphasized, with communication playing a vital role in fostering understanding and respect among individuals from various cultural backgrounds.

Inspired, perhaps, by Habermas, the authors of the articles in this issue delve into the concept of the public sphere: a space where citizens engage in rational-critical discourse on societal problems. The “ideal speech situation,” as introduced by Habermas, represents conditions where communication is free, open, and uninhibited. This ideal scenario allows participants equal opportunities to express their views, with all relevant information being available and no external factors hindering the communication process.

Effective communication, as discussed by the authors, catalyzes community engagement. It informs the members of the community about educational goals, achievements, and challenges, providing a platform for community input and collaboration in shaping the educational landscape. Educational institutions, integral parts of communities, hold the potential to positively and significantly influence societal change.

In essence, this issue explores the intricate interplay between communication and societal change in education, recognizing communication as a dynamic force that not only reflects, but also shapes the evolving landscape of education systems within diverse and dynamic societies.

*Aneta M. Kochanowicz*



## Thematic Articles

---





**Shu-Nu Chang Rundgren**

<https://orcid.org/0000-0002-9521-1737>

Stockholm University, Sweden

[shu-nu.chang-rundgren@edu.su.se](mailto:shu-nu.chang-rundgren@edu.su.se)

## Demonstrating Didactic Models for ESD and Bildung in School Education

(pp. 15–31)

Suggested citation: Chang Rundgren, S.-N. (2023). Demonstrating Didactic Models for ESD and Bildung in School Education. *Multidisciplinary Journal of School Education*, 12(2(24), 15–31. <https://doi.org/10.35765/mjse.2023.1224.01>

### Abstract

**Objective of the article:** The aim of this article is to synthesise the findings of relevant research articles and to demonstrate several “didactic models” of education for sustainable development (ESD) in school education.

**Research method:** The method of narrative literature review was used to identify didactic models for ESD in school education.

**A short description of the context of the presented issue:** The term *didactic* refers to the professional scholarship of teaching. In recent decades, the need to develop didactic models that would support school teaching and to allow for this adjustment in new teaching contexts has been addressed. Research has shown that school subject teachers work differently with ESD. It demands holism and pluralism, which requires embracing multiple stakeholders and communities, and a multi-disciplinary approach. Shedding light on achieving sustainability with its holist and pluralist features, this article analyses relevant research articles and demonstrates several “didactic models” for ESD in school education.

**Conclusions and recommendations:** I propose socioscientific issues-based teaching and learning (SSI-TL) as a useful didactic model for ESD and argue for the need to embrace didactic models like SSI-TL in teacher professional

development for both pre- and in-service teachers. The article explicitly considers the value of applying Communities of Practice as a theory to guide educational practices and research on education for sustainability in school science. The implications of applying the didactic models presented in the article are relevant not only for ESD, but also for students' development of *Bildung* to become reflective and responsible citizens.

**Keywords:** didactic model, socioscientific issue-based teaching and learning, education for sustainable development (ESD), school science, *Bildung*, teacher professional development

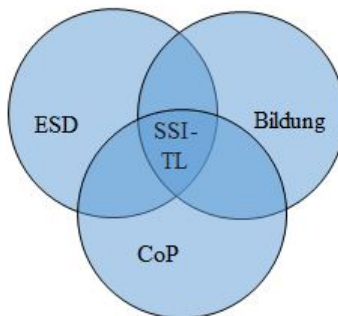
## Introduction

Globally, education for sustainable development (ESD) has increasingly been recognised since the Decade of Education for Sustainable Development (DESD) from 2005 to 2014; teachers' crucial role in ESD to ensure the sustainability of our world has also been addressed (Bourn et al., 2017; Montebon, 2018; UNESCO, 2014, 2020). In line with ESD, there are ongoing discussions about how to integrate ESD into science education programmes and science teacher education to grow responsible citizens for a sustainable future (e.g. Feldman & Nation, 2015; Stratton et al., 2015). It has been suggested that school education in the 21st century should embrace a broader perspective in order to prepare citizens to understand the various components of sustainability – including social, environmental and economic aspects – and to enable them to make social, political and environmental decisions for themselves and their communities (Feldman & Nation, 2015). All the above-mentioned ESD and 21st-century science education initiatives are embraced in Hodson's (2003) notion of "critical scientific literacy" (CSL) or Vision III of scientific literacy, which discusses scientific engagement and sociopolitical action (Sjöström & Eilks, 2021). Based on the importance and complexity of ESD, the need to develop didactic models has been recognised (Dudas et al., 2023; Herranen et al., 2021) so as to allow for the implementation of teaching



designs and analyses in new teaching contexts for sustainability. However, the existing didactic models have their limitations. Thus, the aim of this article is to synthesise the findings of relevant research articles as the basis for demonstrating several didactic models for ESD in school science. In particular, the didactic models which embrace multiple stakeholders and communities and follow a multi-disciplinary approach have been addressed by UNESCO (2014, 2020). This paper further proposes using Communities of Practice (CoP; Wenger, 1998) as a theory to guide ESD educational practices and research in science education. I identify and delineate several didactic models at various school levels, from preschool to upper secondary, and I discuss how CoP can be used to guide educational practice and research in school science for ESD. The implications of the article are relevant not only for the sustainability of the world, but also for students' development of *Bildung*, a well-established philosophical/spiritual tradition in continental Europe which addresses the need to develop citizens to take reflective and responsible action in and with society in multiple dimensions (Herranen et al., 2021, p. 2). A framework for socioscientific issues teaching and learning (SSI-TL) that incorporates futures thinking as an ESD didactic model with CoP and *Bildung* is delineated in Figure 1.

**Figure 1. The SSI-TL framework presented in this paper**



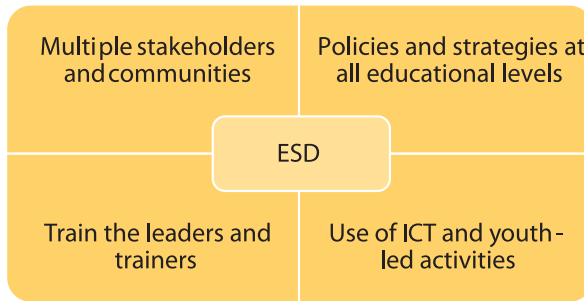
## The roadmap for ESD implementation after DESD

Synthesising the findings in the relevant literature, I found what the UNESCO (2014) Global Action Programme since the DESD has suggested as a roadmap to serve as the ESD beacon for science education. The Global Action Programme proposes five priority action areas, including “transforming learning and training environments by integrating sustainability principles into education and training settings”, “building capacities of educators and trainers to more effectively deliver ESD”, “accelerating sustainable solutions at local level by scaling up multi-stakeholder ESD networks”, “advancing policy” and “empowering and mobilizing youth” (p. 15). Teaching strategies are part of teacher professional development (Shuman, 1986, 1987), so there is no doubt that teachers need to learn teaching strategies for ESD. How these five priority action areas are embraced in school education becomes important for the future direction of ESD and *Bildung*, and it is important to provide didactic models with concrete examples of practice.

Embracing these five priority action areas, four guiding principles (Figure 2) have been recognised for the development of educational practices and research on ESD with the questions of what, why and how.

1. Multiple stakeholders and communities: increasing multi-stakeholder networks in local communities to accelerate sustainable solutions at the local level and expanding multi-stakeholder networks in national and international communities
2. Policies and strategies at all educational levels: integrating ESD into policy at all levels, from school to higher education, as well as organisations and national policies and strategies
3. Train the leaders and trainers: equipping leaders, educators and trainers with the necessary knowledge, skills, attitudes and values of ESD via training programmes
4. The use of ICT and youth-led activities: empowering and mobilising youth via information and communication technology (ICT) and more youth-led ESD activities

**Figure 2. The four guiding principles for ESD practices and research**



To what degree has school education embraced these four principles for ESD since 2015 and the DESD? Since the UN Conference on the Human Environment in Stockholm in 1972, sustainable development has been strongly linked to environmental education (Cars & West, 2015). Since 1990, social aspects of sustainable development, such as human rights, multi-culturalism and gender equity, have emerged (Tanaka, 2017). But how have the social aspects of ESD been presented in school education to date? Based on the four principles (Figure 2), two types of didactic models (theme-based and SSI-based) were identified for ESD.

"It is important to know what has been done after DESD, which is from 2005-2014", so I write " after DESD since 2015".

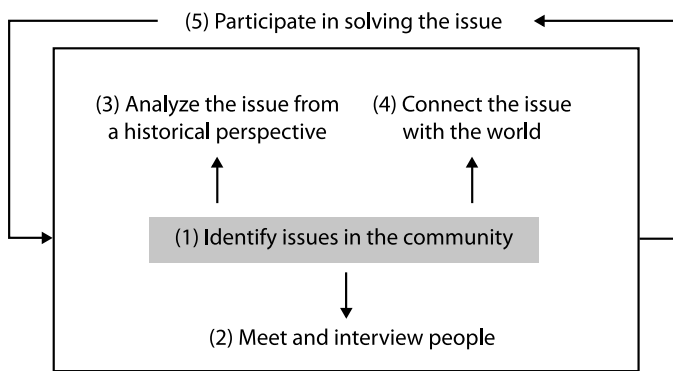
### **Theme-based didactic models**

Perusal of the literature revealed that most school science was linked to environmental education and subjects related to the natural sciences. This resonates with the way that sustainable development was discussed in the past, with a strong focus on environmental education (Cars & West, 2015; Tanaka, 2017). However, some teaching approaches which embrace a multi-disciplinary approach were found.

In the Japanese context, Tanaka (2017) mentions the Development Education Association and Resource Center's (DEAR) primary education

curricula for ESD from 2000 and 2010. The DEAR curriculum 2000 focused on teaching global issues and participatory learning (like photo language and role-play) via “12 thematic curricula: food, culture, environment, trade, literacy, refugees, international cooperation, foreign people in Japan, etc.” (Tanaka, 2017, p. 23). Later, the DEAR curriculum of 2010 was proposed to focus on local issues and their relationship to global issues (Figure 3).

**Figure 3. The DEAR ESD Curriculum of 2010 (Tanaka, 2017, p. 24)**



In a Chinese kindergarten with a science education profile in Hongqiao (Wong et al., 2019), an action research model (with two cycles of planning, action, observation and reflection) was adopted to implement ESD with 10 teachers. The objectives of ESD for children – covering the three domains of environment, economy and sociocultural issues – were applied (see Table 1). Taking children’s life experiences into account, they found that “garbage”, “water” and “recycling” (linked to the environment and economy domains) were easy for them to implement in ESD, since the themes fit within “traditional science education”, whereas the social justice and sociocultural domains were new and required additional teacher training (Wong et al., 2019). Visual representations like videos were used to stimulate children’s participation in ESD activities, but it was found that the participating teachers struggled to match their teaching strategies with ESD objectives and children’s development while implementing ESD in kindergarten (Wong et al., 2019).

**Table 1. The Objectives in Wong et al.'s Action Research Study (2019, p. 502)**

Domain	Objective
Environment	To be familiar with the surrounding environment and having knowledge of relevant resources in the environment. To know that some resources are recyclable and it is important to protect natural resources. To know not to do things that may affect others' quality of life now or in the future. To be able to support the sustainable development of the environment.
Economy	To understand that the production, use, and discarding of goods and services can be reduced. To understand the impact of public facilities on people's lives. To practice lifestyles and distribute concepts that support sustainable consumption during educational activities or in daily life.
Social-cultural	To understand local and other cultures. To be able to enjoy different cultures. To be able to make friends with children from different places, enjoy participating in activities, and experience the joy of living together.

From the above-mentioned two examples of theme-based teaching strategies, themes covering all three pillars (ecology, economy and sociology) of ESD were developed and applied in primary schools and preschools. However, it took longer to implement all the themes, which tackle only one pillar at a time and are not integrated. The issues requiring more research are how children react to the themes and whether children's ESD concept remains unintegrated. Teachers also found it challenging to devise themes to match ESD from their own experiences and children's development. Connecting multiple stakeholders and communities as well as ICT and youth-led activities proved tricky at the preschool level. These issues require further resolution through teacher training.

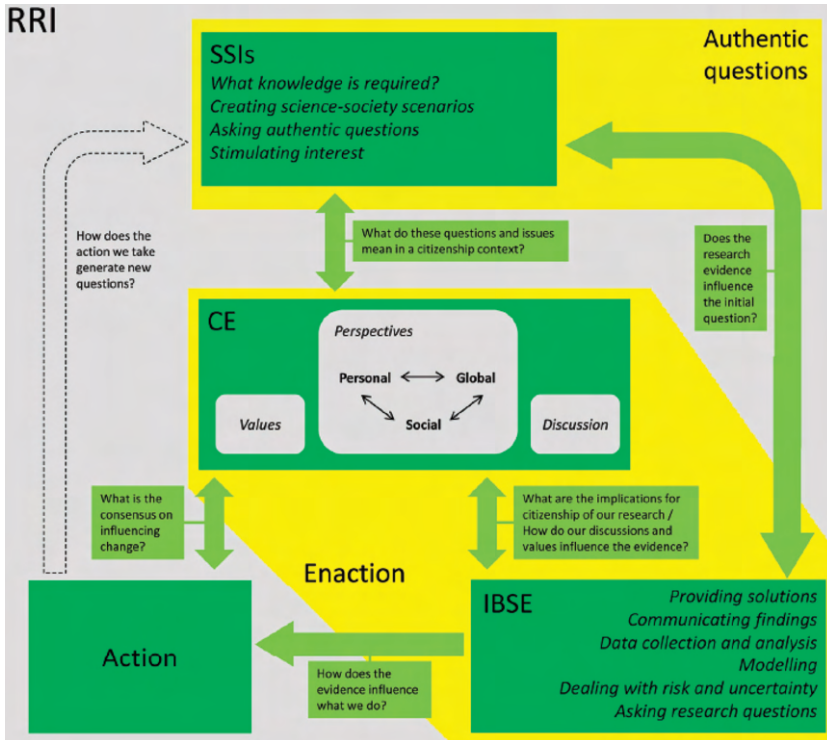
### **SSI-based didactic models**

Controversial issues concerning the complex interrelationship between science, technology and society are termed socioscientific issues (SSI; Patronis et al., 1999; Zeidler et al., 2002). Examples of SSI can be found in the topics of climate change, consumption, nuclear power as an energy resource and several issues related to the COVID-19 pandemic, such as the

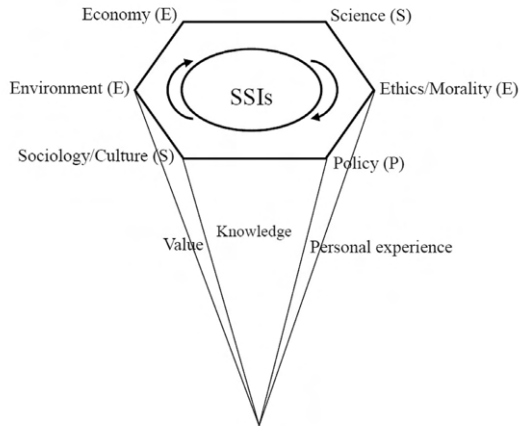
use of quarantine and face masks. Over the past 30 years, SSI-related educational research has become one of the main trends in the field of science education, and many researchers have appreciated the significance of SSI, emphasising the need to design issue-based curricula as part of the school science canon (Chang Rundgren & Rundgren, 2010; Chang Rundgren, 2011; Driver et al., 2000) and for ESD (Levrini et al., 2021). However, just as some teachers were found to be positive about, but ill-prepared to integrate ESD into science lessons, some were also found to be positive about, but ill-prepared for SSI-based teaching (Amos & Levinson, 2019; Rundgren & Chang Rundgren, 2018), even though SSI-based teaching has been embraced within ESD internationally (Amos & Levinson, 2019; Eilks, 2015).

Socioscientific inquiry-based learning (SSIBL) was developed in one EU FP7 project, PARRISE (2014–2017), with 18 partners in 11 European countries. More recently, it has been demonstrated how SSIBL could be engaged with students learning the 2030 Sustainable Development Goals embracing responsible research and innovation (RRI), inquiry-based science education (IBSE), citizenship education (CE), and SSIs (Amos & Levinson, 2019). *Ask–Find Out–Act* is the basis for the teaching and learning sequence of SSIBL (Figure 4). School science teacher training with SSIBL was the focus in the PARRISE project, and the link between SSIBL and curriculum has been used to motivate teachers' engagement in SSIBL workshops (Amos & Levinson, 2019; Rundgren & Chang Rundgren, 2018). However, how SSIBL can contribute to ESD was not explicitly addressed in the PARRISE project, and teachers' understanding of ESD was not explored. While reflecting on the four guiding principles for ESD educational practices and research (Figure 2) since the DESD, multi-stakeholder networks in communities and solutions at the local community level and youth-led activities were not as clearly addressed in SSIBL as they had been in the previously mentioned theme-based model in China (Wong et al., 2019) and Japan (Tanaka, 2017). Even though personal, social, global and stage-of-action perspectives were present, it was challenging to make the link with communities and to have students put their solutions into practice due to time constraints and teachers' limited SSIBL teaching experience (Rundgren & Chang Rundgren, 2018).

**Figure 4. The Detailed SSIBL Model (Amos & Levinson, 2019, p. 31)**



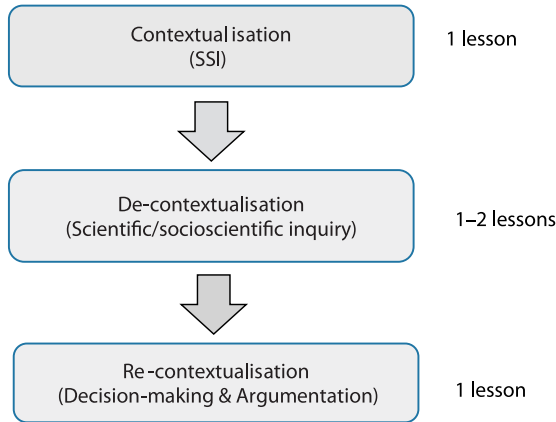
Like SSI-TL, the SEE-SEP model, which was developed in 2010, aimed at teaching and learning SSI and SSI-based argumentation (Chang Rundgren & Rundgren, 2010; Chang Rundgren, 2011). The SEE-SEP model not only stresses the holistic view of SSI, but also gets people to look at SSI separately via the different subject areas of science, economy, ethics/morality, social culture, environment and policy (SEE-SEP) and includes individuals' knowledge, values and experiences (Chang Rundgren & Rundgren, 2010; see Figure 5).

**Figure 5. The SEE-SEP Model (Chang Rundgren & Rundgren, 2010, p. 11)**

In the PARRISE project, the SEE-SEP model was combined with the SSIBL framework for teacher training (Rundgren & Chang Rundgren, 2018). Instead of the *Ask–Find Out–Act* model used by Amos and Levinson (2019), it used an inquiry- and context-based (IC-based) three-step model developed in another EU FP7 project, PROFILES (Walan & Chang Rundgren, 2015). As shown in Figure 6, the IC-based three-step model includes the stages of contextualisation (introducing SSI), de-contextualisation (conducting scientific or socioscientific inquiry) and re-contextualisation (making decisions and argumentation). This teaching activity can be structured as a minimal three-hour activity in a school lesson or a longer one-month course – or even a one-term programme. The IC-based three-step model is feasible in a teaching and learning context (Rundgren et al., 2014; Walan & Chang Rundgren, 2015).

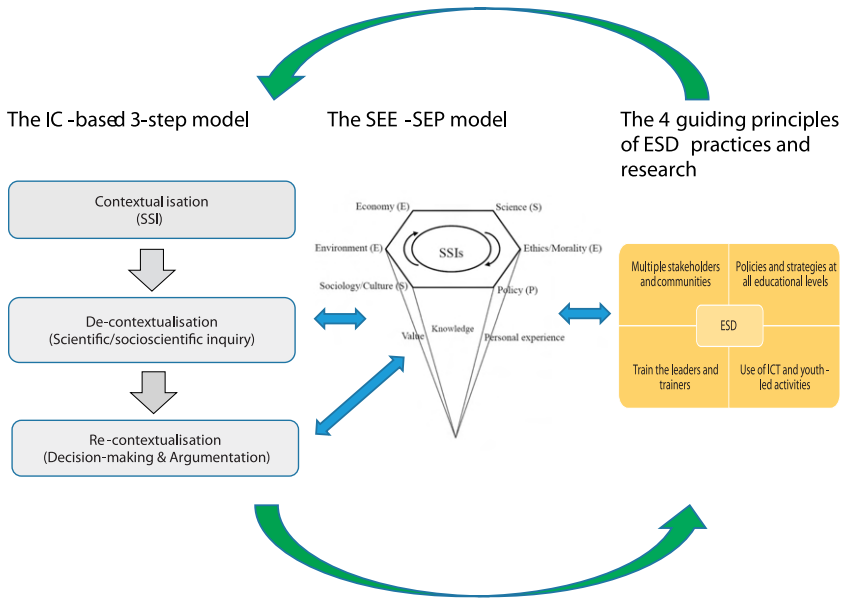


**Figure 6. The IC-Based Three-Step Model**



In my opinion, the second step of de-contextualisation provides many possibilities for inquiry concerning ESD’s three pillars (social, ecological and economical) and the four guiding principles of ESD practices and research (see Figure 2). For example, teachers can use the SEE-SEP model to enable students to find multi-disciplinary, multi-stakeholder and multi-community solutions (based on the SEE-SEP model’s six subject areas of science, economy, ethics/morality, social culture, environment and policy; see Figure 5) by searching the internet and interviewing local, national and international stakeholders. It is certainly possible to apply ICT in this step, for example, by using Zoom or Skype for interviews or searching for viewpoints via social media. Then, in the step of re-contextualisation, ICT, youth-led activities, policy and strategy aspects can be engaged in decisions and solutions, feeding back into Step 1 of the SSI context (Figure 7). Much depends on the available time and how teachers design the SSL-TL activities. The use of the SEE-SEP model has proved feasible in primary through upper secondary school levels and in teacher training workshops (Cebesoy & Chang Rundgren, 2023; Rundgren & Chang Rundgren, 2018). However, more research is needed at the preschool level and in teacher professional development programmes.

**Figure 7. The Integrated Teaching Model for ESD**



**The theory of Communities of Practice for ESD**

Communities of Practice (Wenger, 1998) has been recommended by Sadler (2004) as an appropriate theory for science education in the context of SSI. Here, I advance the use of CoP for ESD through key CoP concepts such as participation and reification, boundary (brokers and boundary object) and locality (local community and global society) (Wenger, 1998). A large quantitative survey of teachers’ teaching practices for ESD (Borg et al., 2012) showed that upper secondary teachers in subject areas such as the physical sciences, social sciences and languages have different teaching strategies for ESD. It was also found in a later qualitative study that science teachers engaged with environmental science-related issues (use of energy, ecology, toxic substances and recycling), while social science and language teachers engaged with issues such as human rights and population, and environmental issues like climate change and recycling (Sund & Gericke, 2020). The same phenomenon was revealed in

preschool teachers (Wong et al., 2019) and primary school teachers (Ak-sland & Chang Rundgren, 2020). Teachers also embraced ESD differently, depending on the subjects they taught: science teachers tended to be more lecture-based, while social science and language teachers used media and ICT more often (Sund & Gericke, 2020). Social science and language teachers' practices were more in line with a holistic view of ESD, suggesting the need for cross-curricula teaching, which could help teachers bridge the divides between school subjects and broker connections by introducing "elements of one practice into another" (Wenger, 1998, p. 105). In addition to the concept of broker as a type of connection, there is boundary object, which includes "artifacts, documents, terms, concepts, and other forms of reification around which communities of practice can organize their interconnection" (Wenger, 1998, p. 105). Here, SSI-TL is regarded as the context for different boundary objects. For example, in the SEE-SEP model (Figure 5), knowledge, values and experiences are seen as important boundary objects that can connect local and international communities as well as diverse school subject "communities". This seems to satisfy the approach of 3M for ESD by involving multi-stakeholder networks, multi-disciplinary approaches and multiple communities (Figure 2). Wenger (1998) also developed the notion of locality, pointing out that "the history of modern times involves a transition from local communities to global societies .... We can develop new ways of participating in the global, but we do not engage with it" (p. 131). This is also an important notion for embracing the concept of creative entrepreneurship for ESD via SSI-TL, even though we might not be able to directly engage with the global context during SSI-TL activities.

## Conclusion and discussions

The literature review revealed that what school science teachers find most challenging is integrating ESD into their lessons (Montebon, 2018; Wong et al., 2019). Environment-related themes and activities were generally embraced by both pre-service and in-service science teachers

in their teaching practice (Aksland & Chang Rundgren, in press; Montebon, 2018; Wong et al., 2019). The environmental domain was most prevalent in pre-service teachers' understanding, while human rights and equity were less often mentioned (Montebon, 2018). It was furthermore found that people's attitudes towards ESD were also influenced by culture (Montebon, 2018). One misconception about sustainability was that it is only about the environment and recycling (Aksland & Chang Rundgren, 2020; Montebon, 2018). Teachers' understanding of sustainability varied according to the subjects they taught. Science teachers were found to have a stronger awareness of environmental sustainability than social studies and primary school teachers, who generally had stronger awareness of economic and sustainability issues (Atmaca & Kiray, 2020). The holistic understanding and teaching strategies of ESD need to be delivered through teacher training programmes (Aksland & Chang Rundgren, 2020; Cebesoy & Chang Rundgren, 2023; Montebon, 2018; Rundgren & Chang Rundgren, 2018), particularly via the SSI-TL model (Cebesoy & Chang Rundgren, 2023; Rundgren & Chang Rundgren, 2018). Regarding the SSI-TL model, I argue that the IC-based three-step model in combination with the SEE-SEP discussion in the second and the third steps is vital and a suitable didactic model for ESD and *Bildung* to embrace all four guiding principles for ESD practices and research in school education.

**Funding:** This research was supported by the Stockholm University.

## References

- Aksland, C., & Chang Rundgren, S. N. (2020). 5th–10th-grade in-service teachers' pedagogical content knowledge (PCK) for sustainable development in outdoor environment. *Journal of Adventure Education and Outdoor Learning*, 20(3), 274–283.
- Amos, R., & Levinson, R. (2019). Socio-scientific inquiry-based learning: An approach for engaging with the 2030 Sustainable Development Goals through school science. *International Journal of Development Education and Global Learning*, 11(1), 29–49.
- Atmaca, A. C., Kiray, S. A., & Colakoglu, M. H. (2020). An examination of teachers' sustainable development awareness in terms of branches, genders, ages and years of service. *Problems of Education in the 21st Century*, 78(3), 342–358.
- Bourn, D., Hunt, F., & Bamber, P. (2017). A review of education for sustainable development and global citizenship education in teacher education. UNESCO press.
- Cars, M., & West, E. E. (2015). Education for sustainable society: Attainments and good practices in Sweden during the United Nations Decade for Education for Sustainable Development (UNDESD). *Environment, Development and Sustainability*, 17, 1–21.
- Cebesoy, U. B., & Chang Rundgren, S. N. (2023). Embracing socioscientific issues-based teaching and decision-making in teacher professional development. *Educational Review*, 75(3), 507–534.
- Chang Rundgren, S. N. (2011). Post it!: A cross-disciplinary approach to teach socioscientific issues. *Teaching Science*, 5(3), 25–28.
- Chang Rundgren, S. N., & Rundgren, C.-J. (2010). SEE-SEP: From a separate to a holistic view of socioscientific issues. *Asia-Pacific Forum on Science Learning and Teaching*, 11(1), Article 2.
- Driver, R., Newton, P., & Osborne, J. (2000). Establishing the norms of scientific argumentation in classrooms. *Science Education*, 84, 287–312.
- Dudas, C., Rundgren, C.-J., & Lundegård, I. (2023). Exploratory considerations in chemistry education: Didactic modelling for complexity in students' discussions. *Science & Education*, 32, 481–498.

- Eilks, I. (2015). Science education and education for sustainable development: Justifications, models, practices and perspectives. *Eurasia Journal of Mathematics, Science & Technology Education*, 11(1), 149–158.
- Feldman, A., & Nation, M. (2015) Theorizing sustainability: An introduction to science teacher education for sustainability. In S. K. Stratton, R. Hagevik, A. Feldman, & M. Bloom (Eds.), *Educating science teachers for sustainability* (pp. 3–13). Springer International Publishing.
- Herranen, J., Yavuzkaya, M., & Sjöström, J. (2021). Embedding chemistry education into environmental and sustainability education: Developing of a didactic model based on an eco-reflexive approach. *Sustainability*, 13(1746), 1–15.
- Levrini, O, Tasquier, G., Barelli, E., Laherto, A., Palmgren, E., Branchetti, L., & Wilson, C. (2021). Recognition and operationalization of Future-Scaffolding Skills: Results from an empirical study of a teaching-learning module on climate change and future. *Science Education*, 105, 281–308.
- Montebon, D. R. T. (2018). Pre-service teachers' concept of sustainable development and its integration in science lessons. *Journal Pendidikan Humaniora*, 6(1), 1–8.
- Patronis, P. T., Potari, D., & Spiliotopoulou, V. (1999). Students' argumentation in decision-making on a socio-scientific issue: Implications for teaching. *International Journal of Science Education*, 21, 745–754.
- Robottom, I., & Simonneaux, L. (2012). Editorial: Socio-scientific issues and education for sustainability in contemporary education. *Research in Science Education*, 42(1), 1–4.
- Rundgren, C.-J., & Chang Rundgren, S. N. (2018). Aiming for responsible and competent citizenship through teacher professional development on teaching socioscientific inquiry-based learning (SSIBL). *Asia-Pacific Forum on Science Learning and Teaching*, 19(2), Article 2.
- Rundgren, C.-J., Persson, T., & Chang Rundgren, S. N. (2014). Comparing different stakeholders' view on science education with the science curriculum in Sweden: Reflecting on the PROFILES 3-step module. In C. Bolte, J. Holbrook, R. Mamlok-Naaman, & F. Rauch (Eds.), *Science teachers' continuous professional development in Europe: Case studies from the PROFILES project* (pp. 38–47). Klagenfurt: Alpen-Adria-Universität.

- Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14.
- Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–23.
- Sjöström, J., & Eilks, I. (2018). Reconsidering different visions of scientific literacy and science education based on the concept of Bildung. In Dori, Y. J., Mevarech, Z. R. and Baker, D. R. (Eds.), *Cognition, metacognition, and culture in STEM education* (pp. 65–88).
- Stratton, S., Hagevik, R., Feldman, A., & Bloom, M. A. (Eds.). (2015). Toward a sustainable future: The practice of science teacher education for sustainability. In S. K. Stratton, R. Hagevik, A. Feldman, & M. Bloom (Eds.), *Educating science teachers for sustainability* (pp. 445–458). Dordrecht, Netherlands: Springer.
- Sund, P., & Gericke, N. (2020). Teaching contributions from secondary school subject areas to education for sustainable development: A comparative study of science, social science and language teachers. *Environmental Education Research*, 26(6), 772–794.
- Tanaka, H. (2017). Current state and future prospects of education for sustainable development (ESD) in Japan. *Educational Studies in Japan: International Yearbook*, 11, 15–28.
- UNESCO (2014). *UNESCO roadmap for implementing the Global Action Programme on education for sustainable development*. Retrieved from <https://sustainabledevelopment.un.org/content/documents/1674unescoroadmap.pdf>
- UNESCO (2020). *Education for sustainable development: A roadmap*. Paris: UNESCO.
- Walan, S., & Chang Rundgren, S. N. (2015). Student responses to context- and inquiry-based three-step teaching model. *Teaching Science*, 61(2), 33–39.
- Wang, G., Zhou, X., & Cui, H. (2019). Exploring education for sustainable development in a Chinese kindergarten: An action research. *ECNU Review of Education*, 2(4), 497–514.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.
- Zeidler, D. L., Walker, K. A., Ackett, W. A., & Simmons, M. L. (2002). Tangled up in views: Beliefs in the nature of science and responses to socioscientific dilemmas. *Science Education*, 86, 343–367.







**Teresa Parczewska**

<https://orcid.org/0000-0001-7651-5519>

Maria Curie-Skłodowska University, Lublin, Poland

[teresa.parczewska@mail.umcs.pl](mailto:teresa.parczewska@mail.umcs.pl)

**Justyna Sala-Suszyńska**

<https://orcid.org/0000-0002-3408-4324>

Maria Curie-Skłodowska University, Lublin, Poland

[justyna.sala-suszynska@mail.umcs.pl](mailto:justyna.sala-suszynska@mail.umcs.pl)

**Ewa Sosnowska-Bielicz**

<https://orcid.org/0000-0003-0132-9820>

Maria Curie-Skłodowska University, Lublin, Poland

[ewa.sosnowska-bielicz@mail.umcs.pl](mailto:ewa.sosnowska-bielicz@mail.umcs.pl)

## Assessment of the Quality of Education and Care in Selected Polish Preschools During the COVID-19 Pandemic Using the ECERS-E Scale

(pp. 33–55)

Suggested citation: Parczewska, T., Sala-Suszyńska, J. & Sosnowska-Bielicz, E. (2023). Assessment of the Quality of Education and Care in Selected Polish Preschools During the COVID-19 Pandemic Using the ECERS-E Scale. *Multidisciplinary Journal of School Education*, 12(2(24)), 33–55. <https://doi.org/10.35765/mjse.2023.1224.02>

### Abstract

**Objectives of the research:** The aim of this project was to investigate the quality of education in Polish preschools during the COVID-19 pandemic in different social environments.

**Research methods:** The study uses a pedagogical approach and the ECERS-E scale, used to both define and assess the quality of preschool institutions. The research also involved interviews with teachers.

**A short description of the context of the issue:** An important goal of the research is to identify problem areas and areas that constitute resources or strengths of preschool institutions.

**Research findings:** A detailed data analysis indicated differences in the quality of education and care offered to children. The preschools under study

obtained the highest results for the mathematics subscale and the lowest for the diversity subscale. Importantly, in nearly 25% of them, the quality of science and environment classes was lower than the minimum. A comparative analysis of the locations of preschools revealed that rural institutions achieved lower results than urban institutions, both in the overall quality of everyday life and for all subscales. Despite the social changes taking place in Poland, research shows that the diversification of the educational environment may significantly determine school competences and achievements.

**Conclusions and recommendations:** The added value of the project is showing the potential of the ECERS scale and proving that it can be used in the Polish context. This creates an opportunity to conduct comparative research on an international scale.

**Keywords:** quality of early childhood education and care, competences, ECERS scale, COVID-19 pandemic, social changes

## Introduction

In many countries, preschool children spend time away from home, taking advantage of a variety of forms of early childhood education and care (e.g., Belsky et al., 2007; Dahlberg et al., 2013). Research shows that this brings measurable individual and social benefits in both the short term and the long term. As the children grow up, they can be more and more independent, achieve better educational results at all levels of education, and have greater chances of success in the job market (finding and keeping a job) and in life (Brzezińska & Czub, 2012; Melhuish et al., 2017; Sylva et al., 2008). In addition to the impact on children's cognitive development, there is also clear evidence that the experience of early childhood education and care (ECEC) can have a long-term impact on socioemotional development by encouraging less aggressive behavior, more sustained attention, more playfulness, and more empathy (Barnett, 2008; Love et al., 2005; Sammons et al., 2002). Early childhood education

and care is one of the most effective tools for equalizing the opportunities in education and life for the youngest citizens (Barnes & Melhusih, 2016; Melhuish, 2004; Sylva et al., 2004, 2010). It is therefore important that all children from birth to school age have access to quality education services. These services should provide a safe, caring environment and a social, cultural, and physical space with a wide range of possibilities for children to develop their potential. Researchers, experts, and most policymakers around the world agree on this (Heckman & Landerso, 2021). The priority and overriding goal of the Polish education policy is to ensure access to high-quality education for all citizens, regardless of their place of residence, sex, religious affiliation, and social status (Białecki, 2003; Helios & Jedlecka, 2016).

Just before the COVID-19 pandemic, the Council of the European Union (2019) published recommendations on high-quality early childhood education and care systems for all member states, including Poland. The recommendations highlight the fact that the monitoring and evaluation of the quality of the educational process provide relevant information at the local, regional, national, and international levels that can be used to improve the quality of policy and practice. It seems that the international ECERS-E scale designed by Sylva, Siraj-Blatchford, and Taggart (2011)<sup>1</sup> may be a good instrument for this purpose.

Assuming that preschools play a significant role in cognition, care, and education, the main goal of this research project was to assess the quality of the education they offer. The main focus was on the possibility of providing children with educational experiences in literacy, mathematics, science/environment, and diversity. The last one means planning teaching according to the child's individual educational needs, gender equality and awareness of gender differences, and racial equality and awareness of racial diversity. The research project was carried out after many months of experience working with children during the pandemic.

---

<sup>1</sup> An analysis of the literature on the quality of care in school daycare centers showed that the ECERS-E scale is not used in Poland.

## Early childhood education and child care in Poland

In Poland, the Ministry of Family, Labor, and Social Policy is responsible for services for children under the age of 3 years. From the ages of 3 to 6, children are covered by preschool education. Data from the Central Statistical Office (Statistics Poland, 2021) show that on September 30, 2020, 90.1% of children aged 3–6 participated in various forms of pre-school education. In the 2020–21 school year, there were 22,400 preschool education institutions that educated and looked after 1.4 million children. Most (69.5%) preschool education institutions were public.

As part of preschool education, children may attend preschool facilities in public or non-public primary schools. To address the shortage of places in ECEC institutions, preschool education units and daycare centers have been set up to provide part-time services. Their operation is regulated by a regulation from the Minister of National Education (2017). In all forms of preschool education, the maximum number of children in a group is 25, supervised by one teacher or tutor, and additionally by a supporting teacher (Karta Nauczyciela, 2023). In Poland, there is a year of preparatory preschool for 6-year-old children (Prawo oświatowe, 2021). Primary education begins at the age of 7. Parents may also decide to send their child to school at the age of 6, provided that they have attended preschool for at least 1 year or have a certificate issued by a Psychological and Pedagogical Counseling Center.

In Poland, to ensure the quality of education, teachers must have a university education with appropriate pedagogical preparation. On October 1, 2019, the standard of educating teachers for preschool education and grades 1–3 of primary school changed. Education begins with uniform master's studies in preschool and early school education (Minister of Science and Higher Education, 2019). The teacher then goes through five stages of professional development, which are regulated by an ordinance on teachers' professional development (Minister of National Education, 2018).

Each preschool institution has clearly defined standards of functioning, determined by the core curriculum, a work plan, and a statute. In early 2020, the daily work routine was disrupted by the spread of the SARS-CoV-2 virus.

This situation affected the whole world. In Poland, from March 12 to May 24, 2020, all educational institutions were closed (Minister of National Education, 2020a). Education was carried out using distance learning methods or other methods determined by the relevant authorities. Children of medical workers and law enforcement workers (including soldiers, police officers, and firefighters) were exempt and able to attend preschools and schools. In March 2020, in the interests of the safety of the children, preschool employees, and their relatives, the Chief Sanitary Inspector announced anti-epidemic guidelines for preschools, preschool units in primary schools, and other forms of preschool education and institutions for caring for children up to 3 years of age. The instructions concerned the organization of care, hygiene, disinfection of rooms and surfaces, gastronomy, and handling suspected infections among staff (Bielecka & Dudzik, 2021).

Starting on May 25, 2020, a gradual return to preschool education in classrooms began (Minister of National Education, 2020b). The restrictions introduced in ECEC institutions had significantly changed everyday life.

### **Research questions**

The aim of this research project was to answer the following questions:

1. What was the quality of education in selected Polish preschools during the COVID-19 pandemic?
2. What were the differences in the quality of education offered to children in preschools in rural versus urban areas during the COVID-19 pandemic?
3. On which of the selected subscales did the selected preschools in urban and rural areas have the highest and lowest scores?
4. For which components of individual subscales did the selected preschools in urban and rural areas have the highest and lowest scores during the COVID-19 pandemic?
5. What do teachers say about the changes in day-to-day life in preschools caused by the COVID-19 pandemic?

## Research methods

This study is defined as mixed-methods research (Bryman, 2017; Flick, 2011), which refers to research that is “a combination of quantitative and qualitative approaches” (Creswell, 2013, p. 219). Quantitative research was carried out using a diagnostic survey to diagnose the phenomenon under study (De Vaus, 2002) and the observation method (Green & Thorogood, 2018; Noel et al., 2018). The basic research tool was the fourth and most current version of the Early Childhood Environment Rating Scale (ECERS-E) by Kathy Sylva, Iram Siraj-Blatchford, and Brenda Taggart (2011). The qualitative research was carried out using content analysis (Krzystek, 2018; Miles & Huberman, 1994; Strauss & Corbin, 1998) based on data obtained from unstructured interviews conducted with teachers.

The ECERS-E is used to measure the quality of education in relation to the cognitive and social developmental outcomes of 3–5-year-olds. The ECERS-E complements the Revised Early Childhood Assessment Scale (ECERS-R), which is an internationally recognized measure of quality in education and care. The first edition of the Early Childhood Environment Rating Scale was published in 1980 by American researchers Thelma Harms and Richard Clifford (1980). In the following years, work on improving the scale was continued, resulting in subsequent editions, including the most popular and widely translated and used one: the ECERS-R, published in 1998 by the same authors. The ECERS-E is an observational scale: most activities and behaviors must be observed in order to score points for them, which makes the instrument very valuable. The scale consists of four separate subscales: (1) literacy, (2) mathematics, (3) science and environment, and (4) diversity. Each of the subscales includes detailed items comprising 18 areas whose quality is assessed by the researcher/observer on a 7-point scale, where 1 = inadequate, 3 = minimal, 5 = good, and 7 = excellent. The authors of the ECERS-E formulated detailed recommendations for the researcher/observers to ensure the objectivity, reliability, and accuracy of measuring the quality of a child’s educational environment. The guidelines include preparing for observations, maintaining objectivity,

and very detailed comments explaining the scoring system. The ECERS, ECERS-R, and ECERS-E are widely used in many countries around the world, including the USA, Great Britain, Denmark, Germany, Kazakhstan, Japan, Portugal, Russia, Sweden, Spain, and Ukraine (FPG Child Development Institute, 2022). In Poland, researchers rarely use this tool (e.g., Gindrich, 2009, 2012, 2018).

The results of the quantitative research were subjected to statistical analysis using the IBM software program SPSS; basic descriptive statistics were calculated, including means, standard deviation, and significance tests. The content analysis method (Krzystek, 2018; Miles & Huberman, 1994; Strauss & Corbin, 1998) was used to analyze data collected through unstructured interviews. Statements from 33 teachers employed in preschool institutions located in urban and rural areas of the Lublin voivodeship (eastern Poland) were systematized and organized. The data was collected from November 2021 to the end of April 2022. The interviews were completed when the theoretical saturation was achieved: common threads began to emerge from the collected data, and subsequent information did not add anything new. The interviews were recorded (audio) and transcribed. The research material was processed in accordance with the principles of modern qualitative data analysis (Denzin & Lincoln, 1998). The thematic analysis was carried out with the use of the software program MAXQDA. After compiling a list of the most common themes, we attempted to interpret them in order to find their common meaning.

The implementation of the project began with sending inquiries to preschool institutions in eastern Poland about the possibility of conducting research on their premises. A total of 101 institutions responded to the request, but due to the pandemic-related restrictions, the resulting research sample consisted of 47 preschools, including 19 from rural areas and 28 from urban areas. The participants were 90 teachers and 752 children from the oldest preschool groups. The research was carried out by trained pedagogical students from November 2021 to April 2022.

## Ethical Considerations

Bearing in mind good ethical practices concerning researchers, research participants, scientists, and professional practitioners (British Educational Research Association, 2018), on October 25, 2021, the completed research project was approved by the Ethics and Scientific Research Committee of Maria Curie-Skłodowska University in Lublin (application no. 9/2021). The project does not involve minors and does not include psychological or medical risk factors for the respondents. Before the research, permission was granted by the head teachers of the preschool institutions involved. The participants were informed that participation in the research was voluntary and that there would be no consequences for refusal at any stage of the process. Moreover, we ensured them that the research results would be confidential, that the personal data of teachers would not be disseminated in a way that would identify the preschools or individuals, and that the data would only be processed for the purpose of scientific analysis.

## Findings

### A. The quality of education in selected Polish preschools during the COVID-19 pandemic

Our first research question concerned diagnosing the quality of education in selected Polish preschools during the COVID-19 pandemic. The analysis conducted with the ECERS-E scale showed that the average quality of everyday life of children in Polish preschools during the COVID-19 pandemic was in the range of 4–5 ( $M = 4.41$ ).

Half of the surveyed facilities had at least a good quality of everyday life, while the other half achieved results indicating a much lower quality of everyday life ( $Me = 4.94$ ). The highest results among the selected preschools were recorded for the mathematics subscale ( $M = 5.02$ ). Half of the institutions achieved results equal to or higher than 5.67 on this subscale. The lowest results were obtained for the diversity subscale ( $M = 3.82$ ); half of the preschools scored lower than

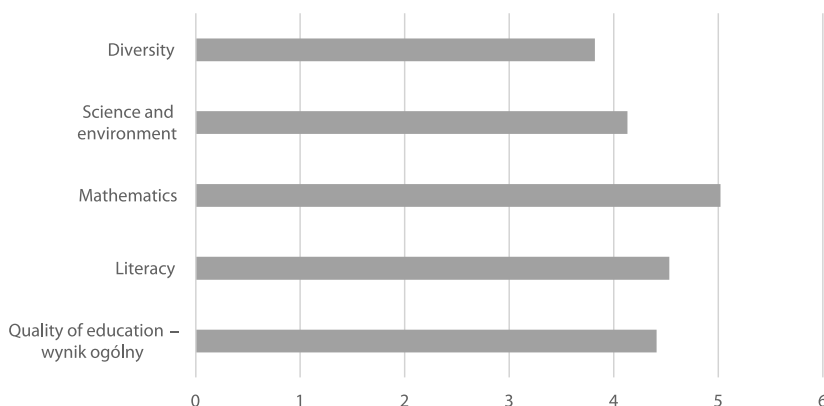


or equal to 4. Moreover, for the science and environment subscale, nearly a quarter of the surveyed institutions obtained a score lower than or equal to 2.20, which proves that in 25% of preschools, the quality of classes in this subject was lower than the minimum. Detailed data, including basic descriptive statistics – means, medians, standard deviation, minimum and maximum values, and lower and upper quartiles – concerning the overall scores and scores for the individual subscales are presented in Table 1. Figure 1 is a graphical representation of the results.

**Table 1. Quality of everyday life in Polish preschools, by individual subscale**

	M	Me	SD	Min.	Max.	Lower quartile	Upper quartile
Quality of everyday life, total score	4.41	4.94	1.66	1.00	7.00	3.56	5.44
Literacy	4.53	5.00	1.70	1.00	7.00	3.67	5.67
Mathematics	5.02	5.67	1.97	1.00	7.00	3.75	6.50
Science and environment	4.13	4.50	1.81	1.00	7.00	2.20	4.50
Diversity	3.82	4.00	1.73	1.00	7.00	2.67	4.67

**Figure 1. Quality of everyday life in Polish preschools, by individual subscale**



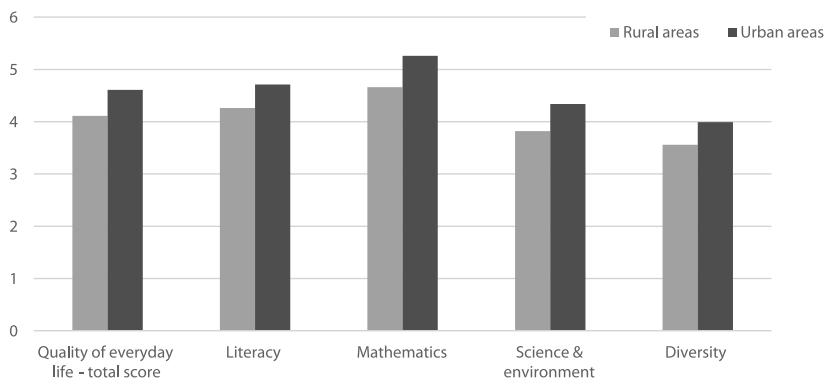
**B. Differences in the quality of education offered to children in rural and urban preschool institutions during the COVID-19 pandemic**

In this study, we also aimed to check whether the environment (rural vs. urban) is a factor that significantly differentiated the level of quality of everyday life in Polish preschools during the COVID-19 pandemic. The analysis was performed using Student's t-test for independent samples. The results show lower scores, both in terms of the general quality of everyday life and for all subscales in rural facilities compared to municipal facilities. However, these differences were not statistically significant (Table 2, Figure 2). Moreover, as shown in Table 2 and Figure 2, the highest scores were on the mathematics subscale, while the lowest scores in both the rural and urban schools were on the diversity subscale.

**Table 2. Quality of everyday life of preschool children in Polish educational institutions, depending on the environment (rural vs. urban)**

	Rural areas (n = 19)		Urban areas (n = 28)				95% CI		Cohen's <i>d</i>
	M	SD	M	SD	T	p	LL	UL	
Quality of everyday life, total score	4.11	1.45	4.61	1.79	-1.02	0.311	-1.50	0.49	0.30
Literacy	4.26	1.53	4.71	1.80	-0.89	0.377	-1.47	0.57	0.27
Mathematics	4.66	2.00	5.26	1.95	-1.03	0.309	-1.78	0.58	0.31
Science & environment	3.82	1.49	4.34	2.00	-0.96	0.342	-1.60	0.57	0.29
Diversity	3.56	1.40	3.99	1.93	-0.83	0.412	-1.46	0.61	0.25

**Figure 2. Quality of everyday life of preschool children  
in selected Polish educational institutions,  
depending on the environment (rural vs. urban)**



### C. Components of the subscales according to the location of the preschool institution during the COVID-19 pandemic

Table 3 presents the basic descriptive statistics (means, medians, standard deviation, minimum and maximum values, and lower and upper quartiles) for the general quality of everyday life score and the results on individual subscales, separately for rural and urban preschools. The data show that in rural institutions, the maximum score (7 points) was obtained only on the mathematics subscale, whereas in urban preschools, maximum scores were achieved on each of the subscales and for the total score. In urban schools, more than half of the preschools recorded at least good results (>5) for both the total score for the quality of everyday life and the dimensions of literacy, mathematics, and science and environment. Among rural institutions, at least good results for the total score for the quality of everyday life as well as for science and environment were achieved in only about a quarter of them.

**Table 3. Quality of everyday life and individual subscales in Polish preschools, depending on the type of environment (rural vs. urban)**

Rural areas							
	M	Me	SD	Min.	Max.	Lower quartile	Upper quartile
Quality of everyday life, total score	4.11	4.56	1.45	1.25	6.33	3.56	5.00
Literacy	4.26	4.67	1.53	1.00	6.33	3.50	5.33
Mathematics	4.66	5.50	2.00	1.00	7.00	2.50	6.33
Science and environment	3.82	4.00	1.49	1.33	6.20	2.20	5.00
Diversity	3.56	4.00	1.40	1.00	6.67	3.00	4.00
Urban areas							
	M	Me	SD	Min.	Max.	Lower quartile	Upper quartile
Quality of everyday life, total score	4.61	5.16	1.79	1.00	7.00	3.41	5.61
Literacy	4.71	5.08	1.80	1.00	7.00	3.75	5.83
Mathematics	5.26	5.75	1.95	1.00	7.00	5.00	6.75
Science and environment	4.34	5.00	2.00	1.00	7.00	2.30	5.55
Diversity	3.99	4.00	1.93	1.00	7.00	2.42	5.50

#### **D. Teachers facing changes in the everyday life of preschool institutions in Poland caused by the COVID-19 pandemic**

To investigate teachers' opinions about changes in education and childcare during the COVID-19 pandemic, we asked them to participate in unstructured interviews (N = 33). This method allowed us to gather data on how teachers perceive and understand the reality they experience (Charmaz, 2006, p. XVII). The interview questions were open-ended, encouraging the interviewees to make longer statements and share experiences and emotions and allowing the researchers to learn how the participants construct their opinions and perspectives. Sample questions included the following: "What are your experiences with day-to-day preschool life during the

COVID-19 pandemic?," "What do you think about education and childcare during the pandemic?," "Which of the changes introduced during the pandemic are worth continuing?," and "What did the pandemic take away and what did you miss the most in your everyday life during COVID-19?"

Five key themes emerged from the analysis of the teachers' statements: 1) arrangement of the physical space in the preschool, 2) safety and health, 3) new forms of conducting classes, 4) relationships among teachers, between teachers and parents, between teachers and children, and among children, and 5) teachers' reflections and professional development.

There are many differences between the categories, but they share the fact that in both the countryside and the city, pandemic-related changes in ECEC institutions resulted in negative as well as positive reflections. This aligns with the theory of crisis behavior (Dzięgielewski & Jacinto, 2015; James & Gilliland, 2017). In terms of how physical space is arranged, according to the respondents, removing many toys from the rooms inspired the children to think and act creatively and to search for unusual solutions; it also triggered initiative and strengthened children's cognitive curiosity and independence.

Almost all teachers saw several advantages related to safety and health (e.g., more frequent hand washing, covering mouths and noses with a bent elbow or a handkerchief when sneezing and coughing, using disinfectants, and not touching one's eyes, nose, and mouth), although some disadvantages were also noted. The collected data show that the pandemic violated children's sense of safety and significantly worsened their health, especially mental health, in both the city and the countryside. For example: "The current pandemic situation introduces a lot of mess and chaos; everything has become uncertain, which causes frustration in teachers who can't achieve their intended goals. But it also has many side effects on the children's psyche, since children found themselves in a new reality and their sense of security is often seriously disturbed" (urban teacher); "The number

of children receiving psychological and pedagogical help is increasing, because they can't master the curriculum material necessary to complete primary school (a lot of absences). Emotional problems in children – tearfulness, anxiety, over-agitation, and educational problems" (rural teacher).

In terms of the teaching methods, the teachers generally expressed negative opinions about distance learning. Recurring themes were a lack of adequate equipment and competences to conduct online classes and a lack of the expected results. Parents' limited abilities, both financial and didactic, were also exposed. Among the negative opinions, there were also some positive ones: For some teachers, it was an advantage to go outdoors more often during classes.

The respondents were very critical of their contact with parents. As they stated, these were mainly quick conversations when dropping off or picking up children, since in most schools, parents were not allowed to enter the building. In a few cases, despite the established rules, parents did not follow the sanitary regime. The respondents mentioned other methods of communicating with parents: telephone calls, online register messages, online meetings, and social media. In individual cases, contact was very limited, as parents did not answer the phone or respond to emails.

Relationships among the teachers were assessed as "fairly good." Most of the respondents noted the lack of face-to-face meetings and events that created a special atmosphere and gave them a chance to hold longer conversations and get to know each other. According to teachers, contact among children deteriorated, both in and outside of the classroom. The following statement was very telling: "The pandemic has changed us a lot and our relationships with other people; it has broken our routine. It's a difficult time for the children and for us" (rural teacher).

The interviews show that although the pandemic disrupted traditional education and care, it also mobilized people to reflect more deeply and take tangible actions. The need to switch to remote education, according to the respondents, forced them to improve their

qualifications in this area, which translated into the development of professional competences. Apart from deep losses, the pandemic made it possible to see the political, economic, and educational alternatives more clearly. It also showed many challenges and paved the way for new experiences that – according to the respondents – proved to be child-friendly and should be maintained after the pandemic.

## Discussion

Access to high-quality educational and health services is the basic factor of children's optimal development, functioning, and well-being, parallel to the functioning of the family and society. According to experts, depriving children of the use of these services significantly limits the development of their potential. In March 2020, the COVID-19 pandemic sparked a worldwide wave of preschool and school closings. A Supreme Audit Office report on Polish schools published at the end of 2021 (Najwyższa Izba Kontroli, 2021) revealed a lower quality of education, deeper educational inequalities, and deteriorating psychophysical condition of students and teachers during the COVID-19 epidemic. According to the Supreme Audit Office, the lack of systemic solutions that would provide schools with optimal conditions for stable didactic work had a negative impact on the educational process. The failure to define the standards of distance or hybrid teaching left it to schools to decide how to implement didactic activities on their own. Their report encouraged us to conduct research in preschool institutions that were not involved in the official audit.

In the case of the youngest children, ECEC has become a stage of education at high risk, as children in early and middle childhood have much fewer opportunities to engage in distance learning, cope with stress, and comply with health and safety measures than older children. Preschools were faced with many questions: how to deal with the new situation, how to continue providing high-quality education and care, how to cooperate with families, how to protect the most vulnerable children, which

health and safety regulations must be respected, and how to manage their employees.

This project was aimed at diagnosing the quality of education and childcare in preschools in rural and urban areas during the COVID-19 pandemic. The quantitative data collected with the use of the ECERS showed that the quality of early childhood education and care in selected Polish preschool institutions during the pandemic was average. These results are mainly related to the location of the preschool (city vs. countryside). The differences revealed in the research provoke reflection and raise the need to address the challenge of improving the development and well-being of children in crisis situations. Overall, 50% of the surveyed institutions showed at least good quality of everyday life, while the other half achieved results indicating a much lower quality of everyday life ( $Me = 4.94$ ). The highest scores among the surveyed preschools were recorded for the mathematics subscale ( $M = 5.02$ ), on which half of the institutions obtained scores equal to or higher than 5.67. The lowest scores were for the diversity subscale ( $M = 3.82$ ). Half of the preschools obtained scores lower than or equal to 4 in this area. In the science and environment subscale, nearly a quarter of the surveyed preschools obtained a result lower than or equal to 2.20, which means that in 25% of them, the quality of these classes was lower than the minimum. It seems that in preschools, as in schools, the lack of a systematic approach to distance education, insufficient training for teachers in conducting online lessons, a lack of relationships with peers, and cases of the digital exclusion of children call for developing an optimal model for school and preschool functioning in the event of an epidemic (Jaskulska et al., 2020; Bielecka & Dudzik, 2021; Wycóżkowska, 2022).

The results of the qualitative research illustrate the assumption known in the social sciences that when everyday routines fail, the world of everyday life ceases to be accepted without reservations and becomes the subject of reflection (Berger & Luckmann, 1991). Since the pandemic was described by the respondents as a “disturbance of balance” or “a disturbance of the daily order based on routine,” this time was subjected to two types of reflection. On the one hand, the respondents



saw it as an opportunity to creatively re-evaluate and rework patterns of actions and the resulting strategies for coping with the new reality. On the other hand, the fact that this reflectiveness was triggered from the outside and was reactive in nature makes it appear as an obligatory task that cannot be avoided. As a result, the process of reflecting on everyday life in preschools, triggered by the pandemic, seems to be one of the symptoms of the instability and loss of sense of security during the pandemic (Giddens, 1991). The need to be safe accompanies human beings at every stage of life – from fetal life to death – and this need increases in new, sudden, and life-threatening situations, like the COVID-19 pandemic (Kozioński, 2011, p. 25).

## Conclusions

The lack of a systemic approach to distance education, the insufficient support for teachers conducting online lessons, and the cases of digital exclusion of students all show the need to create an optimal model for the functioning of schools in an epidemic. In accordance with the recommendations of the scientific community (Najwyższa Izba Kontroli, 2022), it should ensure a balance between the requirements of the sanitary regime and activities protecting the mental health of students, teachers, and parents.

The data collected in the research, in addition to indicating problematic areas, also uncovered those which constitute resources. Identifying these areas can help in designing appropriate, evidence-based public policy and interventions (Cartwright & Hardie, 2012; Davies et al., 2000).

**Funding:** This research received no external funding.

## References

- Barnes, J., & Melhusih, E. (2016). Amount and timing of group-based childcare from birth and cognitive development at 51 months: A UK study. *International Journal of Behavioral Development, 41*(3), 360–370. DOI: 10.1177/0165025416635756
- Barnett, W. S. (2008). *Preschool education and its lasting effects: Research and policy implications*. National Institute for Early Education Research, Rutgers University.
- Belsky, J., Vandell, D. L., Burchinal, M., Clarke-Stewart, A., McCartney, & K., Tresch O. M. (2007). Are there long-term effects of early child care? *Child Development, 78*(2), 681–701. DOI: 10.1111/j.1467-8624.2007.01021.x
- Berger, P. L., & Luckmann, T. (1991). *The social construction of reality: A treatise in the sociology of knowledge*. Penguin Books Ltd.
- Białecki, I. (2003). Szanse na kształcenie i polityka edukacyjna – perspektywa równości i sprawiedliwości społecznej [Opportunities for education and educational policy: The perspective of equality and social justice]. In *Polska dla Dzieci. Ogólnopolski Szczyt w sprawach Dzieci Warszawa 23–24 maja 2003 r. Materiały i dokumenty* [Poland for children: Polish summit on children's issues. Warsaw May 23–24, 2003: Materials and documents]. Wydawnictwo Rzecznik Praw Dziecka.
- Bielecka, G., & Dudzik, I. (2021). Nauczanie zdalne w przedszkolu podczas pandemii COVID-19 w opiniach rodziców [Remote teaching in kindergarten during the COVID-19 pandemic in the opinions of parents]. *Edukacja. Terapia. Opieka, 3*, 83–94.
- British Educational Research Association (2018). *Ethical guidelines for educational research* (4th ed). Retrieved May 16, 2022 from <http://bit.ly/BERAethics2018>
- Bryman, A. (2017). *Quantitative and qualitative research: Further reflections on their integration*. Routledge.
- Brzezińska, A. I., Czub, M., & Czub, T. (2012). *Dziecko sześćioletnie idzie do szkoły...* [A six-year-old child goes to school...]. IBE.
- Cartwright, N., & Hardie, J. (2012). *Evidence-based policy: A practical guide to doing it better*. University Press.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.

- Council of the European Union. (2019). Recommendation of the Council of the European Union of 22 May 2019 on high-quality early childhood education and care systems (2019/C189/02). Retrieved May 6, 2022 from [https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32019H0605\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32019H0605(01)&from=EN)
- Creswell, J. W. (2013). *Projektowanie badań naukowych. Metody jakościowe, ilościowe i mieszane* [Research design: Qualitative, quantitative, and mixed methods]. Wydawnictwo Uniwersytetu Jagiellońskiego.
- Dahlberg, G., Moss, P., & Pence, A. (2013). *Beyond quality in early childhood education and care: Languages of evaluation*. Routledge.
- Davies, H. T. O., Nutley, S. M., & Smith, P. C. (2000). *What works?: Evidence-based policy and practice in public services*. Bristol University Press. <https://doi.org/10.2307/j.ctt1t892t3>
- Denzin, N. K., & Lincoln, Y. S. (1998). *Collecting and interpreting qualitative materials*. Sage.
- De Vaus, D. A. (2002). *Surveys in social research*. Routledge.
- Dzięgielewski, S. F., & Jacinto, G. A. (2015). Designs and procedures for evaluating crisis intervention. In K. Yeager & A. Roberts (Eds.), *Crisis intervention handbook: Assessment, treatment, and research* (pp. 711–750). Oxford University Press.
- Flick, U. (2011). Zum Stand der Diskussion – Aktualität, Ansätze und Umsetzung der Triangulation. In J. Ecarus & I. Miethe (Eds.), *Methodentriangulation in der qualitativen Bildungsforschung* (pp. 19–39).
- FPG Child Development Institute. (2022, April 14). *Active translation licenses for the ERS family of products*. <https://ers.fpg.unc.edu/translations-0>
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late modern age*. Stanford University Press.
- Gindrich, P. (2009). Wspomaganie wczesnej edukacji w kontekście efektywności instytucji przedszkola, czyli jak mierzyć jakość Skalą Oceny Jakości Środowiska Dziecka w Wiekui Przeszkolnym (ECERS-R) [Supporting early education in the context of the effectiveness of kindergarten institutions, or how to measure quality with the Preschool Child Environment Quality Assessment Scale (ECERS-R)]. *Meritum-Mazowiecki Kwartalnik Edukacyjny*, 2, 25–28.
- Gindrich, P. (2018). Jakość pedagogiczna środowiska dziecka w wieku przedszkolnym – wybrane zagadnienia teoretyczne i empiryczne [Pedagogical

- quality of the preschool child's environment: Selected theoretical and empirical issues]. *Przegląd Pedagogiczny*, 2, 215–230.
- Gindrich, P., & Łachut, T. (2012). Skala ECERS i ECERS-R – analiza porównawcza jakości środowiska dziecka w przedszkolu. Raport z badań pilotażowych [The ECERS and ECERS-R – comparative analysis of the quality of the child's environment in kindergarten: A pilot study report]. In E. Jakubiak-Zapalska & K. Kruszko (Eds.), *Dziecko we wczesnej edukacji* (pp. 239–254). Wydawnictwo Ave.
- Green, J., & Thorogood, N. (2018). *Qualitative methods for health research*. Sage.
- Harms, T., & Clifford, R. M. (1980). *Early childhood environment rating scale*. Teachers College Press.
- Heckman, J. J., & Landerso, R. (2021). *Lessons from Denmark about inequality and social mobility*. NBER Working Papers series.
- Helios, J., & Jedlecka, W. (2016). Równość i wolność w polskim systemie edukacyjnym: wybrane zagadnienia [Equality and freedom in the Polish educational system: Selected issues]. *Wrocławskie Studia Erazmiańskie*, 10, 243–271.
- James, R. K., & Gilliland, B. E. (2017). *Crisis intervention strategies*. Cengage Learning.
- Jaskulska, S., Jankowiak, B., & Rybińska, A. (2020). *Obraz kształcenia na odległość w Polsce w czasie pandemii COVID-19 w opiniach nauczycielek i nauczycieli wychowania przedszkolnego* [The image of distance learning in Poland during the COVID-19 pandemic in the opinions of preschool teachers]. <https://sites.google.com/view/przedszkola-pandemia-raport>
- Karta Nauczyciela, Art. 42 [Teachers' charter]. (2023). <https://sip.lex.pl/aktyprawne/dzu-dziennik-ustaw/karta-nauczyciela-16790821/art-42>
- Koziński, M. (2011). *Bezpieczeństwo w Unii Europejskiej. Zdrowie publiczne i świadczenia* [Security in the European Union: Public health and benefits]. Fundacja Pro Pomerania.
- Krzystek, M. (2018). *Analiza tematyczna w badaniach jakościowych* [Thematic analysis in qualitative research]. Fundacja Rozwoju Badań Społecznych.
- Love, J. M., Kisker, E. E., Ross, C., Raikes, H., Constantine, J., Boller, K., Brooks-Gunn, J., Chazan-Cohen, R., Banks Tarullo, L., Brady-Smith, C., Sidle Fuligni, A., Schochet, P. Z., Paulsell, D., & Vogel, C. (2005). The effectiveness of early head start for 3-year-old children and their parents: Lessons for policy and programs. *Developmental Psychology*, 41(6), 885–901. DOI: 10.1037/0012-1649.41.6.885

- Melhuish, E. (2004). *A literature review of the impact of early years provision on young children, with emphasis given to children from disadvantaged backgrounds*. Department for Education.
- Melhuish, E., Gardiner, J., & Morris, S. (2017). *Study of early education and development (SEED): Impact study on early education use and child outcomes up to age three*. Department for Education.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.
- Minister of National Education. (2017). Rozporządzenie Ministra Edukacji Narodowej z dnia 28 sierpnia 2017 r. W sprawie rodzajów innych form wychowania przedszkolnego, warunków tworzenia i organizowania tych form oraz sposobu ich działania [Regulation of August 28, 2017 on other forms of preschool education, conditions for creating and organizing these forms, and their operation]. Retrieved May 11, 2022 from <https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20200001520/O/D20201520.pdf>
- Minister of National Education. (2018). Rozporządzenie Ministra Edukacji Narodowej z dnia 26 lipca 2018 r. w sprawie uzyskiwania stopni awansu zawodowego przez nauczycieli [Regulation from July 26, 2018 on teachers obtaining professional promotion]. Retrieved May 12, 2022 from <https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20200002200/O/D20202200.pdf>
- Minister of National Education. (2020a). Rozporządzenie Ministra Edukacji Narodowej z dnia 11 marca 2020 r. w sprawie czasowego ograniczenia funkcjonowania jednostek systemu oświaty w związku z zapobieganiem, przeciwdziałaniem i zwalczaniem COVID-19 [Regulation from March 11, 2020 on the temporary limitation of the functioning of the education institutions in connection with preventing, counteracting, and combating COVID-19]. Retrieved May 14, 2022 from <https://dziennikustaw.gov.pl/D2020000041001.pdf>
- Minister of National Education. (2020b). Rozporządzenie Ministra Edukacji Narodowej z dnia 14 maja 2020 r. zmieniające rozporządzenie w sprawie czasowego ograniczenia funkcjonowania jednostek systemu oświaty w związku z zapobieganiem, przeciwdziałaniem i zwalczaniem COVID-19 [Regulation of May 14, 2020 amending the regulation on the temporary limitation of the functioning of education institutions in connection with preventing, counteracting, and combating COVID-19]. Retrieved May 14, 2022 from

<https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20200000871/O/D20200871.pdf>

- Minister of Science and Higher Education. (2019). Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 25 lipca 2019 r. w sprawie standardu kształcenia przygotowującego do wykonywania zawodu nauczyciela [Regulation of July 25, 2019 on the standard of preparatory education for the teaching profession]. Retrieved May 11, 2022 from <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20190001450>
- Najwyższa Izba Kontroli [Supreme Audit Office]. (2021). Funkcjonowanie szkół w sytuacji zagrożenia COVID-19 [Functioning of schools during the COVID-19 threat]. <https://www.nik.gov.pl/plik/id,25380,vp,28141.pdf>
- Najwyższa Izba Kontroli [Supreme Audit Office]. (2022, June 26). Szkoły w czasach pandemii [Schools during the pandemic]. <https://www.nik.gov.pl/aktualnosci/szkoly-w-czasach-pandemii.html>
- Noel, A. B., Abdaoui, A., Elfouly, T., Ahmed, M. H., Badawy, A., & Shehata, M. S. (2017). Structural health monitoring using wireless sensor networks: A comprehensive survey. *IEEE Communications Surveys & Tutorials*, 19(3), 1403–1423.
- Prawo oświatowe, Art. 33 [Education Law]. (2021). <https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/prawo-oswiatowe-18558680>
- Sammons, P., Sylva, K., Melhuish, E., Taggart, B., Elliot, K., & Siraj-Blatchford, I. (2002). *The Effective Provision of Pre-School Education (EPPE) project: Measuring the impact of pre-school on children's cognitive progress over the pre-school period*. Department for Education.
- Statistics Poland. (2021). *Education in the 2020/2021 school year*. [https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5488/1/16/1/oswiata\\_i\\_wychowanie\\_2020\\_2021.pdf](https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5488/1/16/1/oswiata_i_wychowanie_2020_2021.pdf)
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage.
- Sylva, K., Melhuish, E., Sammons, P., Siraj, I., & Taggart, B. (2004). *The Effective Provision of Pre-School Education (EPPE) project: Technical paper 12. The final report: Effective pre-school education*. Department for Education.
- Sylva, K., Melhuish, E., Sammons, P., & Siraj-Blatchford, I. (2010). *Early childhood matters: Evidence from the Effective Pre-School and Primary Education project*. Routledge.

- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2008). *Final report from the primary phase: Pre-school, school and family influences on children's development during Key Stage 2 (Age 7–11)*. Department for Children, Schools and Families.
- Sylva, K., Siraj-Blatchford, I., & Taggart, B. (2011). *ECERS-E: The four curricular subscales extension to the Early Childhood Environment Rating Scale (ECERS-R)*. Teachers College Press.
- Wyczółkowska, E. (2022). Zmiana form współpracy nauczycieli przedszkoli z rodzicami dzieci w trakcie trwania pandemii Covid-19 [Changing the forms of cooperation between kindergarten teachers and children's parents during the COVID-19 pandemic]. *Problemy Opiekuńczo-Wychowawcze*, 10, 68–81.







**Marta Wiatr**

<https://orcid.org/0000-0002-0805-6522>

The Maria Grzegorzewska University, Warsaw, Poland

[mwiatr@aps.edu.pl](mailto:mwiatr@aps.edu.pl)

## Contexts of Extraordinary Parental Involvement in Children's Education During the First Wave of COVID-19: A Case Study of a Public Elementary School in Poland

(pp. 57–78)

Suggested citation: Wiatr, M. (2023). Contexts of Extraordinary Parental Involvement in Children's Education During the First Wave of COVID-19: A Case Study of a Public Elementary School in Poland. *Multidisciplinary Journal of School Education*, 12(2(24)), 57–78. <https://doi.org/10.35765/mjse.2023.1224.03>

### Abstract

**Objectives of the research:** The purpose of the study was to learn about parents' experiences of participating in their children's remote education during the first wave of the COVID-19 pandemic. The question posed in this article is about the circumstances under which parents took over tasks previously perceived as a teacher's job.

**Research methods:** The participatory, qualitative case study utilized data from the open-ended questions of an electronic survey to which 104 parents (from a public elementary school in a metropolitan area) responded, as well as data from the school's electronic register. The qualitative analysis employed strategies of constructivist grounded theory.

**Brief description of the context of the problem:** While national and international studies have shown that parents played a critical role in the challenging and stressful home-based education of their children during the COVID-19 pandemic, no research has explained how parents became this vital link of education. The aim of this article is to fill this gap.

**Research findings:** The study revealed two interrelated contextual factors that led to parents' activation in their children's "schooling from home": 1) technical/administrative, related to having inadequate tools for distance education and 2) pedagogical/didactic, related to the prevailing concepts of teaching and learning being anchored in the behavioral-transmission paradigm.

**Conclusions and/or recommendations:** The results apply primarily to the school under study and represent an intrinsic case study. However, it is reasonable to assume that the events, phenomena, and processes identified in the study may serve to explain phenomena in other schools that have organized distance education similarly. The cautious recommendation, aiming to safeguard family resources (thereby protecting equal opportunities for all children to learn) in times of crisis, is to transform the pedagogical underpinnings that shape today's educational practices from behaviorist to constructivist. However, this requires further research.

**Keywords:** distance education; parental experiences; COVID-19 pandemic; correspondence learning; communication; pedagogical concepts of learning

## Introduction

The COVID-19 pandemic forced many governments to take extraordinary measures to limit the spread of the virus. In the spring of 2020, more than 1.5 billion students in over 190 countries were unable to attend school due to these measures (United Nations, 2020). In Poland, the Minister of National Education (MNE) based his decision to suspend teaching and educational activities on the Special Law of March 2, 2020 (Dz.U. of 2 March 2020, item 374). This suspension began on March 12; on March 20, the MNE introduced regulations that formalized distance learning methods and techniques (Dz.U. of 2020, item 493).

## **The key role of parents in emergency distance education in national and international research**

During the second and third quarters of 2020, multiple studies were conducted, in both Poland and internationally. These studies focused on the technologies, work methods, and tools used by teachers outside the classroom (Wiatr, 2022). The aim was to determine how education was being provided during the pandemic. The studies found that during the first wave of the pandemic, schools adopted a “correspondence” model of education. This involved teachers communicating educational content and assignments via email or other integrated tools, such as e-registries or instant messaging (Wiatr, 2022). These tools helped to overcome the geographical distance between teacher and student created by the school closures. The selection of such tools was left to the discretion of school principals and teachers in Poland.

During the pandemic, various reports highlighted the significant role of parents in the continuation of their children’s education (e.g., Bubb & Jones, 2020; Di Pietro et al., 2020; Ho et al., 2021; Misirli & Ergulec, 2021; Mußél & Kondratjuk, 2020; Trzcińska-Król, 2020). These studies not only recognized parents as a vital factor in their children’s academic success or failure, but also identified them as being particularly impacted by distance learning techniques (e.g., Daniela et al., 2021; Girard & Prado, 2022; Krents et al., 2020).<sup>1</sup> The researchers noted that parents often compensated for the shortcomings of educational institutions. This significant parental role in the education of children and adolescents represents an individualization of care and education that requires further analysis.

Many national and international publications have explored how parents have taken on additional teaching responsibilities (e.g., Bhamani et al., 2020; Parczewska, 2021). The publications investigate how parents have responded to their new roles, the costs they have incurred, and the factors that may influence these costs (Bhamani et al., 2020; Brom et al., 2020; Bubb & Jones, 2020; Parczewska, 2021; Thorell et al., 2022).

<sup>1</sup> As the authors note, parents’ new responsibilities for their children’s learning at home have far exceeded those previously associated with schooling and homework.

Most of these studies have focused on the new, overwhelming tasks of parents (as educators of their children), while at the same time taking these tasks for granted and as unchallenged in the face of the rapid, extraordinary situation of lockdowns. What has been neglected is the context in which this new role and new tasks are taken on. Understanding how this happened is critical to designing interventions to better support those involved in children's education. Using participatory research, this article aims to address this knowledge gap by exploring the context in which parents become "home educators."

It was intentional to focus on the brief first wave of the COVID-19 pandemic. Its suddenness and force exposed the old logic that was organizing human behavior, including the rationale underlying educational practices. The subsequent changes in the following, longer waves of the pandemic were based on the experience of the first phase, which, incidentally, remained understudied.

## 2. Research method

The research was conducted in June and July 2020 at the request of the Parents' Council<sup>2</sup> from a metropolitan public elementary school with approximately 500 students. It employed a case study method, both intrinsic – with a focus on the needs, expectations, opinions, and experiences of parents from the school in question – and instrumental, serving as a catalyst or inspiration for explaining processes or phenomena observed at other schools which used similar practices (Stake, 2003).

The study consisted of both quantitative and qualitative components, with the latter being analyzed and presented herein. It followed the constructivist paradigm (Berger & Luckmann, 1983). Data was collected from

---

<sup>2</sup> The Parents' Council is a compulsory body in publicly funded schools run by the local authorities in Poland. It consists of parents of students from all classes. Members of the Parents' Council are elected by the parents for a one-year term. This body has primarily consultative powers and enables parents to participate in the organization of school life, including its formal aspects.

June 25 to July 5, 2020, using an electronic questionnaire developed in collaboration with the Parents' Council. The questionnaire was distributed anonymously and on a voluntary basis to all parents in the school via electronic register (Librus<sup>3</sup>) and email.

From the target group, 104 parents<sup>4</sup> responded to the survey, representing approximately 25% of the total invited participants. To address the educational challenges at various stages of elementary education, the participants were categorized into different levels, based on their child's year<sup>5</sup> (Table 1). Each quote from the participants later in this paper is labeled with the child's level of schooling.

**Table 1**

Student's level	Number of responses for each level	Percentage of responses for each level
I	17	16%
II–III	31	30%
IV–VI	34	33%
VII–VIII	22	21%
Total	104	100%

There was a high level of willingness among parents to include longer descriptions about their experiences in their answers to the open-ended questions. Ninety-eight participants answered the prompts beginning

<sup>3</sup> Librus is a popular school management software program in Poland that features an electronic register.

<sup>4</sup> As some parents had multiple children attending the school under the study, they were requested to respond regarding a single selected child.

<sup>5</sup> Year 1 (Level I) was treated separately due to the low literacy skills of first-graders. Years 2 and 3 comprised Level II–III, which included students from a more advanced stage of early childhood education. Years 4–6 formed Level IV–VI, where students are introduced to a subject-specific teaching style. Years 7 and 8 were combined into Level VII–VIII, where the range of subjects is expanded to include chemistry, physics, and social studies, and the work of teachers and students seems to be geared toward preparing for the 8th-grade final examination (to complete Polish elementary school education).

with “What I liked most about remote teaching was...” and “It’s too bad that...” Likewise, 97 parents completed the sentence “The greatest difficulty for me was...”, 90 completed the sentence beginning with “My child’s greatest difficulty was...”, and 98 answered the question “What and how can remote learning be improved?” The question “Do you have knowledge, skills, or other resources that could help improve the comfort and quality of remote learning at our school?” received 74 responses, 34 of which included specific suggestions.

The analysis presented herein encompasses parents’ statements from the survey’s open-ended questions and data from Librus.<sup>6</sup>

Strategies from Charmaz’s (2013) constructionist grounded theory were used to identify broader categories in an inductive process. The analysis began with open coding followed by selective coding. This process was accomplished by using constant comparison and code transformation techniques. The coding process involved writing memos to develop emerging ideas or hypotheses. Categories were compared and/or referenced to each other in search of relationships and connections. Only one set of categories is presented here, representing the broader context in which parents took over the tasks of educating a child at home.

A distinct category in this set was comprised of statements from parents expressing disagreement with the definition of the school’s distance learning practices and suggesting that what the parents were dealing with was “closer” to homeschooling. This clear statement created a starting point for further inductive analysis to understand the context of the parents’ definition of the situation, which differed from that of the school. The category was named “negation of the school’s implementation of distance learning.” Statements in this category related to claims about the actions of teachers, students, or parents during the school closings (What did the parents/teachers/students do?), leading to categories such as “what does it mean to teach?,” “student helplessness,” “teacher disappearance,” and “emergence of the home educator.” The broader

---

<sup>6</sup> They served to reconstruct the process of remote teaching (emails with assignments, calendars, and schedules).

phenomenon of “communication” provided a more general context for these actions. It provided the connection between (1) the “disappearance of the teacher,” (2) the helplessness of the student, and (3) the “emerging of the parent as home educator.” It’s worth noting that references to homeschooling or home education made by parents are intuitive and do not necessarily meet the criterion of the legal definition of homeschooling in Poland.<sup>7</sup>

The analytical categories that emerged from the study were discussed with the Parents’ Council, school management, and other researchers and their comments and insights were incorporated into the study.

### 3 Results of the analysis

#### 3.1 Implementation of distance education in the school

The elementary school under study introduced distance education in March 2020 and subsequently adjusted it over the following 3 months. Initially, it was a combination of asynchronous and interactive learning. Teachers sent assignments via email to students (and their parents) for individual work with textbooks, exercise books, or multimedia materials on educational portals. Initially, students sent pictures of their work to teachers, but within 2 weeks this practice was quickly replaced. Instead, only selected assignments were sent by pupils identified by the teacher:

During the first week, I took pictures of several of my child’s notebooks every day, and then attached these pictures to emails addressed to different teachers and sent messages from my own account. I tried

---

<sup>7</sup> The Act of September 7, 1991 on the education system guarantees the right of a child to be educated outside of school under conditions organized and ensured by their parents. According to Polish law, a child may be educated at home only at the request of their parents. Parents are obliged to create and ensure the conditions for learning, having obtained the permission of a psychological and pedagogical counseling center to allow this type of education. A child educated at home must pass an annual placement exam.

to describe them in a logical and intuitive way. After the first week, teachers started writing to tell me not to send them pictures of children's notebooks and homework until they asked for it. Some asked once, others twice, still others not at all during those 3 months. Thus, the teachers' ongoing monitoring of children's work and providing feedback ended. It's a shame. I was left alone with the job of teaching. [IV–VI]

In March, certain teachers conducted online meetings via Zoom and experimented with the application called Padlet. In April, the Teams platform was introduced, and teachers began sporadically inviting students to 15-minute online meetings. While parents appreciated these attempts, not all teachers conducted lessons in this manner, and the frequency of weekly meetings varied based on the educational stage. During the 3 months, remote education evolved, but the asynchronous model remained the primary mode of education. The content was delivered via electronic register (Librus) and email. MS Teams was mainly utilized for short online lessons and for submitting completed assignments.

### **3.2. "It wasn't distance education, but home education by parents" – Negation of the school's implementation of distance education**

When asked about their experiences with distance education, few parents acknowledged its benefits (specifically the non-intensive, asynchronous model<sup>8</sup>), but many denied that the school had implemented it at all. Parents expressed their disbelief in two ways: some felt that distance education was non-existent ("Distance education was basically non-existent, so it's hard to say what I liked [VII–VIII]; "there was no distance

<sup>8</sup> Diverse asynchronous education has its supporters. Thus, the scholarly literature points to such advantages as working at one's own pace, according to learners' schedules, with reduced need for infrastructure and fewer conflicts over sharing equipment (Martin et al., 2020). Parents, on the other hand, appreciated the loosening of the time and space regime and the reduced pressure to "be on time," among other things. They also valued the greater harmony at home, better opportunities to adapt their child's learning efforts to their biorhythm, and the ability to maintain a healthy balance of work in front of the computer screen.



education – only teaching by the parent” [I]), while others believed that certain practices did not qualify as distance education (“Unfortunately, this semester, it’s difficult to call it distance education – it was just assigning homework and assessing it” [II–III]; “Sending dry messages with instructions to read something from a textbook or do some assignments is not distance education” [VII–VIII]). This indicates that many parents perceived the teachers’ efforts as inadequate and did not consider them an embodiment of actual instruction.

### **3.3. “I might just as well send assignments myself, in any subject” – What does it mean to teach?**

Parents’ statements were analyzed to determine their perception of the teacher’s work and what is involved in the teaching process. These statements included:

- 1) instances where parents had to take on the teacher’s responsibilities, such as explaining topics to their children (“Actually, almost all the teacher’s work was done by the parents, because they were the ones who had to explain all the topics” [II–III]),
- 2) situations where the teacher failed to perform certain duties (“the teacher did not talk to the students online” [I]; “The teacher ... didn’t even bother to ask whether the child understood the material” [VII–VIII]),
- 3) descriptions of what constitutes good teaching, such as inspiring curiosity and supporting students (“A teacher should teach and impart knowledge, stimulate curiosity, and show the student that even in such conditions it’s worth learning. Be with the student. Support the student” [VII–VIII]), and
- 4) challenges faced by parents as substitute teachers, including motivating students when there are no grades (“Encouraging a child to watch yet another video from the next subject, when it didn’t involve getting a grade or completing a task” [IV–VI]), explaining new topics and issues on which they were unfamiliar (“Understanding the material in some areas [I’m not an educator and can’t transfer knowledge like a teacher]” [II–III]), and organizing the process itself (“Doing my

job in constant readiness to help the children with their schooling, running links, printing attachments, logging in to different sites, etc., and constantly going on Librus" [IV–VI]).

In the analysis of parents' statements, certain activities that proved fundamental in defining teaching itself were extracted. These pivotal teaching activities encompassed structuring the learning environment, explaining, clarifying, motivating, correcting, directing, and monitoring. These activities, typically occurring in the direct physical presence in a classroom, often took place without much reflection. In a distance learning context, however, they required deliberate action to design the learning experience, considering not only the delivery of the subject matter, but – more importantly – to facilitate effective learning. According to Anderson et al. (2001), this occurs through three alternatives: cognitive presence, social presence, and teaching presence, which replace physical, in-person interactions. Nurturing these areas develops and supports the various types of interaction that foster active learning.

In the absence of supportive activities for student learning, teachers appeared and disappeared at different stages of the educational process. They were present at the beginning, assigning work through electronic messages, and at the end, holding students accountable through tests or grades recorded in the electronic register. However, their overall involvement seemed more like delegation rather than genuine care for their tasks. Thus, the actual work was being done by someone else. Despite this, teachers still appeared to be in charge and managed the pace and content of the students' work.

### **3.4 "The sound of Librus messages at virtually any time" – The context of the teacher's disappearance**

One might ponder why teachers vanished from the view of children and parents, despite their dedicated efforts in imparting lessons to students. What factors contributed to this disappearance? The answer is to be found in the feedback provided by parents regarding communication. Limitations were imposed by the available communication tool, primarily

barely interactive emails and the unfortunate didactic decision to divide materials according to 45-minute lesson units, as structured by the typical in-school learning lesson plan for the day. Thus, numerous email messages with attachments were transferred between students and teacher every day, resulting in a tremendous workload for both sides. This meant that students in Years 4–8, due to the subject-divided timetable, received between 6 and 8 assignment messages per day. In the parents' experience, it seemed like "constant broadcasting from Librus, even on weekends, late evenings, and early mornings" [IV–VI] and "school 'nested' at home 7 days a week and almost 24 hours a day" [IV–VI].

Managing this volume of correspondence was difficult, not only for the students but also for the parents rushing to help them ("navigating the Librus message box in search of homework" [IV–IV]). To complete assignments, countless messages needed to be opened and the content deciphered, sometimes printed out. Then, the work on current and future assignments had to be organized and carried out. Lastly, the finished assignments had to be sent back, which was not so clear:

Very large amounts of material were assigned every day. Was it somehow checked by teachers? We tried to send photos of the child's homework every day or every other day (there was so much of it that it was impossible to do so less often – the teacher's email could only accommodate up to nine photos, and that's more or less what we did in two days). And for those hundreds of emails sent, we got three replies during the semester. So there was a feeling that maybe we were unnecessarily spamming them with these assignments. [I]

Parents realized that the issue of handling this volume of messages was not solely their own, but also the teachers', who likely had faced an overwhelming influx of attachments, photos, and messages from various student and parent email addresses. To manage this, teachers implemented rules for message descriptions, making each message a collection of information about the assignment. This included instructions for completing the assignment, the due date, conditions for submitting it (such as

whether it was mandatory for all students in specific groups, whether it was graded or ungraded, and the material it covered), as well as guidance on describing, addressing, and submitting it. These elements were challenging for both students and parents, especially as the assignments blended in with numerous similar messages from other teachers and days (“every teacher wanted homework to be sent elsewhere. One to email, another to some other place” [II–III]). It was therefore a challenge for everyone (“checking what the deadline was for different homework assignments” [IV–VI]; “keeping an eye on the rules for creating email subject lines [some teachers didn’t accept work with the wrong title format]” [IV–VI]; “finding information on assignments to be done” [VII–VIII]). Effectively managing this tool demanded significant time and effort spent scrolling through the inbox, searching for messages to find specific criteria or rules.

One mother shared her experience of requesting bundled assignments for each subject in a single message, instead of five separate ones per week. She also asked for the assignment to be sent by 9:30 a.m., allowing parents to plan learning activities with their children before starting their own work. In response, she received an email stating that teachers work during school hours and that assignment messages are sent according to the timetable [L.4.1, IV–VI].

It’s not surprising that parents perceived such messages as merely a cynical attempt to simulate work:

remote teaching resembled more the logging of activities (whatever kinds) by the teacher – often insignificant and boiling down to merely assigning tasks – than doing real teacher’s work: figuring out how to teach, explain, check whether the child understood, how to help students acquire knowledge and consolidate it, and how to inform the child about further work on a topic or problem. [IV–VI]

During distance education in the school under study, the teachers did not engage in key teaching activities. The analysis shows that most activities were related to the organizational and technical aspects of

communication, such as ordering, sending, returning, attaching (photos of notebook pages), sharing, receiving (messages), searching (for messages), replying (to messages), completing (tasks and assignments), addressing (emails), and grading. These activities were more focused on overcoming geographical distance than building a psychological and communicative connection, along with lowering the transactional distance for student learning (Garrison, 2000; Moore, 2018). According to Moore (2018), building such a lowering distance connection requires a pedagogically informed plan of action, considering the interactional potential of the tool, the structure of the course, and the degree of learner autonomy. Unfortunately, this was lacking in the school in question.

### **3.5 “Teaching has been shifted to the shoulders of parents, in some cases 100%” – Parents overtaking the “school load”**

At the school under study, the teachers were struggling to keep up with the high volume of emails they received from students. The process of handling attachments was both technically and administratively demanding, making it difficult for the teachers to provide comprehensive support to their students. As a result, the burden of the learning process fell on the students themselves. This was a significant shift, as the school system had previously socialized the students to be dependent on and subordinate to their teachers. Becoming autonomous and self-directed learners overnight was not an easy task for the students. For example, this is how one parent recalled it:

the children were not prepared for distance learning. They did not understand that they had to log in, that they had to work through the material systematically, and that they should be in the remote lessons and take an active part in them. It was difficult for them to organize their daily schedule on their own, allocating sufficient time for lessons.  
[VII–VIII]

Many parents were motivated to help their children due to this visible sense of helplessness. However, the parents became actively engaged

in their children's learning in response to their children's needs as well as through the encouragement and, at times, requests from teachers. Teachers employed subtle methods, such as sending copies of tasks meant for the children, as well as more direct strategies, such as informing parents of any missing elements ("I found it difficult to remember what work was for what day, and I took 'missing homework' emails from teachers very personally, as if I had failed and I should have done better" [IV–VI]).

It is evident that parents played a crucial role in the process and that the quality of their involvement often determined their child's success. Parents felt that there was a gap, both physically and emotionally, left by the teacher, and they felt the need to fill it. As a result, many parents assumed the role of non-professional "home educators," functioning as "prostheses" of the teacher's physical presence in the student's home, dependent on following instructions as prescribed.

## Discussion

The study presented here illustrates (on a small scale) the circumstances under which parents took on new responsibilities of educational tasks. The choice of a short period – the 3.5 months of the first wave of the pandemic – was not accidental. This is because the first wave of COVID-19 represented the moment when schools made the extraordinary move to hastily switch to remote teaching. This pace of change and the unprecedented nature of the situation made it possible to identify some implicit patterns and assumptions that fed the hastily implemented solutions in the first wave of the pandemic. How schools handled distance learning at that time, and how it was experienced by those involved, obviously influenced later decisions regarding necessary changes. In this study, attention was paid to the phenomena and processes that turned parents into "home educators" and made them the most critical link in education using distance learning tools.

The parents made it clear that the school's approach could not qualify as distance learning. This clear thesis led to questions about what education

and teaching in general are and how they should be pursued. According to the parents, even though the school was responsible for assigning tasks, setting the pace of work, and checking the student's progress, it was ultimately the family home that provided the means for teaching and conducted the teaching.<sup>9</sup> Those included the family's resources and the parents' involvement. The parents explained, checked understanding, organized the learning environment, and motivated their children instead of the absent teachers.

In addition, the way teachers assigned work – daily, in each subject, according to the daily schedule, and by email – made the management of the entire process very difficult for everyone involved and made the parents' administrative support critical to the entire process. This mode of communication made it impossible for teachers and students to have the intensive interaction necessary for the pedagogical model. The school's use of email was part of a technical/administrative dimension of the broader context that activated parents both as administrators of the teachers' correspondence (helping children to use the tool) and as facilitators, explaining the content, motivating the pupils, guiding and structuring their work, etc.

The parents' ubiquitous, intensive support or even filling in for an invisible teacher, is also well documented in the literature (e.g., Garbe et al., 2020; Haller & Novita, 2021; Lase et al., 2021; Misirli & Ergulec, 2021). It seemed to be a matter of course and, as such, raised the question of the specific pedagogical vision behind it. This vision was related to the second dimension of the practices implemented in the school under study: the pedagogical/didactic dimension. The practices were born out of concepts of learning and teaching that were familiar from the classroom and were anchored in transmission-behavioral models (e.g., Czaplinski et al., 2020; Plebańska et al., 2020; Ptaszek et al., 2020). The teacher is the central figure in the educational process, transmitting knowledge to passive, resistant, and reluctant students and acting as the guardian of the learning

---

<sup>9</sup> These results are supported by the international and national studies referred to above.

process. In the classroom, the teacher directly interacted with the students, with a physical, supervisory presence which allowed them to control both the pace of the students' work and the content they were "absorbing." In distance education, the physical and interactive presence of the teacher proved demanding to achieve. In turn, the educational process lost its former owner. Without a teacher, students lacked guidance on what, when, how, and why to learn. The "vacancy" of the teacher was often filled by parents who were physically present at home to fulfill the teaching duties.

It is worth noting that such attempts to organize distance education took a very different course and were based on different assumptions than those of proper distance education. That is, the distance education approach is established on a constructivist and not behaviorist paradigm and it emphasizes the central role of the student as the owner of the learning process (Garrison et al., 2000; Means et al., 2013; Picciano, 2017; Vaughan et al., 2013).

The shortcomings of this particular asynchronous distance learning program during the initial phase of COVID-19 led to it being discontinued later. The overall frustrations of parents and teachers with the teaching methods nested in the behavioral model and pursued in correspondence form led to a shift towards synchronous online classes during the successive waves of the pandemic. Despite this shift, however, the behavioral teaching paradigm continued. Online synchronous classes immobilized students in front of screens during long school hours, despite numerous recommendations to combine and skillfully interweave synchronous and asynchronous lessons using appropriate technological tools and constructing a pedagogically informed curriculum (Chen et al., 2021; Martin et al., 2020; Minister of National Education, 2020; Miller et al., 2020).

The results apply primarily to one particular school and are thus an example of an intrinsic case study (Stake, 2003). However, it is reasonable to assume that the events, phenomena, and processes identified in the study may serve to illustrate or explain phenomena in other schools that organized distance education similarly. Reports from both Polish (Wiatr, 2022) and international (e.g., Garbe et al., 2020; Huber & Helm, 2020) studies of this short period show that during the pandemic, the dominant



way of organizing distance learning was for teachers to send via email instructions to students for independent work with a textbook, worksheets, and digital materials. International studies also clearly acknowledge parental dissatisfaction with the lack of interactivity of the selected tools, resulting in parental involvement in school tasks at home (Dong et al., 2020; Hamaidi et al., 2021; Lau et al., 2021; Misirli & Ergulec, 2021). These findings, however, require further research.

### Limitations

Certain limitations of this study should be acknowledged as warranting consideration. Firstly, it was conducted on a small scale and in a specific location, which may affect the generalizability of the results. Although similar studies conducted in Poland and abroad have found comparable results, further research and qualitative data analysis are necessary. Secondly, the survey was distributed electronically, which is a common weakness in studies because it may exclude people who have technical difficulties or lack the necessary skills to access the survey. This could have prevented relevant parental perspectives from being represented. Thirdly, the survey did not include sociodemographic questions that could have provided insight into the study participants. The Parents' Council made the decision to exclude these questions so as to encourage a broader response to the survey. This may have weakened the findings presented in this study.

In conclusion, while this study provides valuable insights into parents' experiences, it is important to acknowledge its limitations and consider the need for further research.

**Funding:** This research received no external funding.

## References

- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Network*, 5(2), 1–17. <https://doi.org/10.24059/olj.v5i2.1875>
- Berger, P., & Luckmann, T. (1983). *Spoleczne tworzenie rzeczywistości*. Biblioteka Myśli Współczesnej.
- Bhamani, S., Makhdoom, A. Z., Bharuchi, V., Ali, N., Kaleem, S., & Ahmed, D. (2020). Home learning in times of COVID: Experiences of parents. *Journal of Education and Education Development*, 7(1), 9–26. <https://doi.org/http://dx.doi.org/10.22555/joed.v7i1.3260>
- Brom, C., Lukavský, J., Greger, D., Hannemann, T., Straková, J., & Švaříček, R. (2020). Mandatory home education during the COVID-19 lockdown in the Czech Republic: A rapid survey of 1st–9th graders' parents. *Frontiers in Education*, 5(July), 1–8. <https://doi.org/10.3389/feduc.2020.00103>
- Bubb, S., & Jones, M.-A. (2020). Learning from the COVID-19 home-schooling experience: Listening to pupils, parents/carers and teachers. *Improving Schools*, 23(3), 209–222. <https://doi.org/10.1177/1365480220958797>
- Charmaz, K. (2013). Invitation to Grounded Theory. In *Insert Textbox - Introductory Statement to Chapter 1* (Vol. 53, Issue 9, pp. 1689–1699). <https://doi.org/10.1017/CBO9781107415324.004>
- Chen, Z., Jiao, J., & Hu, K. (2021). Formative assessment as an online instruction intervention. *International Journal of Distance Education Technologies*, 19(1), 1–16. <https://doi.org/10.4018/IJDET.20210101.0a1>
- Czapliński, P., Dynowska-Chmielewska, K., Federowicz, M., Giza-Poleszczuk, A., Gorzeńska, O., Karwińska, A., Traba, R., Wiśniewski, J., & Zwierzdzyński, M. (2020). *Raport Edukacja. Między pandemią COVID-19 a edukacją przyszłości* [Education report: Between the COVID-19 pandemic and the education of the future]. Krakow.
- Di Pietro, G., Biagi, F., Costa, P., Karpiński, Z., & Mazza, J. (2020). *The likely impact of COVID-19 on education: Reflections based on the existing literature and recent international datasets*. Publications Office of the European Union. <https://doi.org/10.2760/126686>
- Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth*

- Services Review*, 118(June), 105440. <https://doi.org/10.1016/j.childyouth.2020.105440>
- Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). Parents' experiences with remote education during COVID-19 school closures. *American Journal of Qualitative Research*, 4(3), 45–65. <https://doi.org/10.29333/ajqr/8471>
- Garrison, R. (2000). Theoretical challenges for distance education in the 21st century: A shift from structural to transactional issues. *International Review of Research in Open and Distance Learning*, 1(1), 1–17.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2–3), 87–105. [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)
- Girard, C., & Prado, J. (2022). Prior home learning environment is associated with adaptation to homeschooling during COVID lockdown. *Heliyon*, 8(4). <https://doi.org/10.1016/j.heliyon.2022.e09294>
- Haller, T., & Novita, S. (2021). Parents' perceptions of school support during COVID-19: What satisfies parents? *Frontiers in Education*, 6(September), 1–15. <https://doi.org/10.3389/educ.2021.700441>
- Hamaidi, D. A., Arouri, Y. M., Noufal, R. K., & Aldrou, I. (2021). Parents' perceptions of their children's experiences with distance learning during the COVID-19 pandemic. *International Review of Research in Open and Distributed Learning*, 22(2), 224–241.
- Ho, E. S., Chiu, S. W., Charis, K. S., & Lee, T. S. (2021). The mediating role of different types of parental support in the social disparity of hope in young adulthood. *Journal of Youth and Adolescence*, 50, 1437–1449. <https://doi.org/10.1007/s10964-021-01409-z>
- Huber, S. G., & Helm, C. (2020). Lernen in Zeiten der Corona-Pandemie Die Rolle familiärer Merkmale für das Lernen von Schüler\*innen: Befunde vom Schul-Barometer in Deutschland, Österreich und der Schweiz. *DDS*, 16, 37–60. <https://doi.org/https://doi.org/10.31244/9783830992318.02>
- Krents, M., Kos, E., Green, A., & Garcia-Alonso, J. (2020). Easing the COVID-19 burdens on working parents. BCG. <https://www.bcg.com/publications/2020/helping-working-parents-ease-the-burden-of-covid-19>

- Lase, D., Zega, T. G. C., & Daeli, D. O. (2021). Parents' perceptions of distance learning during COVID-19 pandemic in rural Indonesia. *SSRN Electronic Journal*, 13(2), 101–111. <https://doi.org/10.2139/ssrn.3890610>
- Lau, E. Y. H., Li, J.-B., & Lee, K. (2021). Online learning and parent satisfaction during COVID-19: Child competence in independent learning as a moderator. *Early Education and Development*, 32(6), 830–842. <https://doi.org/10.1080/10409289.2021.1950451>
- Martin, F., Polly, D., & Ritzhaupt, A. (2020). Bichronous online learning: Blending asynchronous and synchronous online learning. *EDUCAUSE Review*, (September), 1–11. Retrieved from <https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning>
- Means, B., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record*, 115(3), 1–47.
- Miller, T., MacLaren, K., & Xu, H. (2020). Online learning: Practices, perceptions, and technology apprenticeship. *Canadian Journal of Learning and Technology*, 46(1), 1–27.
- Minister of National Education. (2020). *Raport Ministra Edukacji Narodowej. Zapewnienie funkcjonowania jednostek systemu oświaty w okresie epidemii COVID-19* [Report of the Minister of National Education: Ensuring the functioning of the education system during the COVID-19 epidemic]. Warsaw: MEN.
- Misirli, O., & Ergulec, F. (2021). Emergency remote teaching during the COVID-19 pandemic: Parents' experiences and perspectives. *Education and Information Technologies*, 26(6), 6699–6718. <https://doi.org/10.1007/s10639-021-10520-4>
- Moore, M. G. (2018). The theory of transactional distance. In M. G. Moore (Ed.), *Handbook of Distance Education* (4th ed., pp. 32–46). New York: Routledge. <https://doi.org/10.4324/9781315296135-4>
- Mußeł, F., & Kondratjuk, M. (2020). Methodological perspectives on researching home schooling due to the Corona pandemic: An invitation to think further. *International Dialogues on Education*, 7(Special Issue), 28–40. <https://doi.org/10.53308/ide.v7i1/2.22>

- Parczewska, T. (2021). Difficult situations and ways of coping with them in the experiences of parents homeschooling their children during the COVID-19 pandemic in Poland. *Education 3-13. International Journal of Primary, Elementary and Early Years Education*. <https://doi.org/10.1080/03004279.2020.1812689>
- Picciano, A. G. (2017). Theories and frameworks for online education: Seeking an integrated model. *Online Learning*, 21(3), 166–190. <https://doi.org/10.24059/olj.v21i3.1225>
- Plebańska, M., Szyller, A., & Sieńczewska, M. (2020). *Raport - edukacja zdalna w czasach Covid-19* [Report: Distance education in the times of COVID-19.] Wydział Pedagogiczny Uniwersytetu Warszawskiego. [https://kometa.edu.pl/uploads/publication/941/24a2\\_A\\_a\\_nauczanie\\_zdalne\\_oczami\\_nauczycieli\\_i\\_uczniow\\_RAPORT.pdf?v2.8](https://kometa.edu.pl/uploads/publication/941/24a2_A_a_nauczanie_zdalne_oczami_nauczycieli_i_uczniow_RAPORT.pdf?v2.8)
- Ptaszek, G., Stunża, G. D., Pyżalski, J., Dębski, M., & Bigaj, M. (2020). *Edukacja zdalna: co się stało z uczniami ich rodzicami i nauczycielami?* [Distance education: What happened to students, their parents, and teachers?]. Gdańsk: Gdańskie Wydawnictwo Psychologiczne Sp. z o.o. Retrieved from <https://zdalnenauczanie.org/wp-content/uploads/2020/10/edukacja-zdalna.pdf>
- Rozporządzenie Ministra Edukacji Narodowej z dnia 20 marca 2020 r. w sprawie szczególnych rozwiązań w okresie czasowego ograniczenia funkcjonowania jednostek systemu oświaty w związku z zapobieganiem, przeciwdziałaniem i zwalczaniem COVID-19 (Dz.U. of 2020, item 493) [Regulation of the Minister of National Education of March 20, 2020 on special solutions during the period of temporary limitation of the functioning of education system units in connection with the prevention, counteracting and combating of COVID-19]
- Stake, R. E. (2003). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 134–164). Sage Publications, Inc.
- Thorell, L. B., Skoglund, C., de la Peña, A. G., Baeyens, D., Fuermaier, A. B. M., Groom, M. J., Mammarella, I. C., van der Oord, S., van den Hoofdakker, B. J., Luman, M., de Miranda, D. M., Siu, A. F. Y., Steinmayr, R., Idrees, I., Soares, L. S., Sörilin, M., Luque, J. L., Moscardino, U. M., Roch, M., Crisci, G., & Christiansen, H. (2022). Parental experiences of homeschooling during the COVID-19 pandemic: Differences between seven European countries and between children

with and without mental health conditions. *European Child and Adolescent Psychiatry*, 31(4), 649–661. <https://doi.org/10.1007/s00787-020-01706-1>

Trzcńska-Król, M. (2020). Students with special educational needs in distance learning during the COVID-19 pandemic – parents' opinions. *Interdyscyplinarne Konteksty Pedagogiki Specjalnej*, 29, 173–191. <https://doi.org/10.14746/ikps.2020.29.08>

United Nations. (2020, August). *Policy brief: Education during COVID-19 and beyond*. [https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg\\_policy\\_brief\\_covid-19\\_and\\_education\\_august\\_2020.pdf](https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf)

Ustawa z dnia 2 marca 2020 r. o szczególnych rozwiązaniach związanych z zapobieganiem, przeciwdziałaniem i zwalczaniem COVID-19, innych chorób zakaźnych oraz wywołanych nimi sytuacji kryzysowych (Dz.U. 2020 poz. 374) [Act of March 2, 2020 on special solutions related to the prevention, counteracting and combating of COVID-19, other infectious diseases and crisis situations caused by them]

Vaughan, N. D., Cleveland-Innes, M., & Garrison, D. R. (2013). *Teaching in blended learning environments: Creating and sustaining communities of inquiry*. Edmonton, Alberta: AU PRESS. <https://doi.org/10.4324/9780203838761>

Wiatr, M. (2022). Przegląd badań nad zdalną edukacją prowadzoną w polskiej szkole podczas pierwszej fali pandemii covid-19 – o prymacie techniki i technologii nad refleksją pedagogiczną [Review of research on remote education conducted in Polish schools during the first wave of the COVID-19 pandemic: The primacy of technique and technology over pedagogical reflection]. *Colloquium*, 45(1), 135–165. <https://doi.org/http://doi.org/10.34813/09coll2022>



**Anna Kwatera**

<https://orcid.org/0000-0002-9421-7248>

University of the National Education Commission, Krakow, Poland

[anna.kwatera@up.krakow.pl](mailto:anna.kwatera@up.krakow.pl)

**Mariusz Dziegłowski**

<https://orcid.org/0000-0001-6863-3830>

University of the National Education Commission, Krakow, Poland

[mariusz.dziegłowski@up.krakow.pl](mailto:mariusz.dziegłowski@up.krakow.pl)

## Implementation of the Good Behavior Game in Polish Elementary Schools Under COVID-19 Restrictions

(pp. 79–103)

Suggested citation: Kwatera, A. & Dziegłowski, M. (2023). Implementation of the Good Behavior Game in Polish Elementary Schools Under COVID-19 Restrictions. *Multidisciplinary Journal of School Education*, 12(2(24)), 79–103. <https://doi.org/10.35765/mjse.2023.1224.04>

### Abstract

**Objectives of the research:** The main aim of the research was to verify the quality of the implementation of the “Good Behavior Game” (GBG) program in Polish schools and to determine its effects on students and teachers during the COVID-19 pandemic.

**Research methods:** The methodology of the research was based on qualitative and quantitative data analysis. The data was retrieved from teachers’ and coaches’ assessments and the results of playing the GBG in 19 elementary schools in Krakow, Poland during four months of the COVID-19 pandemic.

**A short description of the context of the issue:** The Good Behavior Game is an American universal prevention program that can limit the risky behavior of adolescents and young adults and can help children starting their education to play the role of a student. For teachers, it is additionally an effective tool for classroom management. It is based on four basic pillars: class rules, teamwork, positive reinforcement, and observing students’ behavior.

**Research findings:** The results show the obstacles and difficulties involved in implementing the GBG under COVID-19 restrictions. The findings show how the actions of teachers and coaches translated into an observable reduction in pupils' disruptive behavior.

**Conclusions and/or recommendations:** The analysis revealed a gradual increase in the quality of program implementation in all areas of evaluation. In terms of the program's effect on the pupils, the findings showed that over time they gradually successfully internalized the rules and were behaving in line with expectations. Using the GBG in the context of online education caused by the restrictions of the COVID-19 pandemic posed a challenge to teachers: they had to change teaching methods, prepare new educational resources, and modify GBG procedures. The context of the pandemic can also be seen as an added value in the education process. Better digital competences and an innovative attitude toward the education process were observed among both teachers and students.

**Keywords:** Good Behavior Game, implementation, COVID-19, elementary school, Poland

## Introduction

Contemporary education in Poland needs solutions that support the work of teachers. The Good Behavior Game (GBG) is a program that has proven successful in many countries, including the USA, Brazil, Sweden, the UK, and Estonia. The GBG was first used in Poland in 2017 as a result of cooperation between the American Institute for Research and a non-governmental organization called Ukryte Skrzydła. The GBG is a prevention program whose long-term effectiveness has been scientifically confirmed (Donaldson et al., 2015). Its short-term value for teachers is that it provides smooth classroom management thanks to positive shifts in the behavior of elementary school pupils (Fishbein & Wasik 1981; Donaldson et al., 2017).

This article presents the findings of research on the GBG in Poland. The process coincided with the COVID-19 outbreak. The pandemic resulted in a shift to online education in all types and levels of Polish schools.



The evaluation was focused on the quality of procedures, the performance of teachers and pupils, and the general level of faithfulness to the program. It also included external and internal structural factors that interfered with the implementation process.

In the theoretical part of the article, we provide a broad picture of the GBG's effects, based on the scholarly literature on the GBG in various cultural, social, and organizational contexts. The literature review revealed lacunae in the previous research and enabled us to situate the findings on the implementation of the GBG in Poland within a global context. In the empirical part of the article, we discuss the methodology of the research and characterize the Polish education system, which provides significant context for the GBG. The data is presented in the following section of the article, followed by an analysis of COVID-19's impact on the implementation process. The article concludes with a discussion of the internal and external factors that interfere with the performance of pupils and teachers. At the end of the article, we present our conclusions in regard to the implications of the research for educational policy in Poland and to future research.

### **State of the art – what do we know about the effectiveness of the GBG in various contexts?**

Recent research has focused mainly on the following three areas of the GBG:

- the impact of the GBG on pupils' behavior and social relations and the impact of the GBG on teachers and teacher–student relations,
- modifications of the game in terms of technological enhancements and pupils' stimuli, and
- implementation of the game in various contexts such as levels of education (in preschool classes), outside the classroom, with special educational needs (SEN) pupils, and among culturally diverse populations.

Most of the studies were conducted from the perspective of behavioral psychology and used an experimental research design, including different points in time and/or a control group to verify a hypothesis of behavioral change or to measure the impact of various variables on the overall effects of the intervention. Most recent studies were limited to exploring the short-term effects and have thus raised questions regarding the sustainability of the behavioral patterns pupils adopt as a result of their participation in the game. Recent studies have confirmed the effectiveness of the GBG, as reported since the late 1970s (Medland & Stachnik, 1972).

The GBG is especially effective in classroom management: in reducing disruptive talking, out-of-seat movement, and other disruptive behaviors. The game develops teamwork (Ashworth, Humphrey, et al., 2020) and pro-social behavior (Coombes et al., 2016; Groves & Austin, 2017). A study conducted by Troncoso and Humphrey (2021) proved that the GBG's positive impact on developing social relations and reducing difficulties with concentration can be observed from childhood to early adolescence. Teachers who use the GBG can expect improved on-task behavior from their pupils (Pennington & McComas, 2017) and a long-term increase in educational performance (Ashworth, Panayiotou, et al., 2020). Therefore, it is not surprising that since the very beginning, the GBG was perceived as an effective way to work with at-risk children and children with emotional dysfunctions and deviant behavior (Joslyn & Vollmer, 2019).

However, although the effectiveness of the GBG for classroom management is easily verified, its effects outside the educational environment are not as obvious. Some researchers have pointed to the constraints of the GBG's impact. Donaldson et al. (2015, 2017) believe that the GBG will not be fully effective if it is not implemented in children's social environment. Recent studies have revealed the widespread acceptance – if not enthusiasm – of teachers to use the game and for its positive, lasting effect on the efficiency of teachers (Streimann et al., 2020). This acceptance is evident even among teachers who report a lot of difficulties addressing the lack of interaction with pupils during the game, especially with SEN students (Ashworth, Humphrey, et al., 2020). A study conducted by Tingstrom

(1994) among teachers shows that the GBG is accepted regardless of the age of the target group, the severity of the behavioral problem, or the stated rationale for the procedure. Rubow et al. (2018) also demonstrated that the GBG increased teachers' use of praise relative to reprimands and therefore had a positive effect on teacher–student relations.

Recent studies on the GBG also include several experiments modifying the traditional proceedings of the game with digital technology, especially ClassDojo and Class Badges (Dadakhodjaeva, 2017; Dillon, 2016; Ford 2017). Vargo and Brown (2020), in their experimental study examining three variants of the GBG (traditional, ClassDojo, and Class Badges) in a classroom of students with autism, proved that all variants resulted in similar decreases in disruptive behavior.

The third field of recent studies is implementation of the game in various contexts. The research on the GBG in preschool classes reveals the GBG's usefulness as a screening tool to identify pupils who need radical, individual intervention in group education and to reduce disruptive behavior at the individual and group level (Donaldson et al., 2011, 2017; Foley et al., 2019). Even though teachers reported encountering difficulties because of a lack of interactions with SEN pupils (Ashworth, Humphrey, et al., 2020), after the necessary adjustments, the GBG was assessed as effective in working with this category of pupils (Vargo & Brown, 2020; Groves et al., 2021). Except for Fishbein and Wasik's (1981) study on the GBG in a library context, there have not been many studies on pupils' behavior outside the classroom. The transformation of pupils' behavior in their families and in peer groups has been insufficiently studied. As the game has already been used in dozens of countries, some studies have been published on the outcome of the intervention in different cultural settings. Research by Saigh and Umar (1983) conducted in Sudan reveals the universal characteristics of the GBG, based on behavioral mechanisms which work the same regardless of the culture.

There have not been very many studies and reflections on the GBG implementation process as such, especially in regard to introducing it for the first time in a whole education system and with a large number of pupils. Two recent exceptions stand out: a study by Silva and Wiskow (2020),

who examined teachers' performance and adherence to the rules, and Streimann et al. (2020), who studied the implementation of the PAX GBG in Estonian schools. What we mean by the implementation process is a structural intervention on a large social scale and with a potentially extensive impact on the education system in a given society. From this perspective, the GBG is not just an intervention in a behavioral sense, but should also be seen as a sociological experiment.

### Cultural context

The first three grades of elementary school in Poland are said to involve "integrated teaching" and children between six and ten years of age. During this period of education, all school subjects are taught by the same teacher. Parents of children who have reached six years of age and have passed an aptitude test from a Psychological and Pedagogical Counselling Center can send their child to elementary school; parents may alternatively decide to send their child to school at age seven. In either case, the child is first required to attend one year of preschool.

A crucial characteristic of the Polish elementary school system – and at the same time a significant challenge in implementing the GBG – is the collective approach to teaching rather than the emphasis on teamwork. The second characteristic of the Polish elementary education system is its centralization. Teachers are focused on the core curriculum and are involved in fulfilling many formal and bureaucratic regulations (Popławska, 2021). The bureaucratic and educational workload frequently causes teachers to withdraw from any extra activities, especially from innovative ones. The motivation for such activities is also limited by un-supportive attitudes from head teachers and teaching staff (Kwatarra et al., 2018). Therefore, the autonomy of teachers, understood as a choice of teaching program or coursebook, is rather limited (Madalińska-Michalak, 2019, 2020). The same might be said of interference in the curriculum from non-governmental organizations. The new educational initiatives and programs that are implemented in Polish schools by NGOs are

strongly controlled by head teachers and school superintendents. The choice of which organization provides educational services in a public school is also in the hands of teachers' supervisors.

### **Theoretical framework**

The Good Behavior Game is a teacher's strategy of classroom management based on teamwork. It is embedded in the educational process, which means that there are no extra teaching hours or extra material. What is being taught through the GBG is students' attitudes. The desirable attitudes and behavioral patterns are perpetuated by teachers making use of positive reinforcement. This approach is applied in the early stage of elementary education to promote positive (desirable) behavior and to eliminate misbehavior. Therefore, the goal of the GBG is to improve pupils' in-class behavior in both the short term and the long term (Kellam et al., 2008).

There are four key elements of the GBG: class rules, teamwork, positive reinforcement, and observing students' behavior. The process includes three stages. In the first stage, called pre-implementation, the teacher collects data and becomes familiar with pupils' characteristics. This knowledge is then used to tailor an individual approach to every student and to assign the student to an appropriate team.

In the second stage, called implementation, pupils are taught four key game and teamwork rules: (1) work quietly, (2) be polite to others, (3) get out of our seats only with permission, and (4) follow directions. Students are divided into teams of three to seven members. The teams are equinumerous and include pupils of various genders, behavioral patterns, educational performance, and relation to other pupils. The teacher designates a leader for the team, who has extra responsibility and acts as a link between the team and the teacher. Next, the students learn how to arrange the class settings for teamwork. The teacher prepares tangible and intangible rewards, presents the main assumptions of the GBG to students' parents, and plans the performance of the game during particular classes in their schedule a few weeks in advance.

In the third stage of the GBG implementation, games are played three times per week. Each game lasts ten minutes. Students are rewarded directly after each game. In the following weeks, the game is gradually extended until the total time spent playing the game is three hours per week. This happens at various times of day, during different activities and in different places (school hallways, cafeteria, or at the cinema). The aim of such variety is to teach pupils that “good” behavior is desirable in every place and time, not just during the game. The teacher regularly observes the teams’ behavior and records on the blackboard any instances of rule-breaking. Before each game, the students verbally confirm that they understand all the behavioral rules of the game. If any member of the team breaks any rule, the team loses one credit. If the team loses no more than four credits, the team and all its members are winners. They are rewarded and they celebrate their success. At the end, all the pupils discuss their behavior during the game.

The GBG was based on behavioral theory (more precisely, interdependent group theory) and life course/social field theory. The former emphasizes cooperation between everyone within a group as a determinant of the group’s success. According to this theory, a successful way to improve behavior is positive reinforcement through tangible (stamps or stickers) or intangible (favorite activities) rewards. The latter theory turns researchers’ attention to the way an individual recognizes and learns behavioral norms in their life. This process occurs within an individual’s social group, so-called “significant others” in sociological terms. Such figures help the individual to identify what behaviors are expected from them. The significant others also transfer their knowledge on how to perform these desired behaviors in order to be successful in various social fields: school, university, the job market, or family. Whereas our first significant others are usually parents, once the child begins their formal education, “natural raters” are often teachers and the peer group (American Institutes for Research, n.d.).

Therefore, the effects of the game according to the above theories can be measured in reference to students’ real behavioral patterns, as observed and evaluated by teachers. Students are not evaluated as individuals,

but rather as members of a team. The Score Board Report, the form used by teachers during the game, is nothing but a tool to check whether the specific desirable social behavioral pattern (e.g., “work quietly”) is observed or not. Once it has been observed, it simply means that this pattern has been learned and internalized by the students.

When it comes to teachers’ behavioral patterns, they are self-assessed and compared with coaches’ observations. The patterns have been operationalized with variables that have dichotomous values (present/absent). Teachers use the Implementation Fidelity Checklist as a tool for self-assessment. The Checklist covers six areas of teachers’ performance:

- (1) monitoring pupils’ behavior,
- (2) introducing rules,
- (3) establishing team membership,
- (4) positive reinforcement,
- (5) positive behavior, and
- (6) observing behavior through data use.

Each area has been operationalized with use of a few behavioral patterns. If the desirable pattern is observed (present) the teacher can also evaluate it with a 3-point rating scale: 1 = needs improvement/does not meet the standard, 2 = effective/proficient, and 3 = highly effective/exemplary. The same tool is used by coaches. The comparison of self-assessments and the coach’s observation during an in-depth discussion provides the teacher with essential knowledge on their strong and weak points and recommendations for future development.

The behavioral psychology implemented in the GBG, the operationalization of desirable behavioral patterns, and precise tools to “measure” the internalization of social norms constitutes a ready-made theoretical framework. We add to this framework simply a set of hypothetical external factors that may or may not have an impact on teachers’ and students’ performance: the outbreak of the COVID-19 pandemic and the context of the Polish education system.

## Methodology

This evaluation of the GBG in Poland covered the period between September and December 2020, when the game was implemented in 19 elementary schools in Krakow (the Małopolska region). In total, 74 teachers were included in the program; 44 of them began working with the GBG in the 2019/2020 school year, while 30 teachers joined in the 2020/2021 school year in the pre-implementation phase. All the teachers were supported by 11 GBG coaches. The evaluation was conducted in reference to key parameters described in the GBG Coach Training Resources from the American Institutes for Research. We posed the following research questions:

- 1) To what extent was implementation of the GBG in Polish schools properly conducted (in line with the key parameters set by the American Institutes for Research; the level of fidelity)?
- 2) What were the short-term results of implementing the GBG? Did they conform to the objectives?
- 3) What was the impact of the COVID-19 pandemic on the effectiveness and quality of the teachers' and pupils' performance?

The methodology of the research was based on qualitative and quantitative data analysis. The data comprised teachers' self-assessments of their GBG activities and coaches' observations of the teachers' performance. The database was built using the standard tools, namely the Implementation Fidelity Checklist and Scoreboard Reports, which were filled out by teachers and coaches. We decided to include extra qualitative textual data, namely, the transcripts of email and phone conversations between head coaches, coaches, and teachers, to help us understand the mechanisms and the context of the GBG implementation process. The research fields, methods, techniques, and tools are presented in Table 1.



**Table 1. Fields, methods, techniques, and research tools used in the project**

Research field	Method	Technique	Tool	Observation unit	Sample
Fidelity of GBG implementation (frequency of teachers' self-assessment/coaches' observations of teachers' performance)	Statistical analysis of quantitative data, content analysis of qualitative data)		Implementation Fidelity Checklist	Teachers' self-assessment	N=119
				Coaches' observations of teachers' performance	N=152
GBG results (Game/"Probe" <sup>a</sup> /Rules); the contextual settings of the game; fidelity between objectives and results			Scoreboard report	Result of a single game	N=1,124
External determinants and their impact on the GBG implementation process	Ethnography	Observation/ content analysis	—	Email/ ethnographic note (phone call or observation)	N=46

<sup>a</sup> "Probe" – In this exercise, the teacher does not inform the pupils that they are taking part in the game; however, the teacher tells the pupils what they are supposed to do and observes their behavior while marking any rules violations (as in the Game version).

## Data and results

### *Fidelity of GBG implementation*

The data from teachers' self-assessments, which were conducted using the Implementation Fidelity Checklist (IFC), indicate a highly effective implementation of the GBG in relation to all six areas. The analysis of IFC data from September to December 2020 indicates an improvement in the teachers' performance in four out of six areas. This trend also testifies to a gradual increase in quality of the GBG implementation in Krakow's schools. The restrictions imposed by the state due to COVID-19 – namely, the switch to online education – was a challenge for introducing the GBG. According to the data analysis, one of the crucial shortcomings in fidelity to the program turned out to be unsystematic and unreliable monitoring by teachers and coaches with the IFC and Scoreboard Reports (SR). This

trend was observed in the case of both the game and the assessment. There was not enough emphasis on the coaches' monitoring of the teachers' performance and not enough emphasis on the teachers' self-assessment. The problem was revealed, for instance, by the number of IFCs submitted by teachers and coaches (Table 2).

**Table 2. Number and percentage of teachers who submitted IFCs between September and December 2020**

Number of teachers who took part in the program	Number of teachers who submitted IFCs	Percentage of teachers who submitted IFCs	Total number of IFCs submitted	Number and percentage of IFCs submitted by teachers in a given month								
				September		October		November		December <sup>a</sup>		
				N	%	N	%	N	%	N	%	
Teachers who joined the program in 2019/2020	44	33	75	115	27	23.5	47	40.9	19	16.5	14	12.2
Teachers who joined the program in 2020/2021	30	3	10	3	GBG pre-implementation period				0	0.0	3	100.0
<b>Total</b>	<b>74</b>	<b>36</b>	<b>48.6</b>	<b>118</b>	<b>27</b>	<b>22.9</b>	<b>47</b>	<b>39.8</b>	<b>19</b>	<b>16.1</b>	<b>15</b>	<b>12.7</b>

<sup>a</sup> This period was only two weeks long because classes were held until December 18.

### ***Correspondence between outcomes and GBG assumptions***

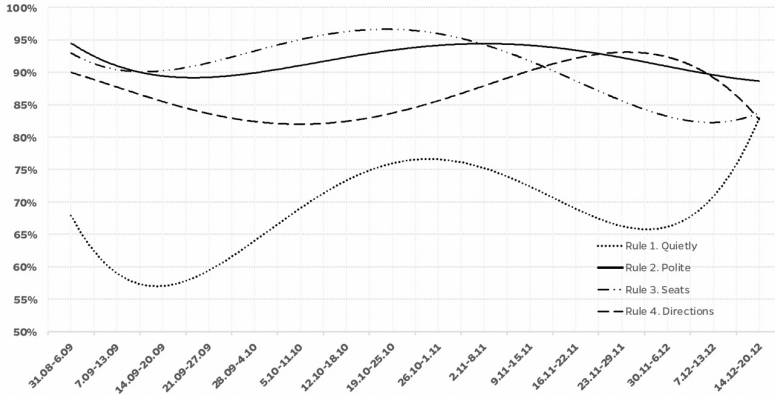
The analysis revealed that pupils strongly internalized three of the rules of behavior (Polite, Seats, and Direction), with 85%–93% of team games having no violations of the rules. The last rule (Quietly) was internalized at a relatively high level, with 68.5% of games having no rule violations. Teachers' comments in the IFCs point to the fact that pupils tended to treat the rules of behavior as permanent practice of everyday school life. According to teachers' observations, pupils also made an effort to implement the rules at home and when playing with their peers. The latter theory turns researchers' attention to the way an individual recognizes and learns behavioral norms in their life. This process occurs within an individual's social group, so-called "significant others" in sociological terms. Such figures help the individual to identify what behaviors are

expected from them. The significant others also transfer their knowledge on how to perform these desired behaviors in order to be successful in various social fields: school, university, the job market, or family. Whereas our first significant others are usually parents, once the child begins their formal education, the “natural raters” are often teachers and the peer group (American Institutes for Research, n.d.).

First the coaches and then the teachers prepared and adopted new procedures for the game in the new online environment.

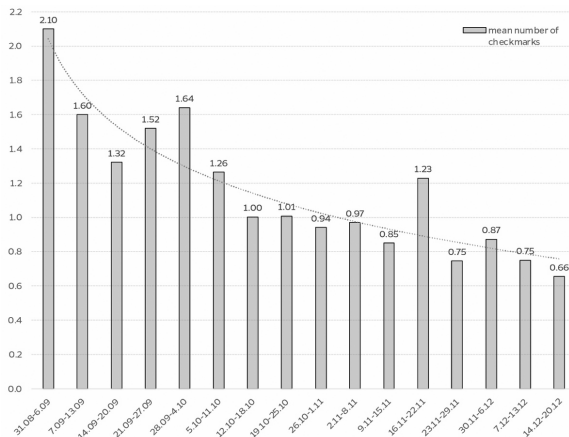
Figure 1 illustrates the percentage of GBG teams in given weeks without checkmarks for any of the four rules. The changes over the four-month observation period were not linear. The percentage of teams without checkmarks for three of the rules (2, 3, and 4) was lower in the last weeks (December) than at the beginning of the GBG implementation period (September). We argue that this trend was the result of the shift to online education. This shift put pressure on teachers and pupils to adapt to the new reality. Rule 4 (Quietly) was the most problematic for children at the beginning. The percentage of successful teams without checkmarks fluctuated during the whole observation period. The percentage of successful teams decreased in the first weeks of September – likely due to the impact of readjusting to school and the low frequency of games at school. The percentage of successful teams increased from the last week of September until the beginning of November. At this time, the government announced the decision to close schools due to COVID-19. However, despite the four-week-long decrease, the percentage of successful teams grew, finally reaching a level 20% higher than at the beginning of the GBG implementation. Therefore, it can be argued that the trend to develop pupils’ ability to perform in line with this rule was only temporarily interrupted by the new circumstances of online learning.

**Figure 1. Trend lines illustrating the percentage of GBG teams without checkmarks in given weeks (polynomial function, N=2,787 games)**



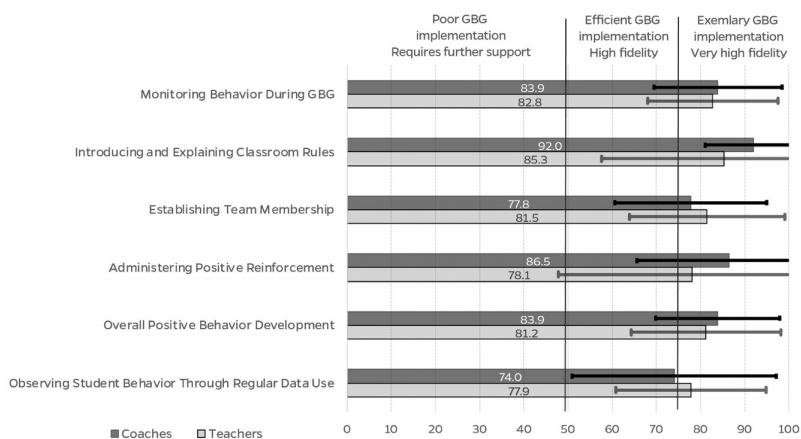
In the case of the games, the amplitude of the mean number of checkmarks was more or less stable; for the probes, this value decreased during the whole observation period (Figure 2). This is good news, because it means that from the first week of implementing the GBG, the mean number of disruptive misbehaviors decreased, except for a short period in the second part of September and November. This trend indicates that pupils gradually internalized the rules and behaved in line with the expected behavioral patterns, regardless of whether they were aware of the teachers' observation or not.

**Figure 2. Mean number of checkmarks per game during GBG probes in given weeks (N=370 probes)**



A more detailed comparative analysis of the data reveals that the coaches and teachers themselves had different assessments of teachers' performance in given areas (Figure 3). On the one hand, in the case of areas such as monitoring pupils' behavior (1), introducing rules (2), positive reinforcement (4), or positive behavior development (5), the teachers' self-assessment was more severe than the coaches' assessment. On the other hand, in areas such as establishing team membership (3) and observing behavior through data use (6), the coaches seemed to be more critical than the teachers. Interestingly enough, the assessment of the last GBG area (6) was the lowest.

**Figure 3. Assessment of teachers' performance (index values<sup>a</sup> in a given area with their standard deviations)**



<sup>a</sup> For the purpose of analysis, we constructed indexes for all six areas of the IFC. Each area was ranked by a teacher/coach on the basis of indicators (2–12). We constructed indexes using indicators with a 3-point rating scale. The scale indicates the level of game implementation: 1 = needs improvement/does not meet the standard, 2 = effective/proficient, and 3 = highly effective/exemplary. The value of each area index is the sum of all indicators' values divided by the number of indicators included (mean value for each area), given as a percentage (multiplied by 100). In this way, the index allowed us to identify the border lines of the implementation level.

## **Impact of COVID-19 restrictions on the quality and efficiency of implementing the GBG**

Teachers with no prior experience with the GBG received two days of training (either October 10–11 or October 17–18, 2020). Schools in Poland were closed on November 9, 2020. Children from the first three years of elementary school had to attend online classes. Therefore, the pre-implementation period was interrupted. Teachers had no opportunity to practice the basic procedures of the GBG prior to implementing it. The shift to online teaching turned out to be a technological and organizational challenge for teachers. In some cases, the challenge was even more difficult due to head teachers' regulations on priorities in online teaching, such as:

- banning any extra projects or activities beyond what was necessary to teach the school curriculum,
- limiting the time pupils were allowed to spend in front of their desktop screen (hours per day/week),
- banning asynchronous online classes, with the aim of providing synchronous classes as the only “proper” form of teaching,
- dividing classes into two groups of pupils working simultaneously with two teachers – one online and the other in the classroom – though only one teacher was familiar with the GBG, and
- teaching SEN pupils in the classroom while simultaneously conducting online classes with the rest of the pupils.

Taking these regulations into consideration, the limited number of checklists delivered by new teachers was not surprising. This context sheds light on the fact that a few checklists were delivered in December instead of in November. One of the teachers explained her decision to suspend the GBG during online education:

Unfortunately, I am not able to run the game online. Some of my pupils are taught by a teacher who is not trained in the GBG. The pupils who work with me online have old computers with poor internet connections.

Some of them don't have cameras, so I can't observe their performance. Besides, I can't see them all because their faces don't fit into one MS Teams screen. Moreover, these are SEN children and they do not do well in virtual groups. Teaching new digital skills would require a lot of time that we don't have since the head teacher reduced the number of hours [that the children can spend] in front of the computer screen. I'm unable to keep up with the syllabus. Besides, I don't work at the same time as the "in-class" group. We don't work at the same pace either, as the second group is less capable and works at a slower pace. The IT equipment is not good enough to meet the challenge. We lack the cameras and microphones – the operating system is often updated. That's why I had to suspend the game during online education.

The coaches were observed to be engaged in supporting the teachers during this period. They produced and delivered online game scripts, which had a positive impact in motivating teachers to prepare their own scripts and conduct games. At the beginning, the games were overseen by coaches, but after a time the teachers ran the games on their own. The excessive number of teachers who were supervised by one coach (in some cases even ten teachers) is a factor that could have negatively impacted coach–teacher cooperation. Weak or no support from head teachers turned out to be another destructive factor for the smooth implementation of the GBG in Polish schools. During the day, teachers quite often were not allowed to use a single classroom where they could organize GBG activities. This meant that teachers had to move from one classroom to another with their pupils and educational resources (charts and boards) after every 45-minute class. In some cases, the teachers were not allowed to arrange the classroom for teamwork. Teachers reported that the head teachers sometimes justified such regulations by concern for the children's health.

## Discussion

Implementing the GBG during online learning caused by COVID-19 restrictions posed a challenge to teachers, who not only had to change teaching methods and prepare new educational resources, but also had to modify GBG procedures, including reinterpreting class rules. In online education, the accepted behavioral patterns – in reference to all the rules – had to be changed, as did illustration of the desired behavior. In the case of the rule imposing mutual politeness, the teachers introduced new examples such as “microphones can be muted only by teachers” or “during our work we don’t make faces to distract others – we will have fun after the work.” Such examples expanded the variety of desired behavior in the digital environment.

As the data analysis reveals, over the course of time and advancement in the GBG, the average number of checkmarks during games and probes (where children were unaware they were being observed by teachers) decreased. This finding indicates that over time pupils gradually internalized the rules and behaved in line with the expectations, whether they were being observed or not. Teachers also improved their GBG skills, as illustrated by the increasing level of fidelity and decreasing number of shortcomings. It is therefore possible to conclude that the general decrease in destructive behavior among the student teams in all six IFC areas indicates the successful implementation of the GBG. The results of the implementation met the expectations regarding the performance of both students and teachers.

The shift to online education revealed technical shortcomings, namely, the quality of internet connections and the computer equipment of teachers and students. Online education also revealed the weak digital competences of many pupils, especially knowledge of online educational platforms such as MS Teams. No less relevant were disruptive factors in the organization of classes. In many cases, pupils in a class were divided into two groups, one of which took part in online classes while the other attended class in their schools. This system slowed down the pace of teaching in the online group and the quality of teaching in



school. The reduction in the duration of online lessons from 45 to 30 minutes (in some cases, even to 20–25 minutes) without adjusting the curriculum was also found to be troublesome for teachers. This obliged teachers to maintain a fast pace in their online teaching. Pupils were also required to spend more time on their individual education at home – often with extensive support from their parents. Online learning revealed the cognitive dysfunction of some children, that is, an inability to concentrate on their teachers' instructions and explanations. This was especially visible in the case of activities in the digital environment. Another problem of online education which ought to be discussed was the decrease in teachers' motivation, which was expressed through a declared lack of faith in teamwork or an individual approach to teaching, and the feeling of being overwhelmed with extra duties.

As the data reveals, the structural constraints caused by the COVID-19 pandemic did not stop, but impeded the implementation of the GBG in Polish schools. The pandemic can also be seen as an added value in the education process. As the result of the pandemic, a better digital competence and more innovative attitudes toward the education process were observed among both teachers and students.

The findings of our study can provide one more argument for the short-term effectiveness of GBG, as signaled by many previous researchers (Medland & Stachnik, 1972; Coombes et al., 2016; Groves & Austin, 2017). It also is in line with previous studies on the implementation of the GBG in various cultural contexts and countries as different as the USA, Estonia, and Sudan (Silva & Wiskow, 2020; Saigh & Umar, 1983). Even in relation to studies on modifying the GBG for new technologies like ClassDojo or Class Badges (Dadakhodjaeva, 2017; Dillon, 2016; Ford, 2017; Vargo & Brown, 2020), the findings of our study prove that the sudden shift to online education under the COVID-19 pandemic did not mean the GBG was no longer applicable. Of course, it posed serious challenges for teachers, some of whom did not manage this shift. Others, however, addressed the problem with unprecedented creativity and innovative solutions.

The above-mentioned similarity between our study and previous research teaches us that there are at least two characteristics of the GBG:

- (1) **universality** – the game, thanks to its simplicity and the precise definition of desirable behaviors and basic social norms, can be implemented successfully regardless of cultural background, technological advancement, or students' characteristics (e.g., SEN students or preschool children)
- (2) **flexibility** – the way the GBG was designed can be compared to open-source software, as it can be modified to fit any particular context of school infrastructure, organizational patterns, various structural constraints, or technological innovations.

We can see our contribution to the discussion on GBG implementation from conducting this study during the outbreak of the COVID-19 pandemic and the structural “incompatibility” of the team-centered GBG with the mass education system in Poland. The pandemic itself, from a sociological perspective, can be seen as a huge, unprecedented sociological experiment. The sudden unexpected global pandemic made people all around the world seek new solutions, behavioral patterns, and norms. As our findings reveal, the COVID-19 pandemic was a specific test for teachers. Some of them suspended from any GBG activities, but others were determined enough to seek innovative solutions. This means that there is a huge potential for teachers' creativity and motivation in the implementation of the GBG, even under unfavorable conditions. Polish teachers, who grew up and are now actors in a standardized, collective education system, seem to recognize the need for teamwork as a crucial soft skill in the contemporary job market. The shift toward teamwork in the Polish educational system has been declared by authorities and teachers themselves at least since the systemic transformation in 1989. The problem is that declarations have not become a part of students' everyday life. In this sense, the context of the post-communist country and its heritage (collective mass education) should be seen as a huge structural constraint to the implementation of the GBG. The successful (even if imperfect) implementation of the GBG in Poland can be an interesting case study for the development of extensive research on other Central and East European countries which were prior satellites of the Soviet bloc.

The clash between standardized collective education and an education system based on teamwork is also a clash between centralized socialist and market economies. What is especially interesting here is the role of GBG implementation as an obstacle impeding change in the whole educational system.

## Conclusions

The findings of the research revealed the relatively high fidelity of the GBG implementation in all six areas of evaluation. The analysis of the Implementation Fidelity Checklists provided by teachers and coaches revealed a gradual increase in the quality of the program in schools in Krakow. The restrictions enacted in Polish schools due to COVID-19, and especially the shift to online education, turned out to be a major hindrance to smooth implementation of the GBG. As an effect of these restrictions, a sharp decline in the number of games (about 50%) was observed, due to technological barriers and difficulties organizing an online version of the GBG. Furthermore, online teaching reduced the incentives for teachers to implement the GBG in their work, and in some cases caused them to withdraw from the program. This situation was worsened by the insufficient support for teachers on the part of the coaches and additional internal limitations that made implementation of the GBG almost impossible. The fidelity of GBG implementation in Poland was also hindered by unsystematic and unreliable use of the Implementation Fidelity Checklists by some teachers and coaches, and the limited monitoring of teachers' performance.

In reference to the program's impact on the pupils, the findings show that there was a very high level of internalization of three class rules (85%–93% of games without a checkmark) and a high level of internalization of the fourth rule (68.5% of games without checkmarks). The study also revealed an improvement in pupils' behavior in the case of probes. Students began to treat the rules of behavior in class as fixed rules in both the school environment and their peer groups.

The study also revealed that the implementation of the GBG had an impact on teachers. They developed their teaching skills, were eager to learn new solutions, and experimented with new tasks. The observations prove that the teachers recognized and valued teamwork – an element that is not much displayed in the Polish education system. They emphasized teamwork during the GBG and during other activities at school. The teachers, supported by the coaches, also made an effort to improve the GBG and to adapt it to online education, mainly through implementation of online GBG syllabuses.

Our study also had some limitations. First of all, as many previous research projects, it was focused on the short-term effects of the game. We cannot determine the extent to which the desirable social behavioral patterns will be prevalent later in the pupils' lives. Secondly, very little is known about these internalized desirable social norms also being performed outside the school environment, in pupils' families, and among their peers and social groups. Thirdly, the study did not include the perception of the GBG from all the participants, meaning parents, teachers, and educational authorities at the local, regional, and national levels.

Crucially, the study enabled us to provide the Ministry of Education and Science, schools, teachers, and coaches with recommendations for further stages of implementing the GBG in Poland. Future research should include such areas as the social and emotional functioning of pupils in their relations with teachers and peers, especially in reference to long-lasting relationships. Researchers should explore dimensions of reducing disruptive behavior, reinforcing the GBG's effects in school and, in parallel, through the engagement of pupils' family environment, and finally, using the GBG program as a screening tool to diagnose behavioral dysfunction in pupils.

**Funding:** This research was funded by the Ukryte Skrzydła Foundation.

## References

- American Institutes for Research. (n.d.). *About the game*. Retrieved October 21, 2023 from [https://goodbehaviorgame.air.org/about\\_gbg.html](https://goodbehaviorgame.air.org/about_gbg.html)
- Ashworth, E., Humphrey, N., Lendrum, A., & Hennessey, A. (2020). Beyond “what works”: A mixed-methods study of intervention effect modifiers in the Good Behavior Game. *Psychology in the Schools, 57*(2), 222–246. DOI: 10.1002/pits.22312
- Ashworth, E., Panayiotou, M., Humphrey, N., & Hennessey, A. (2020). Game on: Complier average causal effect estimation reveals sleeper effects on academic attainment in a randomized trial of the Good Behavior Game. *Prevention Science, 21*(2), 222–233. DOI: 10.1007/s11121-019-01074-6
- Dadakhodjaeva, K. (2017). *The Good Behavior Game: Effects on and maintenance of behavior in middle-school classrooms using Class Dojo* [Dissertation published by the University of Southern Mississippi, 363]. <https://aquila.usm.edu/dissertations/363>
- Dillon, M. M. (2016). *The tootling intervention with Class Dojo: Effects on classwide disruptive behavior and academically engaged behavior in an upper elementary school setting*. [Dissertation published by the University of Southern Mississippi, 223]. <https://aquila.usm.edu/cgi/viewcontent.cgi?article=1229&context=dissertations>
- Donaldson, J. M., Fisher, A. B., & Kahng, S. (2017). Effects of the Good Behavior Game on individual student behavior. *Behavior Analysis: Research and Practice, 17*(3), 207–216. DOI: 10.1037/bar0000016
- Donaldson, J. M., Vollmer, T. R., Krouse, T., Downs, S., & Berard, K. P. (2011). An evaluation of the Good Behavior Game in kindergarten classrooms. *Journal of Applied Behavior Analysis, 44*(3), 605–609. DOI: 10.1901/jaba.2011.44-605
- Donaldson, J. M., Wiskow, K. M., & Soto, P. L. (2015). Immediate and distal effects of the Good Behavior Game: Effects of the Good Behavior Game. *Journal of Applied Behavior Analysis, 48*(3). DOI: 685–689. 10.1002/jaba.229
- Fishbein, J. E., & Wasik, B. H. (1981). Effect of the Good Behavior Game on disruptive library behavior. *Journal of Applied Behavior Analysis, 14*(1), 89–93. DOI: 10.1901/jaba.1981.14-89
- Foley, E. A., Dozier, C. L., & Lessor, A. L. (2019). Comparison of components of the Good Behavior Game in a preschool classroom. *Journal of Applied Behavior Analysis, 52*(1), 84–104.

- Ford, W. B. (2017). *Evaluation of a positive version of the Good Behavior Game utilizing ClassDojo technology in secondary classrooms*. [Dissertation published by the University of Southern Mississippi, 1046]. <https://aquila.usm.edu/dissertations/1046>
- Groves, E. A., & Austin, J. L. (2017). An evaluation of interdependent and independent group contingencies during the good behavior game. *Journal of Applied Behavior Analysis, 50*(3), 552–566. DOI: 10.1002/jaba.393
- Groves, E. A., May, R. J., Rees, R. E., & Austin, J. L. (2021). Adapting the Good Behavior Game for special education classrooms. *Psychology in the Schools, 1*–17. DOI: 10.1002/pits.22496
- Joslyn, P. R., Donaldson, J. M., Austin, J. L., & Vollmer, T. R. (2019). The Good Behavior Game: A brief review. *Journal of Applied Behavior Analysis, 52*(3), 811–815. DOI: 10.1002/jaba.572
- Joslyn, P. R., & Vollmer, T. R. (2019). Efficacy of teacher-implemented good behavior game despite low treatment integrity. *Journal of Applied Behavior Analysis, 53*(1), 465–474. DOI: 10.1002/jaba.614
- Kellam, S. G., Brown, C. H., Poduska, J. M., Ialongo, N. S., Wang, W., Toyinbo, P., Petras, H., Ford, C., Windham, A., & Wilcox, H. C. (2008). Effects of a Universal Classroom Behavior Management Program in First and Second Grades on Young Adult Behavioral, Psychiatric, and Social Outcomes. *Drug and Alcohol Dependence, 95*(1), 1–28.
- Kwaterna A., Łukasik J. M., Kowal, S. (2018). *Odpowiedzialność, wspólnotowość, współpraca w szkole. Nauczyciele i Rodzice* [Responsibility, community, and cooperation at school: Teachers and parents]. Oficyna Wydawnicza Impuls.
- Madalińska-Michalak, J. (2019). Autonomia nauczyciela: uwarunkowania prawne i rozwijanie kompetencji nauczyciela do bycia autonomicznym [Teacher autonomy: Legal conditions and developing the teacher's competence to be autonomous]. *Forum Oświatowe, 31*(2), 11–26.
- Madalińska-Michalak, J. M. (2021). Edukacja zdalna i zachowania innowacyjne nauczycieli [Distance education and teachers' innovative behavior]. *Forum Oświatowe*, Vol. 32, No. 2(64), 53–71.
- Medland, M. B., & Stachnik, T. J. (1972). Good Behavior Game: A replication and systematic analysis. *Journal of Applied Behavior Analysis, 5*(1), 45–51.

- Pennington, B., & McComas, J. J. (2017). Effects of the Good Behavior Game across classroom contexts. *Journal of Applied Behavior Analysis, 50*(1), 176–180.
- Popławska, A. (2021). Autonomia nauczyciela w reformowanej szkole [Teacher autonomy in a reformed school]. In A. Karpińska, M. Zińczuk, & K. Kowalczyk (Eds.), *Nauczyciel we współczesnej rzeczywistości edukacyjnej*. Wydawnictwo Uniwersytetu w Białymstoku.
- Rubow, C. C., Vollmer, T. R., & Joslyn, P. R. (2018). Effects of the Good Behavior Game on student and teacher behavior in an alternative school. *Journal of Applied Behavior Analysis, 51*(2), 382–392.
- Saigh, P. A., & Umar, A. M. (1983). The effects of a good behavior game on the disruptive behavior of Sudanese elementary school students. *Journal of Applied Behavior Analysis, 16*(3), 339–344.
- Silva, E., & Wiskow, K. M. (2020). Stimulus presentation versus stimulus removal in the Good Behavior Game. *Journal of Applied Behavior Analysis, 53*(4), 2186–2198.
- Streimann, K., Selart, A., & Trummal, A. (2020). Effectiveness of a universal, classroom-based preventive intervention (PAX GBG) in Estonia: A cluster-randomized controlled trial. *Prevention Science, 21*(2), 234–244.
- Tingstrom, D. H. (1994). The Good Behavior Game: An investigation of teachers' acceptance. *Psychology in the Schools, 31*(1), 57–65.
- Troncoso, P., & Humphrey, N. (2021). Playing the long game: A multivariate multilevel non-linear growth curve model of long-term effects in a randomized trial of the Good Behavior Game. *Journal of School Psychology, 88*, 68–84.
- Vargo, K., & Brown, C. (2020). An evaluation of and preference for variations of the Good Behavior Game with students with autism. *Behavioral Interventions, 35*(4), 560–570. DOI: 10.1002/bin.1740







**Magdalena Kolber**

<https://orcid.org/0000-0002-8227-5475>

Kazimierz Wielki University, Bydgoszcz, Poland

magkol@ukw.edu.pl

## Learned Helplessness of Secondary-School Students Learning English During Covid-19 Distance Education: a Research Report

(pp. 105–123)

Suggested citation: Kolber, M. (2023). Learned Helplessness of Secondary-School Students Learning English During Covid-19 Distance Education: a Research Report. *Multidisciplinary Journal of School Education*, 12(2(24)), 105–123. <https://doi.org/10.35765/mjse.2023.1224.05>

### Abstract

**Objectives of the research:** This article presents a diagnosis of the learned helplessness experienced by secondary-school students learning English remotely during the 2021 lockdown due to the COVID-19 pandemic. The objectives are to (1) show the level of learned helplessness of secondary-school students learning English, (2) investigate the relationship between foreign language learning strategies and the learned helplessness of secondary-school students, and (3) determine the relationship between the level of learned helplessness and the use of private tutoring by secondary-school students.

**Research methods:** The study was conducted via a written diagnostic survey. It also employed the *School Helplessness Scale* by B. Ciżkowicz (2009) and the *Strategy Inventory for Language Learning (SILL)* by R. Oxford (1990).

**A short description of the context of the issue:** The aim of the text is to answer the following research questions: What is the level of learned helplessness of secondary-school students? Is there a relationship between foreign language learning strategies and the learned helplessness of secondary-school students? Does the use of private tutoring differentiate the level of learned helplessness of secondary-school students?

**Research findings:** The results demonstrate a significant negative correlation between learned helplessness and the use of memory, cognitive, metacognitive, affective, and social strategies. The average score of learned helplessness was 2.54, which indicates that the respondents usually felt the symptoms of it. An analysis of the results for the three deficits revealed that the motivational deficit made the greatest contribution to learned helplessness. The students who had hired a private tutor in English had a lower level of learned helplessness and cognitive deficit.

**Conclusions and/or recommendations:** The research findings lead to several recommendations for educational practice in the context of foreign language learning: using new, effective pedagogical approaches to keep learners motivated—including elements of strategy training or social and emotional learning (SEL)—arranging remedial teaching, and promoting teachers' professional development.

**Keywords:** distance education, COVID-19 pandemic, learned helplessness, foreign language strategies

## Introduction

According to Britannica, distance learning is a “form of education in which the main elements include physical separation of teachers and students during instruction and the use of various technologies to facilitate student–teacher and student–student communication” (Simonson & Berg, 2016). For Holmberg (1989, as cited in Gunawardena & Mclsaac, 2004), this concept

covers the learning-teaching activities in the cognitive and/or psychomotor and affective domains of an individual learner and a supporting organization. It is characterized by non-contiguous communication and can be carried out anywhere and at any time, which makes it attractive to adults with professional and social commitments. (p. 358)

Distance education encompasses various forms of learning, such as distance learning, open learning, networked learning, flexible learning,

distributed learning, and learning in a digitally connected space. This form of learning is also defined as “a structured learning experience that can be done away from an academic institution, at home or at a workplace” (Gunawardena & Mclsaac, 2004, p. 358). Definitions may differ depending on the distance education culture of each country, but there is some agreement on certain key elements: the separation of the teacher and the learner, the use of new technologies to link the teacher and the learner and to ensure a two-way exchange of communication, and the influence of an educational organization.

Due to the swift advancement of technology, courses using a variety of media have been delivered to learners in various locations, all in an attempt to meet the educational needs of growing populations. Prior to the COVID-19 pandemic, this mode of education was an option that teachers could choose. However, in 2020 the spread of the virus disrupted onsite education in most countries all over the world. Thus, distance learning became the only viable form of education. In response to the new circumstances, many countries, including Poland, began to use various communication technologies that facilitate interaction between students and teachers.

The COVID-19 pandemic has resulted in formidable challenges to students’ psychological health. One example is the phenomenon of *learned helplessness*. It “occurs when someone attributes failure to a lack of ability and gives up easily or shows a steady regression in problem-solving strategies when confronted with failure” (Mecce & Painter, 2014, p. 349). This mental state is accompanied by behavioural changes called deficits. Cognitive deficit is characterized by an expectation of ineffectiveness when facing a new task or situation. Motivational deficit manifests itself in decreased motivation. Finally, emotional deficit relates to anxiety disorders, depression, anxiety, or withdrawal (Overmier & Seligman, 1967; Maier & Seligman, 1976, as cited in Ciżkowicz, 2009; see Kolber, 2022). In addition, students develop new strategies to learn effectively when faced with new situations. Oxford and Lavine (2018) use the term *language learning strategies* (LLSs) to refer to “purposeful mental actions (sometimes also manifested as observable behaviours) that a learner creatively implements to meet learning-related needs” (p. 5).

This research contributes to the discussion on distance learning during the COVID-19 pandemic in secondary education in Poland. It captures a unique moment in which secondary-school students completed a half-year of remote learning (see Kolber, 2022, p. 42). Framed by Martin Seligman's (1975) *Theory of Learned Helplessness* (see Overmier & Seligman, 1967; Maier & Seligman, 1976, as cited in Ciżkowicz) and Rebecca Oxford's (1990) *Foreign Language Strategies Taxonomy*, the article aims to 1) show the level of learned helplessness of secondary-school students learning English, 2) investigate the relationship between foreign language learning strategies and the learned helplessness of secondary-school students, and 3) determine the relationship between the level of learned helplessness and the use of private tutoring by secondary-school students. Based on these objectives, the following research questions were formulated: What is the level of learned helplessness of secondary-school students? Is there a relationship between foreign language learning strategies and the learned helplessness of secondary-school students? Does the use of private tutoring differentiate the level of learned helplessness of secondary-school students?

### **Problems faced in distance education during the COVID-19 pandemic – a literature review**

Remote education started overnight because of the COVID-19 pandemic. Schools, kindergartens, and universities did not manage to prepare for this sudden change. In the literature review presented below, numerous problems faced by students, parents, and teachers in distance education during the COVID-19 period are discussed. The factors that might have led to learned helplessness were expressed by students as well as parents and teachers. An analysis of the narratives revealed repeated exposure to challenging working, living, and learning conditions. Moreover, it was found that there is little room to develop learning strategies in the virtual COVID-19 classroom.

### ***Teachers' perspective***

In research carried out in Poland, as many as 85% of surveyed teachers declared having no experience with remote teaching prior to the pandemic. Only a few (15%) had had contact with this form of learning before. Moreover, their experiences were poor and amounted to “individual consultations with students via Zoom, Skype, Messenger, etc.; active and passive participation in webinars, workshops and e-learning courses, supporting lessons and school clubs (sending students links to additional materials)” (Buchner et al., 2020, p. 5).

A lack of IT skills and adequate knowledge of how to deliver distance learning using technology during the school closures was reflected in the teachers' didactic methods. In their virtual classrooms, teachers focused mainly on teacher-centred transmission models of teaching, for instance, uploading videos and giving presentations. Unfortunately, such methods are aimed at presenting and verifying knowledge rather than active involving the students, problem-solving, or group work (Ptaszek et al., 2020, p. 66).

### ***Parents' perspective***

A study conducted in the first months of remote education (April 2020) reports that parents mainly complained of general fatigue, their child's fatigue (72.1%), their child's difficulties in getting down to studying (58.6%), excessive burden to help their child learn (57.6%), difficulties motivating their child to study at home (52.9%), uneven study load (49.4%), and general study overload (49%) (Całek, 2021, p. 22). The analysis of parents' responses to an open-ended survey demonstrated that during the pandemic, schools shifted a large part of the responsibility onto students and parents. The parents, in turn, were not always able to help the children, due not only to their usual professional duties (often performed remotely), but also to their lack of relevant subject knowledge (Całek, 2021).

The feeling of helplessness made some parents turn to professional help for their children. Research conducted on 502 eighth-grade elementary-school students learning remotely suggests that private English classes were the most popular: 185 of the respondents (36.85%) claimed to have had a(11.75%) took on a tutor for Polish (Kolber, 2022).

***Students' perspective***

A study conducted by Marek et al. revealed the difficulties of university students, as reported by their lecturers during the abrupt shift to distance learning. Some comments expressed by faculty members provide evidence that the students adapted well, but others point to some dysfunctional behaviour. According to the lecturers, students were unable to take control of and responsibility for their own learning. They struggled to manage their learning process. Some lecturers also noted that most students were not as tech-savvy as was commonly believed, because they seemed unable to transfer and use their technological knowledge in a distance learning environment (2021). private English tutor. Students must have also experienced learning difficulties in other subjects, as 141 eighth-grade students (28.09%) claimed to have used tutors for mathematics and 59 students

Another study confirmed a significant decline in adolescents' subjective well-being. Eighteen percent of young people felt much worse and 30% of teenagers felt a little worse three months after the school closures than prior to the lockdowns (Ptaszek et al., 2020, p. 84). Students were not motivated enough to learn and they were angry with teachers for giving them too many assignments. Their anger translated into fear that they would not meet deadlines or master the material. Moreover, adolescents were reluctant to turn their cameras on because they were ashamed by their appearance (Ptaszek et al., 2020, p. 29).

The emotional functioning of students learning remotely in the COVID-19 pandemic is perfectly illustrated by the study conducted by Kolber (2022). The most important finding was that the highest level of learned helplessness among eighth-grade elementary-school students learning remotely was recorded for mathematics, slightly lower for Polish and the lowest for English. In addition, the motivational deficit made the greatest contribution to the sense of helplessness (Kolber, 2022). However, this study did not cover higher levels of education (secondary school) or fully explain what should be done to reduce or prevent learned helplessness.

---

## Method

### *Procedure*

Only those secondary schools that accepted the invitation participated in the study. Participation in the study was approved by the school management, who could also consult the parents' council and/or the pedagogical council. In some institutions, the management appointed a school coordinator (e.g., a psychologist or school counsellor), who supervised the course of the study. The anonymous online questionnaires were disseminated and collected between March and April 2021.

### *Participants*

The data were collected from 569 students learning English in secondary schools in the Kuyavian-Pomeranian Voivodeship, including 206 boys and 363 girls (Table 1). Of these students, 354 (62.21%) attended general secondary schools, while the remaining 215 (37.79%) were students at technical and art schools. Regarding the level of education, the sample consisted of 165 (29%) first-year students (named according to the new structure<sup>1</sup>), 181 (31.81%) second-year students (according to the old structure), 81 (14.24%) second-year students (new naming convention), and 142 (24.96%) third-year students (old naming convention).

---

<sup>1</sup> The *old structure* of the education system, which came into force in 1999, divided the educational process into six years of primary school, three years of lower secondary school (*gimnazjum*), and either four years of general secondary school, five years of technical secondary school, or three years of vocational school. The educational reform of 2017 changed this structure to eight years of primary school and either four years of secondary school, five years of technical (vocational) secondary school, or three years of vocational school (stage I) and two years of vocational school (stage II). Between the 2019/2020 and 2021/2022 school years, Polish secondary schools saw a double cohort, consisting of students being taught according to both structures. In the 2020/2021 school year, only first-, second-, and third-year students were available for the study. Therefore, fourth- and fifth-year students were naturally excluded. The description of the research sample and Table 1 include two naming conventions according to the new and old structures.

### Instruments

The respondents were asked to fill in an anonymous questionnaire online. In Part A, the following instruments were used: the *School Helplessness Scale* (Ciżkowicz, 2009; see Kolber, 2019, 2022) and the *Strategy Inventory for Language Learning Version 7.0* (Oxford, 1990; see Kolber, 2015, 2019, 2021). The former contains 20 items assessing the level of learned helplessness along with its three dimensions: cognitive, emotional, and motivational deficit. The latter instrument includes 50 items comprising six strategy groups: memory, cognitive, compensation, metacognitive, affective, and social strategies. The respondents were asked to indicate the strength of their agreement with the statements using a five-point Likert scale ranging from 1 (never or almost never) to 5 (always or almost always).<sup>2</sup> In Part B, the respondents were asked to fill in demographic information. This section provided information on the research sample (Table 1).

**Table 1. Respondents' demographic information (N=569)**

Type of school	General secondary school	354 (62.21%)
	Technical and art schools	215 (37.79%)
Gender	Male	363 (63.80%)
	Female	206 (36.20%)
Educational stage	1st year (after elementary school)	165 (29.00%)
	2nd year (after lower secondary school)	181 (31.81%)
	2nd year (after elementary school)	81 (14.24%)
	3rd year (after lower secondary school)	142 (24.96%)
Are you planning to study English philology?	Yes	20 (3.51%)
	No	339 (59.58%)
	I don't know	149 (26.19%)
	I am not planning to study at all	61 (10.72%)
Does your mother have a working knowledge of English?	Yes	245 (43.06%)
	No	324 (56.94%)
Does your father have a working knowledge of English?	Yes	258 (45.34%)
	No	311 (54.66%)
Have you been taking private lessons in English during distance learning?	Yes	154 (27.07%)
	No	415 (72.93%)

<sup>2</sup> Detailed information on the two instruments is provided in Kolber (2019).



## Results

### *Level of learned helplessness*

The *School Helplessness Scale* assesses the level of learned helplessness as well as its deficits. The average score of learned helplessness in the study group was 2.54 (rounded up to 3), meaning that the respondents usually felt learned helplessness. An analysis of the results for the three deficits revealed that motivational deficit made the greatest contribution to learned helplessness, with a value of 2.65. Emotional deficit was in second place, with a value of 2.60. Cognitive deficit made the smallest contribution to learned helplessness, with a mean value of 2.27 (Table 2).

**Table 2. Descriptive statistics for the *School Helplessness Scale* (N=569)**

School Helplessness Scale	M	SD	Mdn	Min	Max	Q1	Q3
General helplessness	2.54	0.65	2.50	1.05	4.8	2.05	3.00
Emotional deficit	2.60	1.02	2.43	1.00	5.0	1.86	3.29
Cognitive deficit	2.27	0.79	2.20	1.00	5.0	1.80	2.80
Motivational deficit	2.65	0.77	2.62	1.00	5.0	2.12	3.12

### *Relationship between foreign language learning strategies and learned helplessness*

To examine the strength of the relationship between learned helplessness and foreign language strategies, Pearson's linear correlation coefficient was used. The level of helplessness correlated significantly ( $p < 0.05$ ) and negatively ( $r < 0$ ) with the use of memory, cognitive, metacognitive, affective, and social strategies. The emotional deficit correlated significantly ( $p < 0.05$ ) and positively ( $r > 0$ ) with the use of affective strategies. Thus, the more frequent their use, the higher the emotional deficit. Emotional deficit correlated significantly ( $p < 0.05$ ) and negatively ( $r < 0$ ) with the use of cognitive, metacognitive, and social strategies. The more often these strategy groups are used, the lower the emotional deficit. Cognitive deficit was found to correlate significantly ( $p < 0.05$ ) and negatively ( $r < 0$ ) with the use

of memory, cognitive, compensation, metacognitive, and social strategies. This means that the more frequent their use, the lower the cognitive deficit. The motivational deficit correlated significantly ( $p < 0.05$ ) and negatively ( $r < 0$ ) with the use of memory, cognitive, metacognitive, affective, and social strategies (Table 3).

**Table 3. Correlation between language learning strategy groups and learned helplessness and its deficits**

	General level of helplessness	Emotional deficit	Cognitive deficit	Motivational deficit
Memory strategies	$r = -0.303, p < 0.001 *$	$r = -0.053, p = 0.204$	$r = -0.201, p < 0.001 *$	$r = -0.443, p < 0.001 *$
Cognitive strategies	$r = -0.473, p < 0.001 *$	$r = -0.232, p < 0.001 *$	$r = -0.555, p < 0.001 *$	$r = -0.387, p < 0.001 *$
Compensation strategies	$r = -0.074, p = 0.077$	$r = -0.043, p = 0.305$	$r = -0.213, p < 0.001 *$	$r = 0.016, p = 0.711$
Metacognitive strategies	$r = -0.475, p < 0.001 *$	$r = -0.195, p < 0.001 *$	$r = -0.52, p < 0.001 *$	$r = -0.46, p < 0.001 *$
Affective strategies	$r = -0.09, p = 0.031 *$	$r = 0.131, p = 0.002 *$	$r = -0.056, p = 0.183$	$r = -0.29, p < 0.001 *$
Social strategies	$r = -0.365, p < 0.001 *$	$r = -0.149, p < 0.001 *$	$r = -0.359, p < 0.001 *$	$r = -0.376, p < 0.001 *$

\* statistical significance ( $p < 0.05$ )

The research shows that the strongest relationships involve metacognitive and cognitive strategies. One can assume that these strategy groups determine the level of helplessness to the greatest extent. This implies that helpless students may lack the skills to manipulate and transform the target language as well as to coordinate their learning process.

### ***Relationship between private tutoring and the level of learned helplessness***

The values of the quantitative variables in the two groups were compared using the Mann–Whitney U test.  $P$  values of  $< 0.05$  indicated statistically significant correlations. The general level of helplessness was significantly higher in those students who did not use private English tutoring compared to those who got such assistance. One can conclude that private tutoring supports cognitive and emotional processes in students.

Similarly, in their wide-range investigation, Bray et al. (2013, as cited in Türkan, 2022) showed that private tutoring positively affects students' motivation. Private tutoring appears to be a phenomenon which maintains and increases social inequalities. Research indicates that students from more affluent backgrounds tend to participate more in private tutoring than students with a lower socioeconomic status. The explanations provided by Zwier et al. (2021) are that rich parents "are not only better equipped to pay for these supplementary learning activities, but also have more knowledge on how educational institutions work and are more intensively involved in their children's educational career" (p. 412).

Although no statistically significant differences were found, it is worth adding that both motivational and emotional deficits were also higher in students who did not hire tutors than in students who did. These research findings suggest that students who had a private tutor might have fewer symptoms of emotional and motivational deficits of learned helplessness. Table 4 shows the distribution of perceived helplessness and its deficits according to the use of private tutoring.

**Table 4. Distribution of learned helplessness among students learning English and its deficits, by the use of private tutoring**

School Helplessness Scale		Have you been using private tutoring in English during remote learning?		p
		Yes (N=154)	No (N=415)	
Learned helplessness	M±SD	2.39±0.54	2.59±0.68	p=0.004 *
	Mdn	2.35	2.55	
	Q	1.95–2.84	2.05–3.05	
Emotional deficit	M±SD	2.48±0.94	2.64±1.05	p=0.154
	Mdn	2.43	2.57	
	Q	1.86–3.00	1.79–3.43	
Cognitive deficit	M±SD	2.04±0.69	2.36±0.81	p<0.001 *
	Mdn	2	2.2	
	Q	1.60–2.40	1.80–2.80	
Motivational deficit	M±SD	2.54±0.74	2.69±0.78	p=0.077
	Mdn	2.5	2.62	
	Q	2.00–3.00	2.12–3.12	

\* statistical significance ( $p < 0.05$ )

## Discussion and pedagogical implications

The research proves that there is a relationship between learned helplessness and the use of foreign language strategies. The more strategies students use, the lower their level of helplessness. This research finding drew attention to the importance of a paradigm shift away from teacher-centred toward student-centred learning. A learner-centred approach requires new roles from the teacher, who is expected to be, among other things, a helper and a guide in raising students' awareness of their learning strategies. Although language learning strategies have been of interest to researchers for several decades, most research findings do not apply to language learning. Gu (2018) calls for promoting and implementing strategies into school curricula:

Researchers on LLS should do more teacher/learner-friendly research. This involves making research results more readable to classroom teachers and learners. More practice textbooks should be published aiming at integrating LLS research findings into real teaching and learning situations. Teacher-friendly research also involves teachers being encouraged to do their action research by trying out different ways of LLS intervention. (p. 161)

Secondly, various tools such as questionnaires, observation sheets, and task-specific diagnostic instruments should be made available to the teacher. Another way of promoting LLS is to build them into teacher training programs, so that student teachers and full-time teachers begin to trust research findings rather than their own folk knowledge or teaching experiences (Gu, 2018).

In line with the research findings, the emphasis should be on memory, cognitive, metacognitive, affective, and social strategies. According to Rebecca Oxford's *Foreign Language Strategies Taxonomy* (1990), these strategy groups include certain strategy subgroups. Memory strategies include creating mental links, applying images and sound, reviewing properly, and employing action; cognitive strategies comprise practising, receiving

and sending messages, analysing and reasoning, and creating structure for input and output; the metacognitive strategy group include centring ones' learning, arranging and planning learning, and evaluating learning; affective strategies consist of lowering anxiety, self-encouragement, and taking the emotional temperature; social strategies include asking questions, cooperating with others, and empathising with others (see Kolber 2015, 2019, 2021).

Another recommendation for post-COVID teaching methodology is to emphasize active learning. This can be done by enhancing teaching and learning with technology. Digital education resources need to be rethought as not merely methods of instruction, but a vehicle to change the educational paradigm from assuming that all learning happens the same way to focusing on lifelong learning and preparing students for an ever-changing world (Alemán de la Garza et al., 2019). One promising pedagogy that helps students "learn to learn" is flipped learning. Teachers wishing to use this pedagogical approach must incorporate four pillars into their practice: a flexible environment, a learning culture, intentional content, and a professional educator. The first element, *flexible environment*, means adaptable classroom settings. Students do not sit in row after row of desks. On the contrary, their desks are rearranged so that they can move around, work in groups, or learn independently. Educators who use flipped learning are obliged to establish physical space and time frames that allow students to discuss and reflect on their learning. Flipped learning is based on learner-centred education and thus offers a different *learning culture*. The core of a learner-centred culture is to assist and guide each student's learning rather than provide a one-way delivery of information. *Intentional content*, the third element of flipped learning, means that students are given an opportunity to ask and answer authentic questions and to work on authentic tasks. As a result, students are actively engaged in knowledge construction because they participate in the learning process in a meaningful way. Finally, a teacher who uses the flipped learning model should assume the role of a *professional educator*. This role is definitely more challenging than teaching in a traditional classroom. Professional educators continually observe their

students, providing them with immediate feedback assessing their work. They are also reflective practitioners willing to connect with each other and to accept constructive criticism to improve their teaching (Sams et al., 2014).

The study shows that tutoring might be highly effective in preventing learned helplessness. The students who had private tutors were characterized by less learned helplessness than those who did not have such assistance. Brzezińska and Appelt claim that students need tutor-teachers with clearly defined roles who are highly aware of the tasks to be accomplished in the educational relationship. The tutor-teacher is needed by the student as a source of (1) boundaries, (2) cognitive and social requirements and challenges that stimulate the student's development, and (3) a sense of competence and satisfaction with school achievements (2013).

Tutor-teachers should target their tutees' real-life goals. Students know precisely what kind of help they need. However, these needs can be very short-term. Therefore, it is very important for the tutor to be able to respond to new, immediate concerns. Secondly, tutors should constantly explore students' understanding of the material. To this end, they constantly need to investigate students' prior knowledge in detail. Last but not least, support needs to be balanced. On the one hand, an excess of control can lead to a deep dependence on the teacher. On the other hand, insufficient control may mean leaving the student on their own in their struggles. The purpose of tutoring is to help the student until they can use new skills and strategies on their own. This means a gradual decrease in assistance and a gradual increase in student autonomy (Topping, 2000, pp. 9–10). Miller (2015) claims that certain types of questions may promote independent learning and develop metacognition. Using questions such as "What else could you try? Have you experimented with another idea? Why do you think that?" will probe students' thinking and encourage them to think about their learning.

---

## Conclusions

The results show that secondary-school students usually felt learned helplessness during English classes. Moreover, motivational deficit made the greatest contribution to learned helplessness. The level of helplessness correlated significantly and negatively with the use of memory, cognitive, metacognitive, affective, and social strategies. The strongest relationships were between learned helplessness and metacognitive and cognitive strategies. Those students whose parents took on a private tutor had a lower level of learned helplessness. These research findings lead to several recommendations for educational practice:

1. Include elements of strategy training in the school curriculum. Special emphasis should be placed on memory, cognitive, metacognitive, affective, and social strategies.
2. Promote teachers' professional development by creating training schools, where both student-teachers and in-service teachers could broaden their knowledge on strategy training and tutoring in education.
3. Use new, effective pedagogical approaches or methods to keep learners motivated and engaged in the learning process (e.g., flipped learning).
4. Teach digital competencies to educators. This is essential for the development of necessary skills in the post-pandemic educational landscape, in which teachers need to design cognitively engaging didactic materials for the virtual classroom.
5. Bridge the gap between students by arranging remedial teaching at school. Extra care or attention should be delivered to low-income students who fall behind with their studies and whose parents cannot afford a tutor.
6. Last but not least, embrace the concept of social and emotional learning (SEL). Research conducted in low- and middle-income nations focuses on declines in academic learning (e.g., literacy and numeracy) due to the pandemic. It is crucial to note that schools play

a pivotal role in fostering social and emotional development and that school closures have impacted students' emotional regulation, self-efficacy, and social skills. By supporting students' SEL, they can improve their mental health and well-being and, in the long run, adapt to new circumstances. Moreover, educators must become skilled at adjusting to an unstable, rapidly changing educational environment. Experts offer the following practical ways to introduce and broaden the use of SEL practices in the classrooms:

a) assess students and teacher's social and emotional needs; b) establish community and a sense of belonging; c) establish and maintain relationships between students, teachers, and staff to promote a positive learning environment; d) create space for students to conduct self-reflections and recognize/identify their thoughts and emotions; e) promote self-care and stress management. (Social-Emotional Learning, 2022)

**Funding:** This research received no external funding.



## References

- Alemán de la Garza, L., Anichini, A., Antal, P. T., Beaune, A. L., Bruillard, E. R., Burke, D., & Tsinakos, A. (2019). *Rethinking pedagogy: Exploring the potential of digital technology in achieving quality education*. Mahatma Gandhi Institute of Education for Peace and Sustainable Development.
- Brzezińska, A. I., & Appelt, K. (2013). Tutoring nauczycielski – tutoring rówieśniczy: aspekty etyczne [Teacher tutoring – peer tutoring: Ethical aspects]. *Forum Oświatowe*, 2(49), 13–29. <http://forumoswiatowe.pl/index.php/czasopismo/article/view/39>
- Buchner, A., Majchrzak, M., & Wierzbička, M. (2020, May). *Edukacja zdalna w czasie pandemii. Edycja 1*. [Distance education during the pandemic]. <https://centrumcyfrowe.pl/edukacja-zdalna/>
- Całek, G. (2021). Rodzice i nauczyciele o problemach pierwszych trzech miesięcy edukacji zdalnej [Parents and teachers about the first three months of distance education]. In A. Mikołajczak & R. Chęciński (Eds.), *Wyzwania edukacyjne i psychologiczne okresu pandemii* [Educational and psychological challenges in the pandemic] (pp. 10–28). Uniwersytet im. Adama Mickiewicza w Poznaniu.
- Ciżkowicz, B. (2009). *Wyuczona bezradność młodzieży* [Learned helplessness of young people]. Wydawnictwo Uniwersytetu Kazimierza Wielkiego.
- Gu, Peter. (2018). Making language learning strategies research useful: Insights from China for the world. In R. L. Oxford & C. M. Amerstorfer (Eds.), *Language learning strategies and individual learner characteristics: Situating strategy use in diverse contexts* (pp. 143–163). Bloomsbury.
- Gunawardena, C. N., & Mclsaac, M. S. (2004). Distance education. In R. A. Reiser & J. V. Dempsey (Eds.), *Handbook of research on educational communications and technology* (2nd ed., pp. 41). Routledge.
- Kolber, M. (2015). Strategie uczenia się języka angielskiego w liceach ogólnokształcących [Language learning strategies in the secondary-school English classroom]. *Edukacja Ustawiczna Dorosłych*, 3(9), 30–38.
- Kolber, M. (2019). The relationship between language learning strategies and learned helplessness. *Przegląd Pedagogiczny*, 2, 250–262. <http://doi.org/10.34767/PP.2019.02.19>
- Kolber, M. (2020). Learned helplessness during a high school English lesson. *Forum Oświatowe*, 32(2), 87–97. <https://doi.org/10.34862/fo.2020.2.4>

- Kolber, M. (2021). Strategie uczenia się języka obcego a czynniki środowiskowe [Foreign language strategies and environmental factors]. *Edukacja Ustawiczna Dorosłych*, 2(113), 173–183. <http://10.34866/ahj3-xb43>
- Kolber, M. (2022). Learned helplessness of young people during the COVID-19 distance learning: A research report. *Lubelski Rocznik Pedagogiczny*, 41(1), 41–52. <http://dx.doi.org/10.17951/lrp.2022.41.1.41-52>
- Marek, M., Chew, C., & Wu, W. (2021). Teacher experiences in converting classes to distance learning in the COVID-19 pandemic. *International Journal of Distance Education Technologies*, 19(1), 89–109. <https://www.igi-global.com/article/teacher-experiences-in-converting-classes-to-distance-learning-in-the-covid-19-pandemic/264399>
- Meece, J. L., & Painter, J. (2008). Gender, self-regulation, and motivation. In D. H. Schunk & B. J. Zimmerman (Eds.), *Motivation and self-regulated learning: Theory, research, and applications* (pp. 339–367). Lawrence Erlbaum Associates Publishers.
- Miller, A. (2015). Avoiding “learned helplessness.” Edutopia. <https://www.edutopia.org/blog/avoiding-learned-helplessness-andrew-miller>
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Heinle & Heinle Publishers.
- Oxford, R. L., & Lavine, R. Z. (2018). Understanding language learning strategies in context. In R. L. Oxford & C. M. Amerstorfer (Eds.), *Language learning strategies and individual learner characteristics: Situating strategy use in diverse contexts* (pp. 5–29). Bloomsbury.
- Ptaszek, G., Stunża, G. D., Pyżalski, J., Dębski, M., & Bigaj, M. (2020). *Edukacja zdalna: co stało się z uczniami, ich rodzicami i nauczycielami?* [Distance education: What happened to students, their parents, and teachers?]. Gdańskie Wydawnictwo Psychologiczne.
- Sams, A., Bergmann, J., Daniels, K., Bennett, B., Marshall, H. W., & Arfstrom, K. M. (2014). *Flipped Learning Network (FLN). The Four Pillars of F-L-I-P™*. <https://flippedlearning.org/definition-of-flipped-learning/>
- Seligman, M. (1975). *Helplessness: On depression, development, and death*. Freeman.
- Simonson, M., & Berg, G. A. (2016, November 7). *Distance learning*. Encyclopedia Britannica. <https://www.britannica.com/topic/distance-learning>

- Social-Emotional Learning in Response to COVID-19 (SEL). Research Brief.* (2022). Rutgers University. [https://cesp.rutgers.edu/sites/default/files/RU.CESP\\_Research.Brief\\_Covid.SEL.RTI.pdf](https://cesp.rutgers.edu/sites/default/files/RU.CESP_Research.Brief_Covid.SEL.RTI.pdf)
- Topping, K. (2000). *Tutoring* [Educational practices series – 5]. International Academy of Education, International Bureau of Education. <http://www.iaoed.org/downloads/prac05e.pdf>
- Türkan, A. (2022). Examination of the effect of the Covid-19 pandemic period on private tutoring tendencies of high school students: A longitudinal study. *International Journal of Progressive Education*, 18(2), 169.
- Zwier, D., Geven, S., & Van De Werfhorst, H. G. (2021). Social inequality in shadow education: The role of high-stakes testing. *International Journal of Comparative Sociology*, 61(6). <https://doi.org/10.1177/0020715220984500>





**Lucián Líviusz Olteanu**

<https://orcid.org/0000-0003-2047-3609>

Gál Ferenc University, Szeged, Hungary

luciolteanu@gmail.com

## The Adaptation of the Career Decision-Making Difficulties Questionnaire (CDDQ) to a Sample of Hungarian Secondary-School Students

(pp. 125–144)

Suggested citation: Olteanu, L. L. (2023). The Adaptation of the Career Decision-Making Difficulties Questionnaire (CDDQ) to a Sample of Hungarian Secondary-School Students. *Multidisciplinary Journal of School Education*, 12(2(24)), 125–144. <https://doi.org/10.35765/mjse.2023.1224.06>

### Abstract

**The aim of the research:** The goal of the research is to adapt the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati et al., 1996) to a sample of Hungarian secondary-school students.

**Research method:** The sample on which the questionnaire analysis was based included 507 Hungarian secondary-school students. Factor analysis was used in order to adapt the questionnaire and to determine the latent variables, that is, factors based on these correlations. With the help of this method, the number of original variables can be reduced and the original data described with the least possible information loss. To this end, the English-language measuring instrument was validated in this study.

**A short description of the context of the issue:** The exploration of career decision-making difficulties is crucial for personal fulfilment, optimal career fit, improved decision-making skills, reduced uncertainty and anxiety, avoidance of career dissatisfaction, and long-term career development. By addressing these difficulties, individuals can make more informed and satisfying career choices that align with their unique strengths, values, and aspirations.

**Research findings:** The study revealed that the factor structure of the CDDQ varies across different cultural contexts, a finding which suggests that cultural variations impact the underlying dimensions of the CDDQ.

**Conclusions and recommendations:** The utilization of the CDDQ allows counsellors and practitioners to obtain valuable insights into the career decision-making difficulties experienced by their clients. This enables them to customize their interventions and counselling approaches to better meet the specific needs of individuals. The questionnaire provides a well-organized and systematic framework for evaluating and tackling these difficulties, thereby facilitating the development of effective strategies and interventions in the counselling process. The diverse sets of factors across different cultural settings highlight the need to consider cultural influences when assessing and interpreting.

**Keywords:** career decision-making; career decision-making difficulties; pedagogy; career development; motivation

## Introduction

The fundamental aim of career orientation counselling is to support the person asking for advice in coping with difficulties that arise during the career decision-making process. Accordingly, the essential feature of counselling is identifying those specific difficulties which inhibit the person from making a decision (Gati & Itay, 2005). Self-evaluation questionnaires and psychological tests have an equally significant role in diagnostics designed for career decision-making counselling, because they can be applied as complementary tools. Self-evaluation questionnaires are accessible to a wider range of users and help identify those individuals for whom the use of psychological tests is also justifiable. It should be noted that career orientation intervention has to be applied in view of the person's individual needs, while considering that not everybody needs individual counselling and psychological testing.

Career development is a life-long process and it entails continuous decision-making. Throughout this process, one steadily executes a series

of information selection. Cognitive functions that are triggered during this procedure dispose the individual to make subjective and objective value judgements. When deciding on a career path, adolescents cannot yet rely on their life experience, which will be bestowed upon them over time, but their conception of their own future is primarily shaped by their family, school, and peers. When they are planning their future, they mostly take their ideas and desires into consideration. The more consciously and clearly they are able to imagine their future, the more informed decisions they are capable of making (Walsh & Osipow, 1988).

Most of the research into career decision-making focuses on cultural/ethnic and gender differences (Fouad, 1993; Meier, 1991; Tinsley, 1992). Researchers have used various theoretical approaches to examine career decision-making difficulties, each of which emphasizes different aspects. For example, the psycho-dynamic approach (e.g., Bordin & Koppin, 1973) endeavored to classify difficulties according to the individual's problems and internal sources instead of observed symptoms.

At the same time, empirical research into career decision-making has focused on developing an instrument that enables researchers to examine individual differences in career decision-making difficulty. These measuring methods include the Career Decision Scale, the My Vocational Situation Scale, the Vocational Decision Scale, the Career Decision Profile, which is based on a revision of the Vocational Decision Scale, the Behavioral Inhibition Scale, the Career Decision-Making Self-Efficacy Scale, the Career Decision Diagnostic Assessment, the Career Factors Inventory, its Hungarian adaptation, the Career Barriers Inventory, and the Career Belief Inventory. Most studies which used these measuring instruments were carried out independently of theoretical conceptualizations (Tinsley, 1992).

There are two reasons to apply the CDDQ. Firstly, despite the fact that the original English version of the questionnaire was published in 1996, it is still regularly used and cited (e.g., Akpochofo, 2021; Boerchi, 2020; Rochat, 2019; Abdullah, 2018; Shagini, 2018; Gati, 2014; Slaten, 2013; Williams, 2013; Di Fabio, 2009, 2011, 2012; Arulmani, 2006; Creed, 2006). A second reason to opt for this questionnaire is that it measures dimensions connected with career decision-making difficulties that other

questionnaires do not (dysfunctional beliefs and difficulties arising from inconsistent information). The investigation of these dimensions may open up new paths of exploring more subtle and age-specific decision-making difficulties.

This study summarizes the research experience related to the use and Hungarian adaptation of the Career Decision-Making Difficulties Questionnaire (Gati et al., 1996), which was designed to measure difficulties that arise during career decision-making.

### Investigation

The validity of the Hungarian version of the Career Decision-Making Difficulties Questionnaire (Gati et al., 1996) has been examined with exploratory and confirmatory factor analysis. During the exploratory factor analysis (EFA), principal axis factoring was applied with promax and oblimin rotation. In order to determine factors, a screen plot test was performed (Cattell, 1966). The suitability of the factor structure gained by the Kaiser–Meyer–Olkin measure (KMO) for factor analysis was also studied. A KMO value above 0.9 is excellent, above 0.8 is very good, and above 0.7 is satisfactory; however, no factor analysis can be carried out if the KMO is below 0.5 (Sajtos & Mitev, 2007). Missing data were deleted (list-wise). In the case of EFA, the value of items appearing on each factor was appropriate (above 0.32). Cross-loading is when an item appears on multiple factors, and has a value over 0.32 (Tabachnick & Fidell, 2001). It is advisable to remove these variables from the factor structure because it improves the reliability and conformation of the model in question. The results of the confirmatory factor analysis (CFA) and the model's goodness of fit were determined in accordance with the indicators used in the international literature:

- distribution of chi-square and the degree of freedom ( $\chi^2/df$ ),
- root mean square error of approximation (RMSEA),
- 90% confidence interval of RMSEA,



- comparative fit index (CFI), and
- Tucker–Lewis Index (TLI).

In analyzing the indicators, Brown's (2006) criteria for acceptable goodness of fit were used:  $RMSEA \leq 0.06$ ,  $90\%CI \leq 0.06$ ,  $CFI \geq 0.95$ , and  $TLI \geq 0.95$ . For examining the internal consistency of measuring instruments, Cronbach's  $\alpha$  was used, as several Hungarian and other studies have done. A value of Cronbach's  $\alpha$  between 0.5 and 0.7 is acceptable and one above 0.7 indicates good internal consistency (Hinton, 2004).

### **Sample**

The questionnaire-based investigation included 507 participants who are 9th- to 12th-grade students learning in Hungarian secondary schools. To access the target group, I contacted the heads of the institutions for permission and help in the process of filling out the questionnaires. Parents consented to their children's participation in the examination, and the adult students took part in the research as volunteers. Questionnaires were sent to the schools online or in print.

The data collection was hindered by the fact that the online inquiries were very rarely answered. This can be primarily explained by the high number of questionnaires of various topics addressed to the schools. Before distributing the questionnaires, I asked for the head teacher's permission for filling in the questionnaires, and I provided an opportunity to share the questionnaire online so that anybody could join the research from any part of the country. The participants were assured that both the school and the respondents would remain anonymous. Before commencing the examination in the educational institution, the students, teachers, and parents were informed about the conditions and features of the investigation as well as the aims of the questionnaire.

Participation in the research was voluntary and anonymous; the students were able to withdraw even after beginning the questionnaire. The forms were filled out in the classrooms, with an online part and a smaller, pen-and-paper part. Anybody who wanted to know the results was allowed to do so.

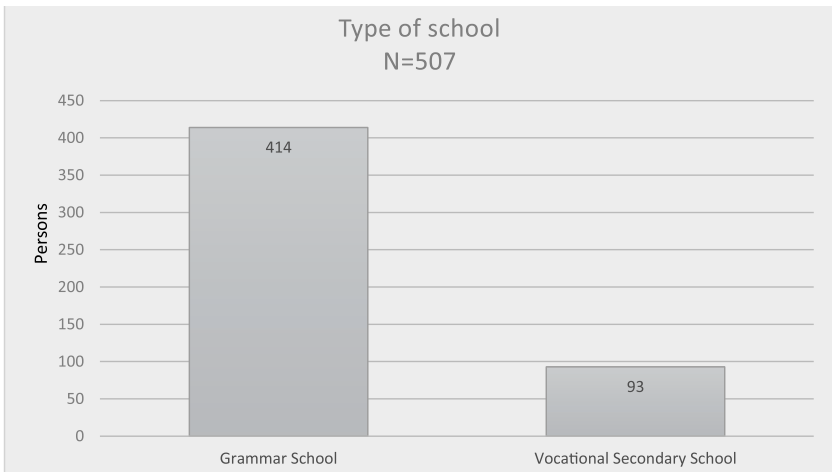
The characteristics of the participants are presented in Table 1.

**Table 1. Features of the research sample**

		Age (years)					Total	
		15.0	16.0	17.0	18.0	19.0		
Gender	male	84	45	48	32	8	215	42.4%
	female	114	63	43	44	26	292	56.8%
Total		198	108	91	76	34	507	100%

The study group who completed the questionnaire included 507 secondary-school students between 15 and 19 years of age ( $M = 16.29$ ;  $SD = 1.3$ ), with a proportion of 56.8% females ( $n = 292$ ) and 42.4% males ( $n = 215$ ). The secondary-school sample contained grammar school students ( $n = 414$  [81.7%]) and vocational secondary-school students ( $n = 93$  [18.3%]).

**Figure 1. Number of respondents, by type of institution**



In sum, the members of the secondary-school sample came from two types of institutions (grammar school and vocational secondary school), mostly from provincial schools. The grade point average (GPA)

of students featuring in the sample was good. Their GPA from the previous semester was 4.06 ( $SD = 0.71$ ) on a scale of 1 to 5.

### **Methods and instruments**

The analysis of the data was carried out in IBM SPSS Statistics for Windows v.23 and SPSS AMOS v.22 statistical packages. Factor analysis was used in order to adapt the questionnaires and to determine latent variables, that is, the factors based on these correlations. With the help of this method, the number of original variables was reduced in order to describe original data with the least possible information loss. After the normality analysis, the results were evaluated with appropriate instruments.

### **Career Decision-Making Difficulties Questionnaire (CDDQ)**

Based on the decision theory by Gati & Itay (2005), a model was worked out that would identify the “ideal career decision-maker.” This idea represents a person who is conscious about the necessity of career decision-making, ready for it, and able to make the “right decision” (one that is the most compatible with their goals and the outcome of an appropriate decision-making process). The complexity of the career decision-making process makes it difficult for most people to become an ideal career decision-maker. Any deviations from the ideal career decision-maker were interpreted as potential problems which might impact an individual’s decision-making process by (a) inhibiting the person from arriving at a decision or (b) leading to a less optimal decision.

The first version of the questionnaire contained 44 statements corresponding to the 44 career decision-making difficulties featuring in the theoretical model. Later, this number was reduced to 34 in order to improve the internal consistency of the test. Two of the 34 questions were meant to check validity. Besides the three main categories, 10 subscales were developed, corresponding to the 10 categories used in the test (see Table 2).

The proposed taxonomy can be divided into three main categories:

1. *lack of readiness for career decision-making* (the individual is not ready for a given decision in relation to career decision-making), which

includes three categories of difficulty that precede engagement in a given career decision,

2. *lack of information*, which involves four categories of difficulty, and
3. *inconsistent information*, which includes three categories of difficulty arising during the actual process of career decision-making.

### ***The ten categories of difficulty***

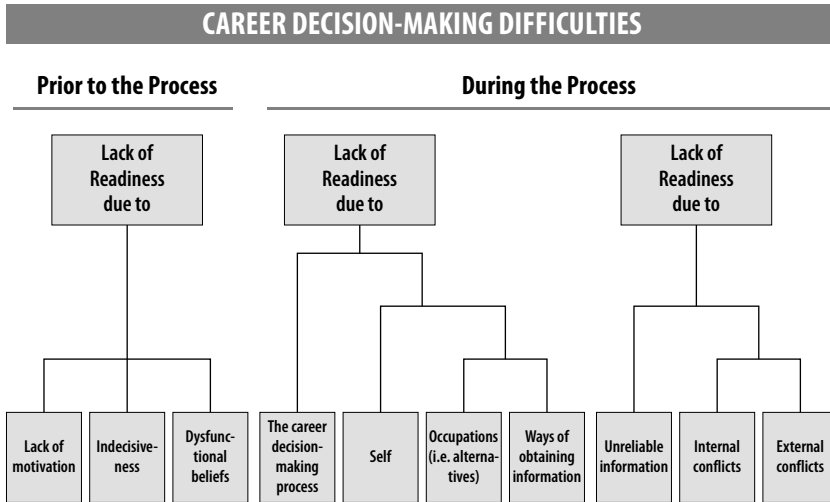
The main category within “lack of readiness for career decision-making” contains three additional categories. They are related to the lack of motivation to start the career decision-making process, general indecisiveness in terms of all kinds of decision-making. The remaining categories include difficulties stemming from dysfunctional beliefs (e.g., irrational expectations) and about the career decision-making process.

Within the main category of “lack of information,” four categories were differentiated: lack of knowledge about the steps required during the process, lack of information about oneself, lack of information about occupations, and lack of information about ways of obtaining additional information. I think that the last two categories are nearer to each other than to the first one, because they refer to external, objective information, while the first one points to subjective information.

Within the main category of “inconsistent information,” three categories were pinpointed:

- unreliable information categories refers to unreliable or obscure information,
- internal conflicts within the individual, and
- external conflicts involving others.

Here, it needs to be pointed out that the last two conflict categories are nearer to each other than to the first one.

**Figure 2. The original factor structure of the CDDQ**  
(source: Gati et al., 1996)

Gati & Saka (2001) examined the internal consistency of the shortened questionnaire and arrived at results identical to those of the original questionnaire with 44 items. The value of Cronbach's  $\alpha$  for the whole questionnaire was 0.91; for the main category of "lack of readiness" it was 0.62, for the main category of "lack of information" 0.88, and for the main category of "inconsistent information" 0.87.

## Results

### *Exploratory Factor Analysis*

The originally proposed CDDQ (Gati & Saka, 2001) contained ten well-formulated factors (RM, RI, RD, LS, LP, LO, LA, II, IU, and IE), but they were not backed up by confirmatory factor analysis (CFA). Therefore, exploratory factor analysis was used in this study to examine whether the latent factors underpinning the questionnaire items correspond to those found in the English version of the CDDQ. During the EFA, principal axis factoring was carried out, so as to better estimate correlations in the background

(Mulaik, 1972). Then, oblimin rotation was used in the original, 32-item version. This method presupposes that factors do correlate with one another, which is more characteristic of the social and behavioral sciences.

During the analysis, five factors in the sample could be differentiated, which explains 60.89% of the variance of the factor structure. Based on the scree plot test, the five-factor solution seems appropriate. The value of the KMO was 0.957, so it can be claimed that the variables are suitable for factor analysis (Sajtos-Mitev, 2007). Moreover, using varimax rotation also yields a five-factor structure.

The first factor is *difficulties arising from inconsistent information*, which includes ten items (25–34). The factor explains 41.695% of the variance. The reliability of the scale is high (Cronbach's  $\alpha = 0.920$ ).

The second factor is *general indecisiveness*, which involves three items (4., 5., –6). The factor explains 5.981% of the variance, and its Cronbach's  $\alpha$  is appropriate ( $\alpha = 0.721$ ).

The third factor is *dysfunctional beliefs*, which contains four items (8., 9., 10., 11). The factor accounts for 5.412% of the total variance. The reliability of the scale is unacceptable ( $\alpha = 0.460$ ).

The fourth factor is *lack of motivation*, which includes four items (1., 2., 3 and 9). The factor explains 4.255% of the total variance. Its Cronbach's  $\alpha$  is acceptable ( $\alpha = 0.595$ ).

The fifth factor is *difficulties arising from insufficient information and knowledge*, which involves twelve items (13–24). The factor stands for 3.547% of the total variance. Its Cronbach's  $\alpha$  is barely acceptable ( $\alpha = 0.944$ ).

The previous analysis demonstrated that one item could be found in two factor structures; the value of cross-loadings was higher than 0.32. Therefore, this was removed from the second analysis. The variable in question is item 9. After re-running the analysis, five factors could be differentiated in the sample again. This factor structure accounts for 60.89% of the variance. The KMO value is 0.957, so it can be argued that the variables are suitable for factor analysis (Sajtos-Mitev, 2007). Furthermore, using varimax rotation also yielded a 5-factor structure.

The factor structure now shows goodness of fit. The variables have high factor values (0.359–0.828) and no cross-loading was found in any

of the variables. The value of the KMO is 0.958, so the variables continue to be suitable for factor analysis (Sajtos-Mitev, 2007).

- The first factor is *difficulties arising from inconsistent information*, which includes 10 items (25–34). The factor explains 42.994% of the variance. The reliability of the scale is high (Cronbach's  $\alpha = 0.920$ ).
- The second factor is *general indecisiveness*, which contains three items (4–6). The factor accounts for 5.972% of the variance and its Cronbach's  $\alpha$  is also high ( $\alpha = 0.721$ ).
- The third factor is *dysfunctional beliefs*, involving three items (8, 10, and 11). The factor explains 5.152% of the total variance. The reliability of the scale is acceptable ( $\alpha = 0.561$ ) (Hinton, 2004).
- The fourth factor is *lack of motivation*, which includes three items (1–3). The factor accounts for 4.228% of the total variance and its Cronbach's  $\alpha$  is appropriate ( $\alpha = 0.677$ ).
- The fifth factor is *difficulties arising from insufficient knowledge and information*, containing 12 items (13–24). The factor explains 3.608% of the total variance. Its Cronbach's  $\alpha$  is quite good ( $\alpha = 0.944$ ).

In total, five factors were differentiated in the background of the questionnaire; one item was removed. This factor structure accounts for 61.954% of the total variance.

### **Confirmatory factor analysis**

Confirmatory factor analysis is a method that is used to test an existing factor structure. The fit of the model related to the CDDQ was examined with CFA.

For the *first model*, 32 variables and five factors that were filtered through EFA were used. Considering the model's fit, the results only partially meet the expected value ( $n = 507$ ,  $\chi^2/df = 2.929$ ,  $RMSEA = 0.062$ ,  $CI = 0.058-0,066$ ,  $CFI = 0.900$ , and  $TLI = 0.890$ ). In regard to internal consistency, the results are adequate (Cronbach's  $\alpha$  for *difficulties arising from inconsistent information* = 0.920, Cronbach's  $\alpha$  for *general indecisiveness* = 0.721, Cronbach's  $\alpha$  for *dysfunctional beliefs* = 0.561, Cronbach's  $\alpha$  for *lack*

*of motivation* = 0.677, and Cronbach's  $\alpha$  for *difficulties arising from insufficient information and knowledge* = 0.944).

For the second model, 31 variables and five factors that were filtered through EFA were used. Considering the fit of the model, the RMSEA, the TLI, and the CI did not reach the desired value. The values of other indicators were as expected ( $N = 507$ ,  $\chi^2/df = 2.978$ , RMSEA = 0.063, CI = 0.059–0.067, CFI = 0.903, and TLI = 0.894). In regard to internal consistency, the results were appropriate (Cronbach's  $\alpha$  for *difficulties arising from inconsistent information* = 0.920, Cronbach's  $\alpha$  for *general indecisiveness* = 0.721, Cronbach's  $\alpha$  for *dysfunctional beliefs* = 0.561, Cronbach's  $\alpha$  for *lack of motivation* = 0.677, and Cronbach's  $\alpha$  for *difficulties arising from insufficient knowledge and information* = 0.944).

The *third model* was established by running EFA and correcting the original EFA model in order to find a solution that best fits the criteria set by Hinton (2004) and that reaches the highest possible internal consistency of each factor. When re-running the EFA, it appeared that based on the modification index, five co-variance errors need to be added to the structure. Items CDDQ13–CDDQ14, CDDQ14–CDDQ15, CDDQ33–CDDQ34, CDDQ29–CDDQ30, and CDDQ27–CDDQ30 varied with one another, thus improving the goodness of fit. In this form, the model has proper fit ( $n = 507$ ,  $\chi^2/df = 2.522$ , RMSEA = 0.055, CI = 0.051–0.059, CFI = 0.926, and TLI = 0.918).

The final five-factor model contains 31 items (see Figure 3). The first factor is *difficulties arising from inconsistent information*, which includes ten items (25–34). The second factor is *general indecisiveness*, involving three items (4–6). The third factor is *dysfunctional beliefs*, which contains three items (8, 10, and 11). The fourth factor is *lack of motivation*, including three items (1–3). The fifth factor is *difficulties arising from insufficient knowledge and information*, which involves 12 items (13–24). The Cronbach's  $\alpha$  values for the model are thus correct and the model in this form has better indicators of fit.



**Table 2. Summary of the results of the three models of the CDDQ using EFA and CFA**

	Total explained variance	KMO	Number of items in factors	Cronbach's $\alpha$	$\chi^2/df$	RMSEA	90% CI of RMSEA	CFI	TLI
Original model (32 items) n=507	60.819%	0.857	EI=10 ÁH=3 KT=4 MH=4 HI=12	EI=0.920 ÁH=0.721 KT=0.460 MH=0.595H I=0.944	2.929	0.062	0.058–0.066	0.900	0.890
Second model (31 items) n=507	59.060%	0.838	EI=10 ÁH=3 KT=3 MH=3 HI=12	EI=0.920 ÁH=0.721 KT=0.561 MH=0.677H I=0.944	2.978	0.063	0.059–0.067	0.903	0.897
Third model (17 items) n=507	60.149%	0.822	EI=10 ÁH=3 KT=3 MH=3 HI=12	EI=0.920 ÁH=0.721 KT=0.561 MH=0.677H I=0.944	2.522	0.055	0.051–0.059	0.926	0.918

Note: KMO = Kaiser–Meyer–Olkin indicator;  $\chi^2/df$  = quotient of chi-squared and the degree of freedom; RMSEA = root mean square error of approximation; 90% CI = 90% confidence interval of the RMSEA; CFI = comparative fit index; TLI = Tucker–Lewis index; EI = inconsistent information; ÁH = general indecisiveness; KT = dysfunctional beliefs; MH = lack of motivation; HI = difficulties arising from insufficient knowledge and information

Among the three models – considering the criteria of EFA and CFA as well as the internal consistency of the factors – the third factor structure (containing 31 items) proves to be the most adequate in the case of the secondary-school sample.

### ***Characteristics of the final structure, with 31 items, of the Hungarian version of the CDDQ in the secondary-school sample***

After establishing the CFA model with 31 items and proper goodness of fit, exploratory factor analysis (EFA) was again carried out with principal axis factoring and oblimin rotation, as with the previous cases.

Again, the scree plot test indicated the appearance of five factors in the sample that account for 61.954% of the total variance of the whole structure. The EFA that was run based on CFA showed appropriate values: the structure does not contain either low loading (below 0.35) or low

cross-loadings (above 0.35). The first factor, *difficulties arising from inconsistent information*, explains 42.994% of the variance. The second factor, *general indecisiveness*, explains 5.972% of the variance. The third factor, *dysfunctional beliefs*, accounts for 5.152% of the total variance. The fourth factor, *lack of motivation*, stands for 4.228% of the total variance. The fifth factor, *difficulties arising from insufficient knowledge and information*, explains 3.608% of the total variance.

The descriptive statistics of the Hungarian version of the CDDQ in the secondary-school sample are presented in Table 3.

**Table 3. Consistency of the subscales and the descriptive statistics of the Hungarian version of the CDDQ found in a sample of secondary-school students (total explained variance: 61.954%)**

	Difficulties arising from inconsistent information	General indecisiveness	Dysfunctional beliefs	Lack of motivation	Difficulties arising from insufficient knowledge
Mean	37.84	14.97	16.45	9.35	49.66
Scatter	17.49	6.12	4.91	5.36	22.04
Internal consistency ( $\alpha$ )	0.920	0.721	0.561	0.677	0.944
Explained variance %	42.994	5.972	5.152	4.228	3.608

### ***Investigation of convergent validity***

The five-factor questionnaire (obtained through CFA) was used to examine the convergent validity of the 31-item CDDQ developed above. The internal consistencies of the scales' factors seemed appropriate. They were tested with Pearson's correlation test. It was investigated whether variables of different scales showed any relevant correlations. The results are presented in Table 4. *Lack of motivation* correlates positively with the factors of *general indecisiveness* ( $r(507) = 0.232, p < 0.01$ ), *dysfunctional beliefs* ( $r(507) = 0.521, p < 0.01$ ), and *insufficient knowledge* ( $r(507) = 0.523, p < 0.01$ ). The factor *general indecisiveness* has a positive correlation with the factors *dysfunctional beliefs* ( $r(507) = 0.109, p < 0.01$ ), *inconsistent information* ( $r(507) = 0.530, p < 0.01$ ), and *insufficient knowledge* ( $r(507) = 0.424,$

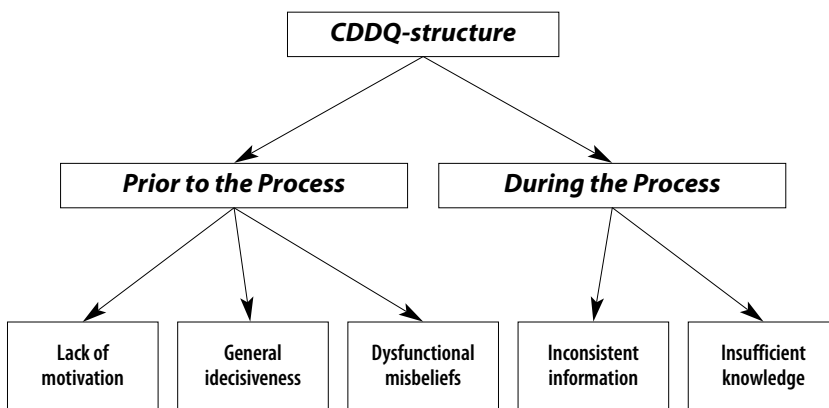
$p < 0.01$ ). Furthermore, the factor *inconsistent information* shows a positive parallel connection with *insufficient knowledge* ( $r(507) = 0.809, p < 0.01$ ). There are correlations between most of the factors, but their strength is not significant.

**Table 4. Correlations among the variables of the CDDQ in the secondary-school sample**

	1	2	3	4	5
Lack of motivation (1)	1	0.232**	-0.028**	0.521**	0.523**
General indecisiveness (2)		1	0.109**	0.530**	0.424**
Dysfunctional beliefs (3)			1	0.054	0.43
Inconsistent information (4)				1	0.809**
Insufficient knowledge (5)					1

Note.\*\* The correlation is significant ( $p < 0.01$ ).

**Figure 3. Final 31-item structure of the Hungarian version of the CDDQ**



## Summary

The international literature on the subject (Amir et al., 2008; Arnold, 2003; Creed & Wong, 2006; Fabio & Kenny, 2011; Gati & Tal, 2008; Vahedi et al., 2012) paint a somewhat different picture considering the structure of the scale than the results seen in the Hungarian sample. However, this conforms to those research outcomes, according to which the factor structure of the CDDQ is influenced by cultural differences (Albion & Fogarty, 2005; Creed & Wong, 2006; Mau, 2001; Zhou & Santos, 2007).

When adapting a measuring instrument, it is important whether various fields are to be studied within a single dimension or to be handled as separate variables. During CFA, in contrast to the investigations in the literature, this study found a five-factor model acceptable in the secondary-school sample (N = 507). As opposed to the 32 items of the original questionnaire, the Hungarian scale contains 31 items. It is possible that variable 9 of the CDDQ – the item which was removed – may have been too generally formulated, and thus the cross-loadings were high.

According to research, the factor structure of the CDDQ is significantly influenced by cultural differences. Because their factor structures differed, only two factors were distinguished in the Chinese version, for example (Creed & Wong, 2006). In an Iranian investigation, three factors were discerned (Vahedi et al., 2012), while a Greek study featured seven factors (Vaipoulou et al., 2019). Furthermore, it is worth noting that some investigations have not thoroughly examined the functioning of the factors within the questionnaire. This indicates the importance of conducting comprehensive research to validate and understand the factor structure of the CDDQ in various cultural contexts. The exploration of career decision-making difficulties is crucial because cultural differences significantly influence the factor structure of the CDDQ. Recognizing and understanding these cultural variations is essential for accurately assessing and addressing career decision-making difficulties across diverse populations.

The Career Decision Difficulties Questionnaire (CDDQ), developed by Gati, Krausz, and Osipow (1996), holds significant value due to its methodological, theoretical, and practical uses in various contexts. It serves as

a valuable tool for designing counselling processes, assessing their effectiveness, and comparing pre- and post-test data.

The CDDQ is particularly suitable for examining samples from secondary schools, making it useful in assessing career decision-making difficulties among students. Additionally, it can be effectively utilized in organizational settings, such as workplaces, or before embarking on re-training programs. One key advantage is its comprehensive approach to addressing career decision-making difficulties. It enables measurement of both cognitive and emotional factors associated with these difficulties. This holistic perspective allows for a better understanding of the multifaceted nature of career decision-making challenges and facilitates targeted interventions.

By using the CDDQ, counsellors and practitioners can gain insights into clients' career decision-making difficulties and can tailor their interventions accordingly. The questionnaire provides a structured framework for assessing and addressing these difficulties, aiding in the formulation of effective counselling strategies (Olteanu, 2023). Furthermore, it allows changes in career decision-making difficulties to be measured over time. By comparing pre- and post-test data, practitioners can evaluate the effectiveness of counselling interventions and can track their clients' progress. The scales of the questionnaire are neatly related to the topic of career decision-making and career orientation in the Hungarian literature. The importance of career consciousness and the need to refine self-definition and self-knowledge are specifically discussed in the counselling model of Szilágyi (2005).

**Funding:** This research received no external funding.

### References

- Amir, T., Gati, I., & Kleiman, T. (2008). Understanding and interpreting career decision-making difficulties. *Journal of Career Assessment, 16*(3), 281–309. DOI: 10.1177/1069072708317367
- Auliyah, A., & Artaya, I. P. (2019). *The influence of work facilities, rewards, and work environment on improving employee performance at Quds Royal Hotel Surabaya*. DOI: 10.13140/RG.2.2.11854.92484
- Bordin, E. S., & Kopplin, D. A. (1973). Motivational conflict and vocational development. *Journal of Counseling Psychology, 20*(2), 154.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: The Guilford Press.
- Cattell, R. B. (1966). The Scree Plot Test for the number of factors. *Multivariate Behavioral Research, 1*, 140–161. [http://dx.doi.org/10.1207/s15327906mbr0102\\_10](http://dx.doi.org/10.1207/s15327906mbr0102_10)
- Chartrand, J. M., & Nutter, K. J. (1996). The Career Factors Inventory: Theory and applications. *Journal of Career Assessment, 4*(2), 205–218. DOI: 10.1177/106907279600400206
- Chartrand, J. M., & Robbins, S. B. (1990). Using multidimensional career decision instruments to assess career decidedness and implementation. *The Career Development Quarterly, 39*(2), 166–177. DOI: 10.1002/j.2161-0045.1990.tb00837.x
- Creed, P., & Wong, O. (2006). Reliability and validity of a Chinese version of the Career Decision-Making Difficulties Questionnaire. *International Journal for Educational and Vocational Guidance, 6*. DOI: 10.1007/s10775-006-0003-3
- Fouad, N. A. (1993). Cross-cultural vocational assessment. *The Career Development Quarterly, 42*(1), 4–13. DOI: 10.1002/j.2161-0045.1993.tb00240.x
- Gati, I., & Itay, A. (2005). *The PIC Model for career decision making: Prescreening, in-depth exploration, and choice. Contemporary models in vocational psychology*. Routledge. DOI: 10.4324/9781410600578-5
- Gati, I., Krausz, M., & Osipow, S. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology, 43*, 510–526. DOI: 10.1037/0022-0167.43.4.510
- Gati, I., & Saka, N. (2001). High school students' career-related decision-making difficulties. *Journal of Counseling & Development, 79*(3), 331–340. <https://doi.org/10.1002/j.1556-6676.2001.tb01978.x>

- Krumboltz, J. D., Mitchell, A. M., & Jones, G. B. (1976). A social learning theory of career selection. *The counseling psychologist*, 6(1), 71–81. DOI: 10.1177/001100007600600117
- Lukács, F. É. (2012). A pályaválasztás és identitásfejlődés összefüggései: PhD értekezés, Eötvös Loránd Tudományegyetem [Career choice and identity development; PhD thesis, Eötvös Loránd University, Budapest]. Retrieved February 21, 2022 from <https://edit.elte.hu/xmlui/handle/10831/46264>
- Mau, W.-C. J. (2001). Assessing career decision-making difficulties: A cross-cultural study. *Journal of Career Assessment*, 9, 353–364. <https://doi.org/10.1177/106907270100900403>
- Meier, S. T. (1991). Vocational behavior, 1988–1990: Vocational choice, decision-making, career development interventions, and assessment. *Journal of Vocational Behavior*, 39(2), 131–181. DOI: 10.1016/0001-8791(91)90008-A
- Mező, F. (2021). Javaslat a pályaeorientáció témakörében gyakori fogalmak rendszerezésére. [A proposal for a classification of common concepts in the field of career guidance]. *Különleges Bánásmód Interdiszciplináris folyóirat*, 2021/4, 7–18. <https://doi.org/10.18458/KB.2021.4.7>
- Olteanu, L. L. (2022) *A pályaválasztás neveléstudományi aspektusai*, PhD értekezés, [Educational aspects of career choice; PhD thesis, Eszterházy Károly Catholic University, Eger]. DOI: 10.15773/EKE.2021.009
- Olteanu, L. L. (2023). Pályaválasztási nehézségek vizsgálata középiskolás diákok körében [Investigating career choice difficulties among secondary-school students' education]. *Neveléstudomány: Oktatás Kutatás Innováció*, 11(1), 25–36. <https://doi.org/10.21549/NTNY.40.2023.1.2>
- Osipow, S. H. (1987). Applying person-environment theory to vocational behavior. *Journal of Vocational Behavior*, 31(3), 333–336. [https://doi.org/10.1016/0001-8791\(87\)90047-9](https://doi.org/10.1016/0001-8791(87)90047-9)
- Osipow, S. H., Carney, C. G., & Barak, A. (1976). A scale of educational-vocational undecidedness: A typological approach. *Journal of Vocational Behavior*, 9(2), 233–243. [https://doi.org/10.1016/0001-8791\(76\)90081-6](https://doi.org/10.1016/0001-8791(76)90081-6)
- Sajtos, L., & Mitev, A. (2007). *The basic handbook of SPSS research and data analysis*. Alinea Kiadó.
- Tinsley, H. E. A. (1992). Career decision making and career indecision. *Journal of Vocational Behavior*, 41(3), 209–211.

- Vahedi, S., Farrokhi, F., Mahdavi, A., & Moradi, S. (2012). Exploratory and confirmatory factor analysis of the career decision-making difficulties questionnaire. *Iranian Journal of Psychiatry, 7*(2), 74–81.
- Vaiopoulou, J., Papavassiliou-Alexiou, I., & Stamovlasis, D. (2019). Career decision-making difficulties and decision statuses among Greek student teachers. *Hellenic Journal of Psychology, 16*(1), 74–94.
- Walsh, W. B., & Osipow, S. H. (1988). *Career decision making*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.





**Jacek Pyżalski**

<https://orcid.org/0000-0001-5817-276X>

Adam Mickiewicz University in Poznań, Poland  
pyzalski@amu.edu.pl

**Natalia Walter**

<https://orcid.org/0000-0002-2347-9312>

Adam Mickiewicz University in Poznań, Poland  
natalia.walter@amu.edu.pl

**Agnieszka Iwanicka**

<https://orcid.org/0000-0003-1176-6725>

Adam Mickiewicz University in Poznań, Poland  
iwanicka@amu.edu.pl

## Understanding Age-Related Differences in the Development of Digital Communication and Information Skills in Polish Adolescents

(pp. 145–164)

Suggested citation: Pyżalski, J., Walter, N. & Iwanicka, A. (2023). Understanding Age-Related Differences in the Development of Digital Communication and Information Skills in Polish Adolescents. *Multidisciplinary Journal of School Education*, 12(2(24)), 145–164. <https://doi.org/10.35765/mjse.2023.1224.07>

### Abstract

**Research objectives:** This study examines the role of digital skills in the personal and social development of young people. It aims to measure and understand these skills among the younger generation, while identifying ways to improve their development.

**Research method:** The data comes from the ySkills project under Horizon 2020, a longitudinal study conducted in six countries, including Estonia, Finland, Germany, Italy, Poland and Portugal. Specifically, we have analyzed data on Polish youth from 2021 and 2022. The sample includes 609 individuals aged 11 to 18, i.e. in the entire age range. Self-report scales assess

digital skills, including technical abilities, information handling, interaction, communication and content creation. Results from the entire first wave in Poland (N=1161) are also included.

**Context:** In today's digital world, digital skills are essential for personal development and social engagement. This study focuses on Poland, where digital literacy is crucial for young people. It aims to shed light on the digital competences of Polish youth.

**Findings:** The study found that teenagers use the Internet mainly for social interaction and are comfortable using digital communication tools, such as email, instant messaging and social media. However, it stresses the need for further education in evaluating information available on the Internet and identifying reliable sources. Gender differences were observed, with boys demonstrating greater skills in navigating and processing information, which highlights the need for additional research to address gender disparities in digital skills.

**Conclusions and recommendations:** This study highlights the importance of digital skills for young people's development and integration into society. To bridge the digital literacy gap, we recommend targeted educational interventions that improve critical thinking and source evaluation skills. Further research and objective assessments are key to comprehensively eliminating the gender gap in digital skills. It is important to be aware of the limitations of the study, including the reliance on self-reporting and the potential impact of COVID-19 on the sample. Future efforts should aim for more robust and objective means of assessing digital skills among young people in Poland.

**Keywords:** digital communication skills, digital information skills, age-related changes, Polish adolescents, longitudinal study

## Introduction

This article is based on an analysis of data from the Horizon 2020 ySkills project, with two phases of longitudinal research in Poland in 2021 and 2022. The study focused on adolescents aged 12/13 to 18, thus covering

both early (12–14/15) and late (15–18) adolescence. During early adolescence, significant changes occur in the parent-child relationship, resulting in a shift towards a more egalitarian and partnership-based relationship between the teenager and their parent/s. Adolescents spend less time with their parents and an increasing amount of time with their peers. The peer group plays a crucial role in the development of interpersonal competencies, by providing opportunities for interaction with individuals of similar status, fulfilling the need to belong and enhancing self-esteem (Piotrowski et al., 2014).

Throughout adolescence, social relationships become increasingly important, and positive relationships with family, peers and teachers are crucial for healthy development (Somerville, 2013; Crone & Dahl, 2012). Communication skills, both online and offline, become particularly significant at this stage. Adolescence also brings cognitive changes, including the development of formal thinking, specifically hypothetical and deductive reasoning (Piotrowski et al., 2014b). Adolescents actively develop their information skills and display eagerness to search and verify information. Information and communication technologies (ICTs) play a key role in adolescents' lives, as they support everyday communication and provide access to information and entertainment (Pyżalski et al., 2019).

With the development of technology, relationships have changed in contemporary society. Online platforms and mobile applications are widely used for initiating, maintaining, and transforming relationships, which makes communication one of the most prevalent online activities among youth (Smahel et al., 2020). Therefore, this article focuses primarily on the digital information and communication skills that teenagers acquire and improve at this stage of development.

The central notion of the ySkills project and this article revolves around digital competences, with a particular focus on digital skills. Competences encompass knowledge, skills and attitudes, while skills are measurable and necessary for applying knowledge to tasks and problem-solving situations (Walter & Pyżalski, 2021). Digital skills are defined based on objectives, audiences, and context, with the International

Telecommunication Union (ITU) defining them as the ability to use information and communication technologies (ICT) effectively to achieve beneficial outcomes while minimizing potential harm (ITU, 2018).

Digital competence, as recognized by the European Commission, involves the confident, critical, and responsible use of digital technologies to learn, work and participate in society (Council Recommendation on Key Competences for Life-long Learning, 2018). It includes skills and issues such as information and data literacy, communication and collaboration, media literacy, digital content creation, security, intellectual property, problem solving and critical thinking. The European Commission's Digital Competence Framework (DigComp 2.2) identifies five areas of digital competence: information and data literacy, communication and collaboration, digital content creation, security, and problem solving (Vourikari, Kluzer, Plunie, 2022). In addition, these areas overlap with the concept of 21st century skills, which places considerable emphasis on soft digital skills, which are considered crucial for the future labor market (van Laar et al., 2017).

The concept of digital competences is understood in a similar way in Polish studies. For example, Batorski et al. (2012) believe that the concept of digital competence covers a broad set of skills that determine the efficient and informed use of new technologies and active participation in the life of the information society. These include digital and information competences. Plebańska (2021) additionally notes that a digitally competent person is now expected to think independently, take initiative, solve problems creatively and use technology in a way that fits in with the current labor market situation or, more broadly, the current industrial revolution. She also pays attention to digital emotional intelligence.

According to Ester van Laar and co-authors (2018), digital skills include technical skills, information management, communication, collaboration, creativity, critical thinking and problem solving. In the ySkills project, we define them as the ability to use information and communication technologies in ways that help individuals achieve beneficial, high-quality outcomes in everyday life for themselves and others, and reduce potential harms associated with the more negative aspects of digital

engagement (Donoso et al., 2020, p. 9). Based on previous research and literature analysis by van Deursen and Helsper (2018) and van Deursen, Helsper and Eynon (2016), a conceptual model has been created with indicators corresponding to four dimensions of digital literacy. These dimensions include functional and critical aspects and are as follows (Helsper et al., 2021):

1. Technical and operational skills, or proficiency in managing and operating ICT, including the technical skills of using devices, platforms and applications. It entails knowledge of using buttons, adjusting settings and programming.
2. Information navigation and processing skills, or the ability to critically search and select digital sources of information. It also includes the ability to critically evaluate information.
3. Communication and interaction skills, or the ability to use various digital media and technological features to interact with others, build networks and critically evaluate the impact of communication and interpersonal interactions.
4. Content creation and production skills, or the ability to create high-quality digital content, comprehend how it is produced and published, and how it impacts others.

As mentioned earlier, in view of the developmental characteristics of adolescents, communication skills, as well as information navigation and processing skills are the key themes in our analysis.

### **The Importance of Information and Communication Skills in Youth Development – Selected Results of a Study of European and Polish Adolescents**

Young people use information and communication technologies extensively, and digital media can facilitate the development and maintenance of their social relationships. However, while these technologies can be a valuable source of information, they can also cause anxiety, provide

misinformation and disrupt one's well-being. Additionally, the internet can be beneficial, as it provides young people with a vast source of information and tools to assess their credibility and biases, by using search engines and critical thinking methods. These skills can help them learn effectively, make informed decisions and succeed in various aspects of life.

Developing digital skills also enables young users to be independent and proactive in identifying and avoiding risks associated with their online activities. According to the EU Kids Online research concept, young people play both the role of recipients and actors in online interpersonal relationships and digital tasks (Pyżalski, 2019). Moreover, using technology requires a combination of various skills, such as translation, innovation, learning, communication and collaboration (Elphick, 2018).

Despite commonly held beliefs, research shows that young people's digital skills are not always as strong as they are given credit for. (European Commission, 2012).

ITU's 2018 *Measuring the Information Society* report presents information from the European Commission's 2016 data on the distribution of digital skills among children aged 4–14 in eight European countries, namely the UK, Poland, Spain, Germany, Sweden, France, Italy and the Netherlands. The data was collected by asking parents to assess their children's social, operational, information navigation, mobile and content creation digital skills. The findings reveal a diverse landscape, with Polish children scoring highest on information navigation skills, but lower on mobile skills and content creation skills. Moreover, parents from all countries surveyed reported lower levels of digital skills related to content creation compared to other digital skills investigated.

According to the Polish part of the EU Kids Online survey conducted by Pyżalski et al. (2019), only 37% of young people aged 11–17 rate their online information search skills as strong. However, 66% of young people know what information should and should not be shared on the internet. The survey also found that less than 16% of young people feel that they can be themselves online, while slightly less than 17% communicate differently online than in face-to-face meetings. Additionally, only 7% discuss personal matters online that they do not discuss offline.

Common findings from all countries participating in the study are as follows: 1) a high percentage of children and adolescents use social media for a variety of communication activities, 2) children rate their online communication skills highly but lack critical evaluation of online interactions, 3) children rarely meet offline with people they meet online, and 4) families play an essential role in supporting children's digital information and communication skills (Smahel et al., 2020).

The *Teenagers 3.0* report by Lange (2021) confirms that the internet is a popular tool for accessing information and doing homework, with 64% of students using it for studying. Furthermore, 27.3% of students collaborate with their peers online when doing homework several times a week.

Developing information and communication competencies in children and young people is an important educational goal today. Communication skills are fundamental to learning, emotional development and establishing and maintaining social relationships, both at school and later in the workplace. Strong communication skills enable individuals to adapt to an increasingly diverse social environment while ensuring a good quality of life. Poor communication skills, on the other hand, can exacerbate personality problems, distrust of others, social isolation (which can affect mental health), and even risky behavior, especially at a young age (Martinek & Hellison, 2016; Teryushkova, 2016). The internet provides children and adolescents with an online space to interact with others, exchange views and ideas, and meet people who think like them. Research shows that individuals who are comfortable with online communication can also form deep offline relationships (Bargh et al., 2002). The psychological well-being of children and adolescents increasingly depends on their existence in digital spaces and on having a circle of friends and acquaintances online. The influence of online and offline peers is critical to the development of children's and adolescents' communication and information skills.

The literature uses the term "cyber-socialization" to describe learning how to function in the digital world, including communicating with others through new technologies. Cyber-socialization is gaining prominence

as more and more people, especially young people, spend time online and use digital media to communicate, study, work or entertain themselves. Researchers suggest that, on the one hand, ICT can have a positive impact on communication, the development of information competencies, and the well-being of individuals (Verduyn et al., 2017; Timnea et al., 2018). On the other hand, this communication can effectively disrupt, distort and violate the mental well-being of internet users (Hudimova, 2020; Valtonen et al., 2021). One factor in such disruption may be the lack of non-verbal communication that is characteristic of text-based digital media (e.g., instant messaging), which can have a disruptive effect on the understanding of emotional signals conveyed in face-to-face communication, thereby limiting the mastery of critical social skills (Giedd, 2012; Knapp & Hall, 2010).

## Methods

These results are partial outcomes of the larger ySkills project (ySkills.eu – European Union’s Horizon 2020 Research and Innovation Programme under grant agreement no. 870612), which focuses on the digital skills of young people across the European Union.

A standardized online questionnaire prepared by the ySkills research consortium was distributed in 6 countries (Estonia, Finland, Germany, Italy, Poland and Portugal) between April and November 2021, and then repeated with the same sample after roughly a year (in 2022). Data was collected in cooperation with high schools. Convenience sampling was used. However, participating schools were selected based on their socioeconomic status to ensure a diverse sample. Students completed the questionnaires individually during school hours (either traditionally or online depending on the circumstances of the pandemic at the time and in the country). Informed consent was obtained from all respondents and their legal guardians in all participating countries, and the ethics committee issued a positive decision. The questionnaire was standardized across all countries and was presented in the language of each country.



The questionnaire in each country was subjected to cognitive testing and piloting.

The article is limited to results on a sample of Polish adolescents. There were 609 participants in both waves of the survey. The sample consisted of 292 boys (47.9%), 301 girls (49.4%) and 16 participants who did not indicate their gender (2.6%).

In the first stage, the age of participants ranged from 11 to 16 years old. 4.1% of participants were 11 years old, 12.6% were 12 years old, 21% were 13 years old, 15.8% were 14 years old, 23.5% were 15 years old, and 23% were 16 years old). We report both results from the first wave (N=1161) (sample statistics are shown in the corresponding tables) and comparative results from the two waves. In the article, we present both the outcomes of the entire skill subscales (as described below in the methodology section) and the results for individual items. The t-test for independent variables was used to describe comparisons between subgroups in one wave, and the t-test for dependent variables when comparing results between two waves.

### **Digital Skills Scales**

In the project, we measured four dimensions of digital skills, as described in the introduction (technical and operational skills, information navigation and processing, interaction and communication, content creation and production).

Data for the four dimensions of the digital skills scales were transformed as follows:

Those who answered “I don’t understand what you mean by that” were assigned a score of 0. Thus, answers about individual skill received scores ranging from 0 to 6, with “I don’t want to answer” options (DWTA) marked as missing (-99).

To calculate the high skill level, the number of items for which respondents reported the strongest skill (i.e., 5 “Very true for me”) was counted for each dimension. This procedure was repeated for the overall

skill scale, including a separate programming skill score. High skill scores were divided by the number of a person's answers in a given category, excluding items with DWTA answers. This meant a score of 0 if the person had no strong skills, 0.5 if they had half of the strong skills, and 1 if they had all of the strong skills.

Cases were excluded if they had a missing score (including DWTA) in three or more items in separate skill categories. For the overall skill scale, anyone excluded on a separate category was also excluded from the overall skill scale.

Because some individuals gave fewer than six answers on separate skill scales, the proportional scores were irregular, resulting in multi-modal distributions with several peaks. To prepare the scales for analysis, a smoothing procedure was applied. Scores of .20 were divided into scores of .1666 (1/6), scores of .25 into .333 (2/6), .40 into .50 (3/6), .60 into .666, .75 into .666 and .80 into .8333.

All items were qualitatively validated through cognitive interviews, and the composite scales showed good statistical properties (acceptable levels of skewness and kurtosis), as well as high levels of reliability (alpha above 0.70 for all scales).

Additionally, the frequency of digital communication with peers and parents was measured using a scale with the following cafeteria: *Never, Several times, At least once a week, Daily or almost daily, Several times each day, Almost all the time.*

## Results

In 2021, the first phase of the survey was carried out among teenagers from six European countries, including Poland. The Polish sample consisted of 1,161 (N=1161) participants between the ages of 11/12 (sixth grade of primary school) and 16/17 (second grade of secondary school). During the survey, young people were asked about two main ICT areas. Our analysis started from frequency of digital communication with people who are important in teenagers' lives. Firstly, we asked about their

communication practices via the Internet with different audiences. Secondly, we sought to identify key aspects of communication skills and information search and processing skills. As shown in Table 1, the adolescents surveyed in this study mainly engage in online communication with their peers. Specifically, 75.9% of the respondents communicate online with their acquaintances/friends at least once a day. In contrast, 52.2% of the teens surveyed communicate online with their parents/guardians on a daily basis.

**Table 1. Frequency of digital communication of Polish teenagers with peers and parents (guardians) (N=1161).**

	<i>I communicate with my friends (e.g., via Messenger)</i>		<i>I communicate with my parents or guardians (e.g., via Messenger)</i>		
	n	%	n	%	
Never	19	1.6	70	6.0	
Several times	58	5.0	167	14.4	
At least once a week	65	5.6	179	15.4	
Every day or almost every day	252	21.7	268	23.1	
Several times each day	286	24.6	189	16.3	
Almost all the time	344	29.6	149	12.8	
Missing	Missing value	84	7.2	82	7.1
	I do not know	26	2.2	35	3.0
	I prefer not to say	27	2.3	22	1.9

The digital communication skills of the surveyed youth are summarized in Table 2.

**Table 2. Self-assessment of communication skills among Polish teenagers (N=1161).**

	<i>Depending on the situation, I know what medium or tool to use to communicate with someone (e.g., make a call, send a WhatsApp message, send an email).</i>		<i>I know when I should mute or turn off video in online interactions.</i>		<i>I know which photos of me and information about me it is OK to share online.</i>		<i>I know when it is appropriate and when it is not appropriate to use emoticons (e.g. smileys, emojis), initialisms (e.g., LOL, OMG) and capital letters.</i>		<i>I know how to report negative content about me or the group I belong to.</i>		<i>I know how to recognize that someone is being bullied online.</i>		
	n	%	n	%	n	%	n	%	n	%	n	%	
I don't understand what you mean by this	24	2.1	24	2.1	32	2.8	14	1.2	43	3.7	29	2.5	
Not at all true in my case	42	3.6	27	2.3	30	2.6	37	3.2	39	3.4	50	4.3	
Not very true in my case	12	1.0	15	1.3	13	1.1	21	1.8	56	4.8	102	8.8	
Neither true nor untrue in my case	23	2.0	52	4.5	59	5.1	63	5.4	146	12.6	363	31.3	
Mostly true in my case	200	17.2	220	18.9	245	21.1	264	22.7	313	27	301	25.9	
Very true in my case	817	70.4	778	67.0	728	62.7	713	61.4	503	43.3	254	21.9	
<b>Total</b>	<b>1118</b>	<b>96.3</b>	<b>1116</b>	<b>96.1</b>	<b>1107</b>	<b>95.3</b>	<b>1112</b>	<b>95.8</b>	<b>1100</b>	<b>94.7</b>	<b>1099</b>	<b>94.7</b>	
<b>Missing</b>	Missing value	18	1.6	21	1.8	24	2.1	20	1.7	20	1.7	19	1,6
	I don't know	25	2.2	24	2.1	30	2.6	29	2.5	41	3.5	43	3.7
	<b>Total</b>	<b>43</b>	<b>3.7</b>	<b>45</b>	<b>3.9</b>	<b>54</b>	<b>4.7</b>	<b>49</b>	<b>4.2</b>	<b>61</b>	<b>5.3</b>	<b>62</b>	<b>5.3</b>
<b>Total N</b>	<b>1161</b>	<b>100</b>	<b>1161</b>	<b>100</b>	<b>1161</b>	<b>100</b>	<b>1161</b>	<b>100</b>	<b>1161</b>	<b>100</b>	<b>1161</b>	<b>100</b>	

Regarding digital skills in the area of information navigation and processing, in the first wave of the survey, participants answered questions about their individual skills, as shown in Table 3.

**Table 3. Self-assessment of information navigation and processing skills among Polish teenagers (N=1161).**

	<i>I know how to choose the best keywords for online searches</i>		<i>I know how to find the site I visited before</i>		<i>I know how to find information on a website, no matter how it is designed</i>		<i>I know how to use the advanced search functions of search engines</i>		<i>I know how to check if the information I find online is true</i>		<i>I know how to figure out if a website can be trusted</i>		
	n	%	n	%	n	%	n	%	n	%	n	%	
<b>I don't understand what you mean by this</b>	51	4.4	17	1.5	43	3.7	87	7.5	25	2.2	28	2.4	
<b>Not at all true in my case</b>	33	2.8	37	3.2	42	3.6	58	5.0	48	4.1	47	4.0	
<b>Not very true in my case</b>	43	3.7	20	1.7	83	7.1	178	15.3	111	9.6	91	7.8	
<b>Neither true nor untrue in my case</b>	138	11.9	48	4.1	244	21.0	280	24.1	273	23.5	191	16.5	
<b>Mostly true in my case</b>	431	37.1	325	28.0	396	34.1	289	24.9	400	34.5	376	32.4	
<b>Very true in my case</b>	431	37.1	677	58.3	310	26.7	229	19.7	255	22	387	33.3	
<b>Total</b>	1127	97	1124	96.8	1118	96.3	1121	96.6	1112	95.8	1120	96.5	
<b>Missing</b>	Missing value	16	1.4	20	1.7	18	1.6	19	1.6	21	1.8	17	1.5
	I don't know	18	1.6	17	1.5	25	2.2	21	1.8	28	2.4	24	2.1
	Total	34	2	37	3.2	43	3.7	40	3.4	49	4.2	41	3.5
<b>Total N</b>	1161	100	1161	100	1161	100	1161	100	1161	100	1161	100	

After conducting the second wave of the survey in 2022, we compiled the findings from the adolescents who took part in both phases. This is the percentage of strong skills in a specific category, calculated on the basis of at least 3 items. The process of calculating this indicator is described in the *Methods* section of the article. A statistically significant increase in the mean was observed in almost all categories, with the exception of programming

skills. Of particular note is the improvement in communication and interaction skills, as well as information skills.

**Table 4. Longitudinal comparisons of self-assessment of digital skills measured in two waves (t-test results)**

	I wave		Wave II		p (t-test for dependent groups)	Cohen d
	M	n	M	n		
Technical and operational skills	0.51	579	0.56	579	p<0.001	0.302
Programming skills	0.14	573	0.14	573	n.s.	
Information navigation and processing	0.34	583	0.37	583	p<0.001	0.308
Communication and interaction skills	0.57	577	0.61	577	p<0.01	0.312
Content creation and production skills	0.34	568	0.37	568	p<0.01	0.311
Digital skills (percentage of strong skills in all categories)	0.35	557	0.38	557	p<0.001	0.171

During the first wave of the survey (all teenagers), a statistically significant difference in mean scores was found between boys and girls. In particular, boys outperformed girls in the category of information navigation and processing skills ( $M=0.42$  in boys,  $M=0.26$  in girls;  $p<0.001$ ), as well as in the category of communication and interaction skills ( $M=0.57$  in boys,  $M=0.56$  in girls,  $p<0.01$ ). In the second wave, boys outperformed girls in the category of information navigation and processing skills ( $M=0.42$  in boys,  $M=0.26$  in girls;  $p<0.001$ ). In the second wave of the survey, boys continued to score higher in information literacy ( $M=0.45$  in boys,  $M=0.31$  in girls;  $p<0.001$ ), but there were no statistically significant differences in communication skills.

## Discussion

The study revealed that Polish teenagers use the internet mainly to communicate with their peers, with 75.9% of them interacting with their friends on a daily basis, and only 52.2% communicating with their parents

on a daily basis. This is in line with the developmental needs of adolescents, as positive peer relationships strengthen their social bonds, safety, self-esteem and social skills (Piotrowski et al., 2014). Technology has transformed relationships, with online platforms and mobile apps being common tools for initiating, maintaining and transforming relationships, particularly among young people (Smahel et al., 2020).

Polish adolescents exhibit strong digital communication skills, with over 87% of them declaring proficiency in using various digital tools. They are able to use emoticons, internet slang and acronyms appropriately, recognize online bullying, and report negative content. This is consistent with previous studies showing increased use of technology and better handling of digital media among young people (Batorski, 2015; Pyżalski, 2019). However, critical evaluation of online information and distinguishing between credible sources is an area where confidence is lower. Young people may lack critical thinking skills and resources to verify the accuracy of information (Swanson et al., 2017). OECD's PISA findings indicate that less than 10% of students can differentiate between fact and opinion (Schleicher, 2019).

Higher indicators of individual digital competences are associated with the age of the respondents. This suggests that children and teenagers are gradually becoming more proficient in using technology. This phenomenon can be attributed to their exposure to more advanced media technologies and more frequent ICT use, as well as the influence of their school education. It is worth highlighting that the overall results on the level of digital skills (percentage of strong skills across all categories) did not show significant improvement during the second wave of the survey. However, this does not mean that individual competencies were not rated higher by the respondents compared to previous assessments; rather, they did not consistently reach the highest level to a greater extent. Further analysis will be necessary after the next wave of surveys to delve deeper into this issue.

In terms of gender differences, boys outperformed girls in information navigation, processing and communication skills in the first wave of the study. In the second wave, boys maintained higher information

literacy scores, while communication skills showed no significant differences. These findings underscore the need for further research on gender differences in digital skill development. Self-report questionnaires suggest greater confidence in digital skills among boys, but objective performance tests yield inconsistent results. Differing cultural norms and individual preferences may contribute to different strengths in digital skills between genders (Haddon et al., 2020).

Overall, Polish teenagers value their digital communication skills, particularly with their peers. While they navigate and search the internet effectively, additional education on how to critically evaluate information and identify credible sources would be beneficial.

## Conclusion

The results presented here have important limitations. First of all, as discussed above, digital skills were measured using a self-assessment methodology that may be subject to some bias due to subjectivity and different benchmarks used by respondents. Such results should be triangulated with other methods, preferably a performance test, which was partially done in this project, although not reported. Additionally, the first wave of surveys was carried out during the educational crisis caused by the COVID-19 pandemic that resulted in high rates of absenteeism, as well as the inability to include some students in the sample due to problems reaching their parents/guardians. This may have caused sampling biases on some sociodemographic variables that were difficult to estimate. Nonetheless, the results obtained are valuable since they were collected within a large sample with high variance, as well as a longitudinal model that allowed the same respondents to be reached and identified in two stages (waves).

**Funding:** This project was supported by ySKILLS project funded by Horizon 2020 Research & Innovation programme under Grant Agreement no. 870612.



## References

- Bargh, J.A., McKenna, K.Y.A, Fitzsimons, G.M. (2002). Can you see the real me? Activation and expression of the 'true self' on the Internet. *Journal of Social Issues* 58(1):33–48. doi: 10.1111/1540-4560.00247.
- Batorski, D. (2015). Technologie i media w domach i życiu Polaków [Technologies and media in the homes and lives of Poles]. In: J. Czapiński, T. Panek (Eds.), *Diagnoza społeczna 2015: Warunki i jakość życia Polaków* [Social Diagnosis 2015: Conditions and quality of life of Poles], Rada Monitoringu Społecznego, (pp. 355-377). doi: 10.5709/ce.1897-9254.192.
- Batorski, D., Płoszaj, A., Współpraca, W., Jasiewicz, J., Czerniawska, D., & Peszat, K. (2012). *Diagnoza i rekomendacje w obszarze kompetencji cyfrowych społeczeństwa i przeciwdziałania wykluczeniu cyfrowemu w kontekście zaprogramowania wsparcia w latach 2014–2020* [Diagnosis and recommendations in the area of social digital competence and counteracting digital exclusion in the context of planning support for 2014–2020]. Warsaw: Ministry of Regional Development.
- Council Recommendation on Key Competences for Lifelong Learning, 22 May 2018, ST 9009 2018 INIT.
- Crone, E. A., & Dahl, R. E. (2012). Understanding adolescence as a period of social-affective engagement and goal flexibility. *Nature reviews neuroscience*, 13(9), 636-650. doi: 10.1038/nrn3313.
- Donoso, V., Pyżalski J., Walter N., Retzmann, N., Iwanicka A., d' Haenens, L., Bartkowiak, K. (2020). *Report of Interviews with Experts on Digital Skills in Schools and on the Labour Market*. Zenodo. doi: 10.5281/zenodo.5226910.
- Elphick, M. (2018). The impact of embedded iPad use of students perceptions of their digital capabilities. *Education Sciences*, 8(3), 102. doi: 10.3390/educsi 8030102.
- European Commission (2012). *Key Data on Education in Europe 2012*. Brussels: Education, Audiovisual and Culture Executive Agency (EACEA P9 Eurydice). <https://ec.europa.eu/eurostat/web/products-statistical-books/-/978-92-9201-242-7>. doi: 10.2797/77414.
- Giedd, J.N. (2012). The digital revolution and adolescent brain evolution. *Journal of Adolescent Health*, 51, 101–105. doi: 10.1016/j.jadohealth.2012.06.002.

- Haddon, L., Cino, D., Doyle, M., Livingstone, S., Mascheroni, G., & Stoilova, M. (2020). *Children's and young people's digital skills: a systematic evidence review*. Zenodo. doi: 10.5281/zenodo.6921674.
- Helsper EJ, Schneider LS, Van Deursen AJAM, et al. (2021) *The Youth Digital Skills Indicator*. ySKILLS. Available at: <https://zenodo.org/record/4608010>. doi: 10.5281/zenodo.4476540.
- Hudimova, A.K. (2020). Modern adolescent's psychological well-being and social media overload. *Vector of modern pedagogical and psychological science in Ukraine and EU countries* (pp.182-198). doi: 10.30525/978-9934-588-37-2.1.11.
- ITU (International Telecommunication Union) (2018) *Measuring the Information Society Report, Volume 1*. Geneva, Switzerland: ITU Publications. <http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2018/MISR-2018-Vol-1-E.pdf>
- Knapp, M.L., Hall, J.A. (2010). *Nonverbal communication in human interaction* (Seventh ed.), MA: Wadsworth Cengage Learning.
- Lange, R. (red.) (2021). *Nastolatki 3.0. Raport z ogólnopolskiego badania uczniów* [Teens 3.0: Report of a nationwide survey of students]. <https://www.nask.pl/raporty/raporty/4295,RAPORT-Z-BADAN-NASTOLATKI-30-2021.html>
- Martinek, T., Hellison, D. (2016). Teaching personal and social responsibility: Past, present and future. *Journal of Physical Education and Recreation & Dance*, 87(5), 9-13. doi: 10.1080/07303084.2016.1157382.
- Piotrowski, K., Ziółkowska, B., & Wojciechowska, J. (2014). Rozwój nastolatka Wczesna faza dorastania [Development of a teenager: Early adolescence]. In A. I. Brzezińska (Ed.), *Niezbędnik Dobrego Nauczyciela* [The Essentials of a Good Teacher] (Vol. 5, Rozwój w okresie dzieciństwa i dorastania [Vol. 5, Development in Childhood and Adolescence]), Instytut Badań Edukacyjnych.
- Piotrowski, K., Ziółkowska, B., & Wojciechowska, J. (2014b). Rozwój nastolatka. Późna faza dorastania [Development of a teenager: Late adolescence]. In A. I. Brzezińska (Ed.), *Niezbędnik Dobrego Nauczyciela* [The Essentials of a Good Teacher] (Vol. 6, Rozwój w okresie dzieciństwa i dorastania [Vol. 6, Development in Childhood and Adolescence]), Instytut Badań Edukacyjnych.
- Plebańska, M. (2021). *Kompetencje cyfrowe i ich cyfrowy rozwój* [Digital competencies and their digital development]. Difin.

- Pyżalski, J. (2019). Dzieci i młodzież jako użytkownicy internetu – podstawowe informacje [Children and adolescents as internet users - basic information]. In: J. Pyżalski, A. Zdrodowska, Ł. Tomczyk, K. Abramczuk, *Polskie badanie EU Kids Online 2018* [Polish EU Kids Online survey 2018] (pp. 17-30). Adam Mickiewicz University Scientific Publishers.
- Pyżalski, J., Zdrodowska A., Tomczyk, Ł., Ambramczuk, K. (2019). *Polskie badanie EU Kids Online 2018. Najważniejsze wyniki i wnioski* [Poland's EU Kids Online 2018 survey: key findings and conclusions]. Adam Mickiewicz University Scientific Publishers.
- Schleicher, A. (2018). *Insights and interpretations. Pisa 2018*, 10. OECD Publishing.
- Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S., and Hasebrink, U. (2020). *EU Kids Online 2020: Survey results from 19 countries*. EU Kids Online. doi: 10.21953/lse.47fdeqj01of0.
- Somerville, L. H. (2013). The teenage brain: Sensitivity to social evaluation. *Current directions in psychological science*, 22(2), 121-127. doi: 10.1177/0963721413476512.
- Swanson, E.A., Barnes, M., Fall, A.-M., Roberts, G. (2017). Predictors of Reading Comprehension Among Struggling Readers Who Exhibit Differing Levels of Inattention and Hyperactivity. *Reading and Writing Quarterly*, September 2017. doi: 10.1080/10573569.2017.1359712.
- Teryushkova, Yu.Yu. (2016). Communicative competence as a factor in the successful adaptation of students with disabilities. *Psychologist*, 6, 54-64. doi: 10.7256/2409-8701.2016.6.19806.
- Timnea, A.C., Potop, L., Timnea, O.C., Potop, V. Jurat, V. (2018). Physiological Features of Obesity in Children and Adolescents. *Journal of Physical Education and Sport*, 18 (Supplement issue 5), Art 332, pp. 2199 – 2206. doi: 10.7752/jpes.2018.s5332.
- Valtonen, J., Kyhälä, A., & Reunamo, J. (2021). Recreational screen time, sedentary behavior, and moderate to vigorous physical activity in 11-year-old children. *Journal of Physical Education and Sport*, Vol. 21 (3), Art 197, pp. 1553-1560. doi: 10.7752/jpes.2021.03197.
- Van Deursen, A. J., Helsper, E. J., & Eynon, R. (2016). Development and validation of the Internet Skills Scale (ISS). *Information, communication & society*, 19(6), 804-823.

- Van Deursen, A. J., & Helsper, E. J. (2018). Collateral benefits of Internet use: Explaining the diverse outcomes of engaging with the Internet. *new media & society*, 20(7), 2333-2351.
- Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577-588. doi: 10.1016/j.chb.2017.03.010.
- Van Laar, E., van Deursen, A. J., van Dijk, J. A., & de Haan, J. (2018). 21st-century digital skills instrument aimed at working professionals: Conceptual development and empirical validation. *Telematics and informatics*, 35(8), 2184-2200. doi: 10.1016/j.tele.2018.08.006.
- Verduyn, P., Ybarra, O., Résibois, M., Jonides, J., Kross, E. (2017). Do social network sites enhance or undermine subjective well-being? A critical review. *Social Issues and Policy Review*, 1, 274-302. doi: 10.1111/sipr.12033.
- Vuorikari, R., Kluzer, S. and Punie, Y. (2022). *DigComp 2.2: The Digital Competence Framework for Citizens*, EUR 31006 EN, Publications Office of the European Union, Luxembourg, 2022, , doi: 10.2760/115376, JRC128415.
- Walter, N., Pyżalski, J. (2021). Rozwijanie umiejętności cyfrowych młodych ludzi – gdzie jesteście, dokąd zmierzamy? [Developing young people's digital skills: Where are we, where are we going?] In: S.M. Kwiatkowski (ed.), *Współczesne problemy pedagogiki. W kierunku integracji teorii z praktyką* [Contemporary problems of pedagogy: Towards integration of theory and practice]. Published by the M. Grzegorzewska Academy of Special Pedagogy.



**Aleksandra Błachnio**

<https://orcid.org/0000-0003-0756-7416>

Kazimierz Wielki University, Bydgoszcz, Poland  
alblach@ukw.edu.pl

**Ryszarda Cierzniewska**

<https://orcid.org/0000-0003-3890-0082>

Ignatianum University in Cracow, Poland  
ryszarda.cierzniewska@ignatianum.edu.pl

**Hasan Mosazadeh**

<https://orcid.org/0000-0002-1313-8530>

Kazimierz Wielki University, Bydgoszcz, Poland  
htmosazadeh@gmail.com

**Zofia Szarota**

<https://orcid.org/0000-0002-6342-3153>

WSB University, Dąbrowa Górnicza, Poland  
zszarota@wsb.edu.pl

## Measurement and Pedagogical Diagnosis of Phonoholism Among Adolescents (pp. 165–186)

Suggested citation: Błachnio, A., Cierzniewska, R., Mosazadeh, H. & Szarota, Z. (2023). Measurement and Pedagogical Diagnosis of Phonoholism Among Adolescents. *Multidisciplinary Journal of School Education*, 12(2(24)), 165–186. <https://doi.org/10.35765/mjse.2023.1224.08>

### Abstract

**Research objectives:** Adolescence is one of the most difficult developmental periods. Studies have documented ill-being among adolescents (Chen & Lucock, 2022; Alimoradi et al., 2022; Lakkunarajah et al., 2022; Li et al., 2022). Furthermore, compared to adults, adolescents are vulnerable to smartphone addiction (Kwon et al., 2013). The aim of the present study was to investigate the extent to which mobile phone use bears the hallmarks of excessive smartphone addiction or so-called phonoholism (Barabsa, 2018).

**Research methods:** The Polish version of the Mobile Phone Problem Use Scale for Adolescents (MPPUSA) was used (Krzyżak-Szymańska; 2018).

A total of 684 adolescents aged between 12 and 18 years took part in the study. They were students from three schools – one primary and two secondary schools (a high school + technical school and a technical school + vocational school). The surveys are representative of these institutions. **A short description of the context:** As the scale has more than nine different cultural adaptations, the Polish data can be related to current global trends.

**Research findings:** The results show that 14% of Polish adolescents are at risk and 3% use mobile phones problematically. Statistically significant relationships were found between the variable describing phone use among adolescents and both gender and type of school.

**Conclusions and/or recommendations:** The MPPUSA only partially meets the needs of pedagogical diagnosis. There is little evidence from adolescents or data relating to students' perspectives on phonoholism. The school pedagogue or class teacher should ask specific, multidimensional questions when diagnosing the problem. They should also use the clues from this preliminary diagnosis of the phenomenon in everyday school life concerning internet use.

**Keywords:** smartphone, addiction, problematic mobile phone use, adolescents, pedagogical diagnosis

## Introduction

Adolescence is not homogeneous (Nazari et al., 2022), and a common developmental feature of young people is the need for self-identification and comparison with their peers. Young people go through a process of maturing, expanding social strategies and circles of social functioning, escaping the control of parents and educators, constructing identities, recognising and identifying with psychosocial commitments and engaging in risky behaviour, thus testing themselves and their social environment. This developmental period, described by Erikson (2002) as identity crisis, is the most difficult stage of life, and the choices made during it can

impact an individual's entire life. It is also worth recalling that the proximal and distal context in which an individual is embedded is important for the quality of choices and decisions they make (Erikson, 2002; Cierzniewska, 2017; Cierzniewska & Błachnio, 2021).

The post-pandemic period has revealed many consequences of the long-term closure of educational institutions (Lisiecka et al., 2023), including personal costs (Gogoi et al., 2022). Lifestyle changes (tendency towards isolation, sedentary lifestyle, eating and body image disorders (e.g., Zachary et al., 2020; Jia, 2021), preferences and greater “immersion” in digital technology are now observed. In parallel, studies have reported an increase in rates of depression, anxiety and stress among adolescents (Chen & Luccock, 2022; Alimoradi et al., 2022; Lakkunarajah et al., 2022; Li et al., 2022). As adolescents tend to use new media proactively and are more vulnerable to smartphone addiction than adults (Kwon et al., 2013), it is necessary to diagnose the extent of mobile phone use among adolescents.

The mobile phone is an indispensable attribute of young people, which, through its excessive use, has ushered in new challenges and initiated new challenges in terms of redundancy (see Zeichner et al., 2014). The mobile phone (often a smartphone) has the undeniable advantage of being convenient to use in many everyday situations. We are doing more and more while staying online almost everywhere. The attractiveness of the apps, the ease of use and the multitude of functions optimise our lives, though leading to negative consequences (Kaviani et al., 2020). Researchers have identified many risks, including phonoholism and nomophobia. Phonoholism, or mobile phone addiction syndrome, describes an addiction that leads to a disruption of habits and instincts, including a constant compulsion to call and/or send and receive text messages. It can also mean an addiction to new phone models (Hoffmann, 2017). The second term is an abbreviation of the phrase “no mobile phone phobia”. It describes the anxiety, tension and irritability that a person feels when deprived of physical contact with a phone (Bragazzi & Puente, 2014). Further developments in technology and the availability of the internet on smartphones have increased the risk and led to a loss of criteria clearly distinguishing internet addiction from phone addiction.

As early as 2012, researchers observed that the rate of smartphone addiction was 8.4%, which turned out to be higher than the internet addiction rate of 7.7% (Kwon et al., 2013). When discussing mobile phone users' addictions, researchers document the negative effects these devices have on the wellbeing of the individual and those around them. These include a loss of control over the course of one's life, cognitive relevance, mood regulation and physical and mental health (Billieux, Maurage, et al., 2015; Billieux, Philippot, et al., 2015; Domoff et al., 2020; Pattnaik, 2018; Sunday et al., 2021).

There is still no consensus on a definition for problematic phone use. The current question is therefore whether this is addiction, which is a clinical qualification (behavioural disorder), or whether it takes the form of inappropriate use/abuse of these devices (Billieux, Maurage et al. 2015; Sunday, 2021). This phenomenon calls for research in the face expanding functionality of more mobile phone products. Addiction has very serious consequences, and overuse of these devices is always problematic and can lead to them. A second recommendation from researchers is to set the research in a broader context (Domoff et al., 2020; Fischer-Grote, 2021; Pajor, 2021; Rathod, 2022). Screen addiction can be socially modelled (by adults or even parents who are addicted to smartphones). It can reveal deficits in adolescents' social environment, where there are no close interpersonal relationships or opportunities to be together and spend time together. More broadly, it exposes a defeatism toward the "digital problem" and the lack of "digital education" of parents and schools (Dębski, 2017) and the unlimited internet access on mobile devices (without rules on the use of digital media), which was partially legitimized by the experience of the COVID-19 pandemic (Hasan & Bao, 2020).

Systematic reviews have shown the effects of overload in terms of digital stress/stimulation, distraction, depression, suicidal thoughts, anxiety, loss of sleep, cyberbullying, false prestige, fear of being left out, obesity, vision problems, migraines and cognitive behaviour (cognitive laziness, impaired memory, shortened attention span and multitasking and expectation of immediate gratification for intellectual effort) (Rathod et al., 2022). In a subsequent systematic review, studies from 16 countries



were analysed, yielding a sample of 47,943 students. The aim was to investigate the impact of smartphone addiction on learning and educational outcomes. The impact on the quality of learning and level of academic performance was clearly confirmed. An important finding for our study was the identification of moderators that differentiated the effect size: region, study group, purpose of use and test tool (Sunday et al., 2021). Differences were identified according to the age of the adolescents and the educational context (primary and secondary school or university), as well as peer contexts, making young people vulnerable to the impact of mobile/smartphone use to varying extents. There is evidence to suggest that young people under the age of 15 are more vulnerable to the consequences of smartphone misuse (Pattnaik, 2018) and that secondary school girls are more susceptible to addiction (Lange, 2021), using smartphones in a way that is more orientated towards peer networks.

## Objectives

The aim of this study was to investigate the extent to which mobile phone use bears the hallmarks of excessive smartphone addiction or so-called phonoholism (Barabsa, 2018). This is particularly timely considering the number of published studies on long-term post-pandemic costs. We formulated three research questions:

- How do adolescents use mobile phones and smartphones?
- What differences exist among adolescents in the use of these devices?
- What is the diagnostic potential of the Mobile Phone Problem Use Scale for Adolescents (MPPUSA) for the educator?

## Method

The study was run in one primary school and two secondary schools (a high school, and a technical school + vocational school) at the end of the 2023 school year (April–June). Adolescents aged 12–18 years were

recruited to complete the questionnaires. The procedure received the approval of the management, teachers and parents and the informed consent of the young people who voluntarily took part in the survey. The sociodemographic characteristics of the participants are summarised in Tables 1 and 2.

The Polish version of the MPPUSA was used (Krzyżak-Szymańska, 2018). It consists of 26 items rated on a 10-point scale (1 meaning “completely false” and 10 meaning “completely true”). It is possible to obtain from 26 to 260 points. The score is used to classify the respondent into one of four possible categories:

- people who occasionally use a mobile phone (26–29 points),
- people who use a mobile phone appropriately (30–130 points),
- those at risk of problematic mobile phone use and at risk of addiction (131–166 points) and
- problematic mobile phone users (167–260 points).

The MPPUSA is a reliable tool, whose Polish version has a Cronbach’s  $\alpha$  of 0.96; in the current study, the Cronbach’s  $\alpha$  was 0.874. Although the authors of the scale (Lopez-Fernandez et al., 2013) assumed a single-factor structure, this result was not replicated in the Polish version. The study resulted in a three-factor model (see Table 5). According to Krzyżak-Szymanska (2018) the first factor, “Dominance”, includes behaviours such as hiding the amount of time spent on a mobile phone, being late because of a mobile phone, being ineffective in studies and experiencing a fear of turning off one’s phone. The reliability of the subscale was good (Cronbach’s  $\alpha = 0.921$ ). The second factor, “Involvement”, means, among other things, spending too much time using a phone and losing control over its use. For the Polish adaptation, its Cronbach’s  $\alpha$  was 0.918. The third factor, “Entrapment,” describes dependency or a feeling of being lost without a phone (Cronbach’s  $\alpha = 0.864$ ). A more detailed description is available in the methodology manual (Krzyżak-Szymanska, 2018). In our study, the scatterplot test also indicated a 3-factor solution. There was little variation (see Table 5), and the subscales’ reliability was calculated as  $\alpha = 0.860, 0.808$  and  $0.777$ , respectively.

There were also questions about the amount of time spent with a mobile phone during the week and on weekends. Recognising the limitations of the MPPUSA, additional questions on Internet and gaming use were introduced.

The results are part of a larger survey covering self-compassion (an adaptation of the youth version of the tool) in addition to inappropriate phone use. The analysis was performed in the software program Statistica 13.3.

## Results

The survey included 684 students, whose sociodemographic data are shown in Table 1. The respondents lived in both rural and urban areas (including small towns as well as large cities with up to 500,000 inhabitants). Only metropolitan areas with more than 500,000 residents were poorly represented. High school students predominated in the survey, but a sample of teenagers studying in primary school was also surveyed (Table 2).

**Table 1. Distribution of age, by gender (N=684)**

	N	M	Mo	N Mo	Min	Max	Sd	N/A
Total	661	16.00	16.00	161	12	20	1.76	23
Male	384	16.29	16.00	86	12	20	1.86	4
Female	247	15.53	17.00	70	12	20	1.53	–
Other	21	16.14	16.00	8	14	18	1.11	18
N/A	9	16.33	17.00	4	13	19	1.66	1

**Table 2. Sociodemographic characteristics of the sample (N=684)**

		Total N(%)	Male N(%)	Female N(%)	Other N(%)	N/A N(%)
Place of residence	238(35%) up to 20,000 people	126(32%)	102(41%)	8(36%)	2(7.5%)	Town with 3(11%)
	Town with between 20,000 and 100,000	147(22%)	64(16%)	75(30%)	5(23%)	3(11%)
	City with between 100,000 and 500,000	153(22%)	139(36%)	11(4.5%)	1(4%)	2(7.5%)
	City with more than 500,000	17(2%)	10(3%)	2(1%)	3(14%)	2(7.5%)
	N/A	16(2%)	–	1(0.5%)	–	15(55.5%)
Village						
Education	Primary school	106(15%)	53(14%)	50(20%)	1(5%)	2(7%)
	High school	197(29%)	56(14.5%)	128(52%)	8(36%)	5(19%)
	Technical school	326(47%)	242(62%)	68(27.5%)	9(41%)	7(26%)
	Vocational school	41(6%)	36(9.25%)	1(0.5%)	4(18%)	–
	N/A	14(2%)	1(0.25%)	–	–	13(48%)

The values of descriptive statistics are summarized in Table 3. Of particular note is the significantly higher MPPUSA score for girls compared to boys. Student's t-test resulted in a value of  $t(627)=-497$  ( $p<0.000$ ).

**Table 3. MPPUSA – descriptive statistics**

	MPPUSA								
	M	Mdn	Mo	N Mo	Min	Max	SD	Skewness	Kurtosis
Adolescents (N=671)	96.383	94	Multiple	12	25	250	37.337	0.469	0.078
Male (N=384)	90.224	86	Multiple	9	25	220	34.711	0.578	0.185
Female (N=245)	104.959	105	Multiple	5	25	250	38.538	0.336	0.233

Based on the data, 14% of adolescents are at risk, and 3% use smartphones in a problematic way. These values are lower than those of the Polish version. At that time, 38.5% of respondents were in the at-risk category and 5.9% used the phone in a problematic way (Krzyzak-Szymanska, 2018).

**Table 4. Categorization of respondents, by phone use and gender**

MPPUSA		Total N=678(100%)	Sex	
	Values		Male N=389(100%)	Female N=245(100%)
People who occasionally use a mobile phone	26–29	7(1%)	5(1%)	2(1%)
People who use a mobile phone appropriately	30–130	545(82%)	333(87%)	184(75%)
<b>People at risk of problematic mobile phone use and at risk of addiction</b>	<b>131–166</b>	<b>101(14%)</b>	<b>41(10%)</b>	<b>47(19%)</b>
<b>Problematic mobile phone users</b>	<b>167–260</b>	<b>25(3%)</b>	<b>10(2%)</b>	<b>14(5%)</b>

The analysis of the 3-factor model solution showed that school type is a criterion that significantly differentiates young people (see Table 6 and Figure 1).

**Table 5. Replication of MPPUSA factors**

MPPUSA	Factor loadings			Factor loadings		
	1	2	3	1	2	3
	(Krzyżak-Szymańska, 2018)			(current study)		
Item 14	0.819	0.098	0.163	0.720	-0.102	0.125
Item 22	0.781	0.195	0.320	0.772	-0.003	0.229
Item 21	0.773	0.259	0.237	0.622	0.155	0.137
Item 18	0.751	0.316	0.160	0.556	0.361	-0.024
Item 24	0.697	0.128	0.275	0.619	-0.057	0.161
Item 12	0.644	0.255	0.403	0.547	0.166	0.350
Item 17	0.639	0.461	0.186	0.496	0.388	-0.005
Item 4	0.583	0.443	0.115	0.465	0.391	-0.034
Item 6	0.260	0.761	0.251	0.124	0.710	0.046
Item 3	0.266	0.700	0.266	-0.011	0.737	0.145
Item 19	0.450	0.647	0.158	0.193	0.681	0.066
Item 20	0.305	0.600	0.292	0.053	0.475	0.400
Item 2	0.071	0.589	0.399	-0.147	0.542	0.270

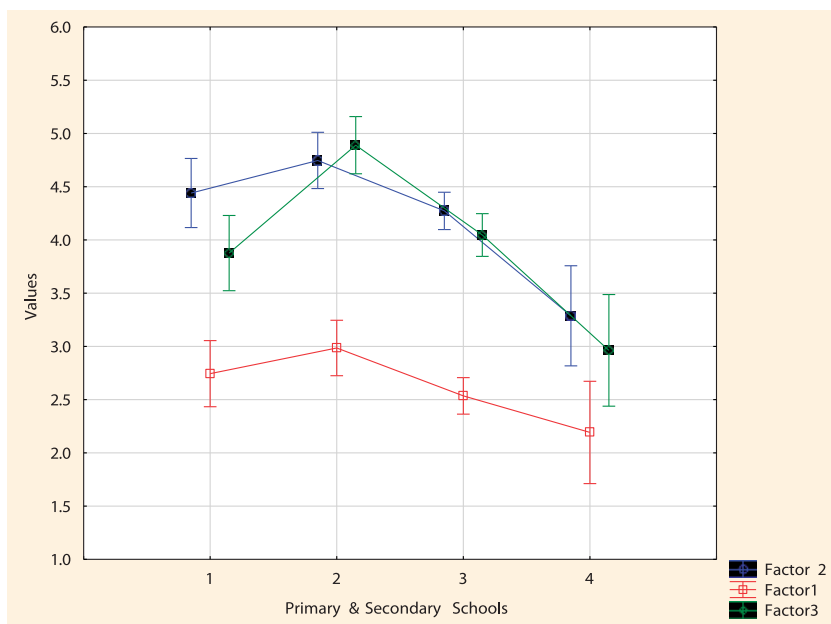
MPPUSA	Factor loadings			Factor loadings		
	1	2	3	1	2	3
	(Krzyżak-Szymańska, 2018)			(current study)		
Item 5	0.408	0.583	0.227	0.262	0.567	-0.119
Item 23	0.481	0.582	0.218	0.459	0.319	0.064
Item 1	-0.014	0.577	0.403	0.058	0.478	0.169
Item 15	0.538	0.558	0.207	0.519	0.386	0.097
Item 9	0.215	0.545	0.436	0.391	0.321	0.162
Item 11	0.515	0.541	0.214	0.405	0.440	0.093
Item 7	0.303	0.247	0.676	0.219	0.062	0.661
Item 16	0.024	0.322	0.655	-0.076	0.245	0.628
Item 13	0.403	0.293	0.633	0.344	0.155	0.574
Item 25	0.299	0.115	0.619	0.323	-0.068	0.283
Item 26	0.422	0.270	0.611	0.460	0.094	0.540
Item 10	0.213	0.299	0.597	0.069	-0.015	0.632
Item 8	0.466	0.359	0.498	0.186	0.253	0.342
Variance explained	6.313	5.357	4.087	4.428	3.794	2.637
Eigenvalues	0.243	0.207	0.157	0.170	0.146	0.101

Rotation method - Varimax with Kaiser rotation

**Table 6. Analysis of variance for the three MPPUSA factors, by school type (primary, high, technical and trade school)**

	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
Factor 2	79,498	3	26,499	1889,856	660	2,863	9,254	0,000
Factor 1	35,362	3	11,787	1811,116	660	2,744	4,296	0,005
Factor 3	174,694	3	58,231	2242,133	660	3,397	17,141	0,000

**Figure 1. Differences in mean values of MPPUSA factors 1, 2 and 3 in primary schools (1), high schools (2), technical schools (3) and trade schools (4)**



To determine the nature of the differences, post hoc analysis was conducted using the HSD test for unequal samples. For factor 1, technical school students scored significantly higher than high school students. For factor 2, students from trade schools scored significantly lower than students from the other schools. High and primary school students scored significantly higher than their technical school counterparts. For factor 3, high school students had the highest score, which differed significantly from the other groups. On the other hand, technical school students had higher scores than primary and vocational school students.

**Table 7. Average values of MPPUSA factors 1, 2 and 3 in primary schools (1), high schools (2), technical schools (3) and vocational schools (4)**

FACTOR	School	n	M	SD	HSD (unequal N)		
					(1)	(2)	(3)
1	primary (1)	101	2.744	1.571			
	secondary (2)	197	2.985	1.852	0.729		
	technical (3)	325	2.535	1.571	0.807	0.035	
	vocational (4)	41	2.192	1.521	0.432	0.132	0.784
2	primary (1)	101	4.441	1.643			
	secondary (2)	197	4.747	1.880	0.572		
	technical (3)	325	4.273	1.609	0.896	0.028	
	vocational (4)	41	3.288	1.489	0.011	0.001	0.042
3	primary (1)	101	3.877	1.789			
	secondary (2)	197	4.890	1.913	0.001		
	technical (3)	325	4.047	1.838	0.914	0.000	
	vocational (4)	41	2.963	1.660	0.111	0.000	0.039

The information presented in Tables 8 and 9 shows that a large percentage of young people spend many hours with a mobile phone. More than half of the respondents (53%) indicated the two longest time frames – “4 to 6 hours” and “more than 6 hours” – as estimates of their time on a mobile phone. Nearly one in three people use the internet via mobile phone for up to 4 hours a day. As many as 25% of the teenagers surveyed spend more than 6 hours daily in this way. It should be noted that this activity excludes games.

**Table 8. Time spent using a mobile phone during the week**

	None at all	Up to 1 hour	1 to 2 hours	2 to 4 hours	4 to 6 hours	Over 6 hours	No data
	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
<b>Using the internet with a mobile phone</b>	10(2%)	35(5%)	107(16%)	199(30%)	145(21%)	169(25%)	6(1%)
<b>Total mobile phone use</b>	12(2%)	27(4%)	79(12%)	186(28%)	170(25%)	189(28%)	8(1%)
<b>Playing games on a phone</b>	234(35%)	217(32%)	108(16%)	59(9%)	20(3%)	26(4%)	7(1%)



The results proved consistency, albeit incomplete, in terms of dysfunctional phone use and reported long durations of time spent on the phone.

**Table 9. Time spent using a mobile phone during the week by those at risk of problematic phone use and problematic phone users (N=119)**

	None at all	Up to 1 hour	1 to 2 hours	2 to 4 hours	4 to 6 hours	Over 6 hours	No data
	N	N	N	N	N	N	N
Using the internet with a mobile phone	4	6	13	22	22	52	–
Total mobile phone use	5	4	8	23	18	60	1
Playing games on a phone	44	31	13	13	3	14	–

## Discussion

Our study is part of the growing literature on the utility of the MPPUSA (Mach et al. 2020). The purpose of the article goes beyond a narrow analysis of the utility of the tool, and uses the results to discuss how post-pandemic immersion in digitality can modify attitudes towards the problem of phonoholism.

Research conducted in Poland in 2016 and 2019 (a total of more than 50,000 respondents) by the Dbam o Mój Z@sięg Foundation and the University of Gdansk, as part of the project “Young Digital” on the problematic use of smartphones by schoolchildren aged 12–18, indicated that smartphones and phones are a regular part of children’s lives from the age of 10, and in large metropolitan areas from the age of 7 or 8. Mobile phones or smartphones are used regularly by 86.6% of respondents, and 92% of these mobile devices have internet access. More than half use their devices the same amount of time on weekdays and at weekends, so school obligations do not limit the period of use. Among respondents, 35% reach for the phone dozens of times a day. The vast majority of survey participants (77%) are aware of possible mobile/smartphone addiction. When asked whether they self-identify as a mobile phone addict, 20.8% of respondents answered

in the affirmative, and almost one in ten chose the answer “it’s hard to say”. The researchers’ diagnosis was much more optimistic, as in their interpretation only 1%–2% can be classified as mobile phone addicts (Debski & Bigaj, 2019, 2022).

The researchers also reported intriguing information about the ways of using mobile phones: Respondents ranked social networking and communication with other people first on the list, followed by searching for information, developing their own passions and interests and downloading files with important information (74%–80% of respondents). Other activities of young people include watching films (78%) and listening to musicians of their choice (75%). Two thirds of the respondents keep in touch with their peers this way, and thanks to the internet their circle of friends has expanded by more than 50%.

NASK’s report, “Teens 3.0”, which determines the extent to which teens are addicted to the internet, computers and smartphones, is based on research using the E-SAPS Test<sup>18</sup>. This instrument consists of subscales measuring stimulus tolerance, withdrawal syndrome, somatic symptoms and expected gratification. The survey shows that 33.6% of respondents have a high level of problematic internet use, and 3.2% have a very high level, clearly indicating a problem. It also found that girls of high school age are at the highest risk. The researchers recognise the possibility that parents are unable to properly assess the degree of their children’s addiction or that teens may hide their addiction. It turns out that one in six teens surf the internet after 10 pm, when parental control is greatly reduced (Lange, 2021, pp. 67–71). Activities identified by teens in the survey included accessing gambling sites (47.2%), publishing private photos (45%), publishing private videos (43.9%) and using social networks (40.3%). Less frequent activities included using Google search (4.3%), browsing news sites (4.8%), using email (5.5%), video chatting (5.9%), using cloud technology (5.9%), reading weblogs (6.7%) and using psychology tests and/or social network games (6.7%) (Lange, 2021, p. 75). The discrepancy in the cited studies is likely due to the methodology used, though the key results regarding the degree of addiction are significantly different, which is hard to explain. Perhaps

the pandemic led to a significant increase in excessive mobile internet and smartphone use.

Nevertheless, of the 671 participants in our survey, 14% of teens are in the at-risk group and 3% are problematic phone users. This result may seem optimistic compared to previously published estimates of the number of problematic phone users. For example, in the Polish version of the MPPUSA, the group of problematic phone users was almost twice as large (5.9%) (Krzyzak-Szymanska, 2018). In another study that used an abbreviated version of the MPPUSA on a Polish sample, researchers identified problematic users at 9%, but their sample did not consist of teenagers.

The results of our study provoke the hypothesis of changing social attitudes towards frequent smartphone use as a post-pandemic effect. The need for remote learning legitimised long hours spent online. Although students returned to school, parents' and students' vigilance and sensitivity to the time spent on a mobile phone did not return to their pre-pandemic state. Testing this hypothesis requires further research on a larger scale. However, there are indications that support this line of research.

The current study of 450 high school students from across Poland (Łuczynski & Pietruszka, 2022) found that adolescents (aged 15–20) declared that they could live without a phone (64%), but did not actually try. They were more likely to see the consequences of phone abuse in their peers than in themselves. The vast majority (61%) do not take any preventive measures to protect themselves from addiction. Clearly, vigilance against phonoholism is organic. What's more, most of them spend a lot of time (more than 4 hours) on the phone every day.

The aspect of time seems to be crucial in the new, post-pandemic context of managing phone addiction. In the results of our study, we looked for a pattern that would differentiate the use of smart phones according to school or gender. We discuss the results of this below. It should be noted, though, that the analysis showed a change in one of the factors in the tool, namely "Involvement". The three items that no longer loaded on this factor were interpreted quite differently by the respondents in the time domain. It seems that allocating time for being online requires significant adjustment, in the field of research as well as in upbringing and education.

Referring to these differences, the data prove that the type of school (primary school, high school, technical school or vocational school) significantly differentiated the factors of problematic phone use among young people. For "Dominance" (factor 1), technical school students scored significantly higher than high school students. On the other hand, for "Involvement" (factor 2), vocational school students scored significantly lower than students from other schools. High school and primary school students scored significantly higher than their technical school counterparts. In "Entanglement" (factor 3), high school students received the highest score, which differed significantly from the other groups. Although the factors offer a wide range of interpretive possibilities, they should be used with caution, as the make-up of the MPPUSA's factors varies depending on the language version (Mach et al., 2020).

An analysis of the significance of differences in phone use among adolescents confirmed the differences between girls and boys described in the literature (Billieux et al., 2007; Takao et al., 2009; Kwon et al., 2013). In our study, girls had a significantly higher MPPUSA score ( $M=104.959$ ) compared to boys ( $M=90.224$ ). Problematic phone users ( $n=119$ ) accounted for only one in ten boys surveyed, but as many as one in five girls. The predominance of the problem among girls still requires in-depth research. In the literature, the reasons are attributed to different motives for mobile phone use in women/girls than in men/boys. In particular, phone addiction in women is explained by a higher propensity for social interaction than in men (Billieux et al., 2007). Moreover, some have argued that the higher self-reported scores must be linked to the fact that women tend to be aware of and express their problems more openly than men (Kwon et al., 2013).

A review of both Polish and foreign studies reveals a certain research gap regarding motives for being in contact with others and widespread internet surfing. Researchers indirectly touch on this aspect by considering factors related to the psychological condition of young people. Compensating for certain negative states, such as feelings of loneliness or fear of social exposure, has been identified in research and has positive, negative and indifferent consequences for the individual (Long et al., 2016).

“Cognitive relevance” has also been identified, defined as a focus on interests and passions that can be moderated by social interactions and on-line resources, uses hours of a young person’s activity (Petry, 2014) and can be identified as smartphone addiction during screening. We would not interpret such engagement with printed text as negative, although the physical health consequences may be similar. From the detailed Polish studies cited above, we can indirectly identify the presence of this type of youth engagement, which can be an important positive dimension of pedagogical work in the school classroom or school as a whole.

### **Limitations**

The research, based entirely on self-reporting tools, followed a mixed model: a paper-and-pencil group survey at school and an online group survey at school. The complexity of the survey procedure in schools prolonged the data collection process (getting the consent of the management, parents, educators and the students themselves). Both the voluntary nature of the survey and the participants’ willingness to cooperate significantly affected the researchers’ access to young people; the sample is certainly not representative. It would be worthwhile, in the context of the unresolved relationship between gender and phone addiction in the literature, to repeat the data collection on a sample with more girls. The cross-sectional measurement would have to be replaced by a longitudinal measurement.

### **Conclusions and recommendations**

The chosen research tool, the MPPUSA, is commonly used worldwide in many language and cultural versions, as emphasised by the authors of its Polish version, and can be used for screening (i.e. for preliminary identification of adolescents’ problematic mobile phone use) (Krzyzaniak-Szumanska, 2018). The following conclusions were drawn:

1. The school pedagogue or class teacher should ask specific, multidimensional questions when diagnosing phonoholism in accordance with the preliminary diagnosis of the phenomenon in everyday school life. In our opinion, the motives and types of activity related to using the internet are important.
2. Thus, we do not have a standardised tool for the Polish context that would take into account changes in the functionality of smartphones and mobile phones. At the same time, it should be relatively simple to use with children and adolescents, given the differences in the level of thinking and language of such important self-reporting scales. Another tip should be the fact that not every school has a psychologist at its disposal, so the tool should be available to school educators and classroom teachers.
3. An issue generally not raised by researchers outside the NASK “Teens 3.0” report is the assumption that young people will answer the questionnaire honestly, which can be quite doubtful. Even the follow-up questions in the tool are not a problem for savvy teens who adopt a conscious attitude of falsifying their behaviour. Adolescents are well aware of the symptoms of addiction (see Dębski, 2017) and the consequences of reporting them to the adult world. Camouflaging excessive mobile phone and smartphone addiction may be a learnt attitude practiced in everyday life. In addition, studies have been published showing discrepancies between self-reported and actual mobile phone use recorded by tracking applications (so-called psychoinformatics methods; see Montag et al., 2015). The context of the study may also have been modified by the ongoing discussion in the public space about the use of instant messaging in schools and the resulting ban on mobile phones and smartphones in many schools. Resistance among adolescents may stem from a sense of being cut off from the opportunity to satisfy a natural need for contact with others, where the phone is a substitute for real interactions.

**Funding:** This research received no external funding.

## References

- Alimoradi, Z., Lotfi, A., Lin, C.Y., Griffiths, M. D., & Pakpour, A. H. (2022). Estimation of behavioral addiction prevalence during COVID-19 pandemic: A systematic review and meta-analysis. *Curr Addict Rep*, 9, 486–517. <https://doi.org/10.1007/s40429-022-00435-6>
- Barabas, M. (2018) Fonoholizm zagrożeniem dla rozwoju dzieci i młodzieży [Phonoholism as a threat to the development of children and adolescents]. *Edukacja – Technika – Informatyka*, 2(24), 92–97.
- Billieux, J., Maurage, P., Lopez-Fernandez, O., Kuss, D. J., & Griffiths, M. D. (2015). Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. *Current Addiction Reports*, 2(2), 156–162. <https://doi.org/10.1007/s40429-015-0054-y>
- Billieux, J., Philippot, P., Schmid, C., Maurage, P., De Mol, J., & Van der Linden, M. (2015). Is dysfunctional use of the mobile phone a behavioural addiction? Confronting symptom-based versus process-based approaches. *Clin Psychol Psychother*, 22(5), 460–468.
- Billieux, J., Van der Linden, M., d'Acremont, M., Ceschi, G., & Zermatten, A. (2007). Does impulsivity relate to perceived dependence on and actual use of the mobile phone? *Applied Cognitive Psychology*, 21(4), 527–537.
- Bragazzi, N., & Puente, G. (2014). A proposal for including nomophobia in the new DSM-V. *Psychol. Res. Behav. Manag.*, 7, 155–160.
- Chen, T. H., & Lucock, M. (2022). The mental health of university students during the COVID-19 pandemic: An online survey in the UK. *Plos One*, 17(1), Article e0262562. <https://doi.org/10.1371/journal.pone.0262562>
- Cierzniewska, R. (2017). Znaczące konteksty edukacji [Meaningful educational contexts]. In R. Cierzniewska, M. Gackowska, & M. Lewicka, *Młodzież o sobie i codzienności szkolnej. Obok dyskursu jakości* [Young people about themselves and everyday life at school: Next to the quality discourse]. Toruń: Wydawnictwo Adam Marszałek.
- Cierzniewska, R., & Błachnio, A. (2021). Proactive coping in youth and old age as an indicator of identity formation in an anormative context. *Multidisciplinary Journal of School Education*, 10/2(20), 201– 218.

- Dębski, M. (2017). *Nałogowe korzystanie z telefonów komórkowych. Szczegółowa charakterystyka zjawiska fonoholizmu w Polsce. Raport z badan* [Addictive use of mobile phones – detailed characteristics of the phenomenon of phonoholism in Poland: A research report]. Gdynia: Fundacja Dbam o Mój Z@sięg.
- Dębski, M., & Bigaj, M. (2019). *Młodzi cyfrowi. Nowe technologie. Relacje. Dobrostan* [Young digital people. New technologies. Relationships. Well-being]. Gdynia.
- Dębski, M., & Bigaj, M. (2022). Młodzi Cyfrowi? Żyją ze smartfonem w rękę. Kim są? *Tygodnik Spraw Obywatelskich*, 148(44).
- Domoff, S. E., Sutherland, E. Q., Yokum, S., & Gearhardt, A. N. (2020). Adolescents' addictive phone use: Associations with eating behaviors and adiposity. *International Journal of Environmental Research and Public Health*, 17, 2861. DOI:10.3390/ijerph17082861
- Fischer-Grote, L., Kothgassner, O. D., & Felnhofer, A. (2021). The impact of problematic smartphone use on children and adolescents' quality of life: A systematic review. *Acta Paediatrica*, 110, 1417–1424. DOI: 10.1111/apa.15714
- Gogoi, M., Webb, A., Pareek, M., Bayliss, C. D., & Gies, L. (2022). University students' mental health and well-being during the COVID-19 pandemic: Findings from the UniCoVac qualitative study. *International Journal of Environmental Research and Public Health*, 19(15), Article 9322. <https://doi.org/10.3390/ijerph19159322>
- Hasan, N., & Bao, Y. (2020). Impact of “e-learning crack-up” perception on psychological distress among college students during COVID-19 pandemic: A mediating role of “fear of academic year loss.” *Children and Youth Services Review*, 118, 105355. 10.1016/j.childyouth.2020.105355.
- Hoffmann, B. (2017). Phonoholism: A new behavioral addiction. *Trakia J Sci*, 15(4), 315–19. 10.15547/tjs.2017.04.007
- Jia, P. (2021). A changed research landscape of youth's obesogenic behaviors and environments in the post-COVID-19 era. *Obes Rev*, 22, Suppl. 1, e13162.
- Kaviani, F., Robards, B., Young, K., & Koppel, S. (2020). Nomophobia: Is the fear of being without a smartphone associated with problematic use? *International Journal of Environmental Research and Public Health*, 17, 6024. 10.3390/ijerph17176024
- Krzyżak-Szymańska, E. (2018). *Adaptation and validation of the tool for measuring the level of problematic use of mobile phones by the adolescents*. National Bureau for Drug Prevention.



- Kwon, M., Kim, D.-J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: Development and validation of a short version for adolescents. *PLoS ONE*, 8(12), e83558. <https://doi.org/10.1371/journal.pone.0083558>
- Lakkunarajah, S., Adams, K., Pan, A. Y., Liegl, M., & Sadhir, M. (2022). A trying time: Problematic internet use (PIU) and its association with depression and anxiety during the COVID-19 pandemic. *Child Adolesc Psychiatry Ment Health*, 16, 49. <https://doi.org/10.1186/s13034-022-00479-6>
- Lange, R. (Ed.). (2021). *Raport Nastolatki 3.0. Raport z ogólnopolskiego badania uczniów* [Teen report 3.0: Report from a nationwide survey of students] Warsaw: NASK Państwowy Instytut Badawczy.
- Li, G., Conti, A. A., Qiu, C., & Tang, W. (2022). Adolescent mobile phone addiction during the COVID-19 pandemic predicts subsequent suicide risk: A two-wave longitudinal study. *BMC Public Health*, 22, 1537. <https://doi.org/10.1186/s12889-022-13931-1>
- Lisiecka, A., Chimicz, D., & Lewicka-Zelent, A. (2023). Mental health support in higher education during the COVID-19 pandemic: A case study and recommendations for practice. *International Journal of Environmental Research and Public Health*, 20(6), 4969.
- Lopez-Fernandez, O., Freixa-Blanxart, M., & Honrubia-Serrano, M. L. (2013). The problematic internet entertainment use scale for adolescents: Prevalence of problem internet use in Spanish high school students. *Cyberpsychology, Behavior, and Social Networking*, 16(2), 108–118. doi:10.1089/cyber.2012.0250
- Łucznyński, A., & Pietruszka, L. (2022). Phonoholism as a sign of “always on” generation: Research report. *Seminare. Poszukiwania naukowe*, 43(4), 115–133.
- Mach, A., Demkow-Jania, M., Klimkiewicz, A., Jakubczyk, A., Abramowska, M., Kuciak, A., Serafin, P., Szczypiński, J., & Wojnar, M. (2020, Jun 3). Adaptation and validation of the Polish version of the 10-item Mobile Phone Problematic Use Scale. *Front Psychiatry*, 11, 427. DOI: 10.3389/fpsy.2020.00427. PMID: 32581858; PMCID: PMC7283544
- Montag, C., Blaszkiewicz, K., Lachmann, B., Sariyska, R., Andone, I., Trendafilov, B., & Markowetz, A. (2015). Recorded behavior as a valuable resource for diagnostics in mobile phone addiction: Evidence from psychoinformatics. *Behav Sci (Basel)*, 5(4), 434–42. 10.3390/bs5040434

- Nazari, N., Hernández, R. M., Ocaña-Fernandez, Y., Griffiths, M. D. (2022). Psychometric validation of the Persian Self-Compassion Scale Youth Version. *Mindfulness*, 13, 385–397. <https://doi.org/10.1007/s12671-021-01801-7>
- Pajor, P. (2021). Problemowe użytkowanie, nadmierne korzystanie, uzależnienie od smartfona [Problematic use, excessive use, smartphone addiction]. *Psychiatria I Psychologia Kliniczna*, 21(4), 281–292. DOI: 10.15557/PiPK.2021.0032
- Panova, T., & Carbonell, X. (2018). Is smartphone addiction really an addiction? *J Behav Addict.*, 7(2), 252–259.
- Pattnaik, A. (2018). Smart phone addiction and its impact among adolescents in India. *Journal of Emerging Technologies and Innovative Research*, 5(5), 82–91.
- Petry, N. M., Rehbein, F., Gentile, D. A., Jeroen, S., Lemmens, J. S., Rumpf, H.-J., Thomas Mößle, T., Bischof, G., Tao, R., Fung, D. S. S., Guilherme Borges, G., Auriacombe, M., Ibáñez, A. G., Tam, P., & O'Brien, C. P. (2014). An international consensus for assessing internet gaming disorder using the new DSM-5 approach. *Society For The Study Of Addiction*. DOI:10.1111/add.12457
- Rathod, A. S., Ingole, A., Gaidhane, A., & Choudhari, S. G. (2022, October 27). Psychological morbidities associated with excessive usage of smartphones among adolescents and young adults: A review. *Cureus*, 14(10), e30756. DOI:10.7759/cureus.30756; DOI: 10.7759/cureus.30756
- Sunday, O. J., Adesope, O. O., & Maarhuis, P.L. (2021). The effects of smartphone addiction on learning: A meta-analysis. *Computers in Human Behavior Reports*, Vol. 4, 2021, 100114. <https://doi.org/10.1016/j.chbr.2021.100114>
- Takao, M., Takahashi, S., & Kitamura, M. (2009). Addictive personality and problematic mobile phone use. *CyberPsychology & Behavior*, 12(5), 501–507.
- Zachary, Z., Forbes, B., Lopez, B., Pedersen, G., Welty, J., Deyo, A., & Kerekes, M. (2020). Self-quarantine and weight gain related risk factors during the COVID-19 pandemic. *Obesity research and clinical practice*, 210–216. DOI:<https://doi.org/10.1016/j.orcp.2020.05.004>
- Zeichner, N., Perry, P., Sita, M., Barbera, L., & Nering, T. (2014, April). Exploring how mobile technologies impact pedestrian safety. *NYC Media Lab Res. Brief*, 1–17.



**Estera Twardowska-Staszek**

<https://orcid.org/0000-0001-5499-7393>

Ignatianum University in Cracow, Poland

[estera.twardowska-staszek@ignatianum.edu.pl](mailto:estera.twardowska-staszek@ignatianum.edu.pl)

**Izabela Zych**

<https://orcid.org/0000-0002-2962-0276>

University of Cordoba, Spain

[izych@uco.es](mailto:izych@uco.es)

## Social and Emotional Competencies of Polish Pupils: Psychometric Properties of the Polish Version of the Social and Emotional Competencies Questionnaire (SEC-Q)

(pp. 187–202)

Suggested citation: Twardowska-Staszek, E. & Zych, I. (2023). Social and Emotional Competencies of Polish Pupils: Psychometric Properties of the Polish Version of the Social and Emotional Competencies Questionnaire (SEC-Q). *Multidisciplinary Journal of School Education* 12(2(24)), 187–202. <https://doi.org/10.35765/mjse.2023.1224.09>

### Abstract

**Objectives of the research:** Social and emotional competencies are crucial predictors of effective human psychosocial functioning. Although research on social and emotional competencies has been carried out for many years almost worldwide, in the current era of rapid social changes, further research is necessary. Thus, it is still essential to validate international questionnaires to measure social and emotional competencies in different geographic areas, including Poland. This would make it possible to study the dynamics of the development of these competencies and to conduct comparative studies between different countries. Therefore, the aim of the study was to validate the Social and Emotional Competencies Questionnaire (SEC-Q) in Poland.

**Research methods:** This study was conducted with the Social and Emotional Competencies Questionnaire (SEC-Q).

**A short description of the context of the issue:** The Social and Emotional Competencies Questionnaire (SEC-Q) was completed by 1,052 students aged 9 to 16. The psychometric properties of the SEC-Q were tested through Confirmatory Factor Analysis (CFA).

**Research findings:** The results showed that the SEC-Q has good psychometric properties and, as in its original version, it includes four components: self-awareness, self-management and motivation, social-awareness and relationship skills, and responsible decision-making.

**Conclusions and recommendations:** Validation of the SEC-Q will allow for more research on social and emotional competencies in Poland, including an evaluation of programs for increasing social and emotional competencies and international comparative studies.

**Keywords:** social competencies, emotional competencies, validation study, SEC-Q, Poland

From the point of view of interpersonal and social relationships, social and emotional competencies are among the most essential human competencies. Although studies on social and emotional competencies have been carried out for many years almost worldwide, in this era of rapid social changes, further research is necessary. Social and emotional competencies need to be further studied in different geographic areas, and it is still necessary to measure and describe these competencies among children and adolescents in Poland.

Emotional competence has been widely studied since the groundbreaking research on emotional intelligence initiated by Salovey and Mayer (1990). They defined emotional intelligence as a set of abilities that includes perceiving and expressing emotions, utilizing emotions in the course of cognitive processes, understanding and analyzing emotions, and directing emotions to control and regulate them (Salovey & Mayer, 1990; Mayer & Salovey, 1997).

Many authors use the term emotional competence, taking into account not only emotional intelligence, but also the ability to use it in a wide range of social situations. This approach is somewhat broader than

Salovey and Mayer's emotional intelligence, as it emphasizes the fact that the social context plays a key role in emotional functioning (Saarni, 1999).

Thus, emotional competence is closely related to social competence, especially because the ability to deal with one's own and other people's emotions is the basis of social interaction (Halberstad et al., 2001). This is particularly evident in peer interactions, where the dynamics of emotional transmission are important. Calkins et al. (1999) confirmed that children who can manage their own emotions have more peer relationships; children who can show their own emotions are more liked by their peers; children who can accurately interpret emotional messages are more socially accepted; and children who can deal with anger in a constructive way are also more liked. Thus, social and emotional competencies play an important role in interpersonal relationships, and consequently in school adjustment (Denham et al., 2003; DiPrete & Jennings, 2011).

Social and emotional competencies are predictors of school success and wellbeing (Corcoran et al., 2018; Llamas-Diaz et al., 2022). As the research shows, social and emotional competencies are the basis of school readiness (Carlton & Winsler, 1999). In addition, social and emotional competencies in early childhood relate to performance at school age (Trentacost & Izard, 2007). There is a correlation between cognitive skills, social and emotional competencies, and success at school and later in life (Jones et al., 2015).

Research has shown that social and emotional competencies are important predictors of effective human functioning in different areas. High levels of social and emotional competencies correlated positively with good physical and mental health (Extremera et al., 2011; Schutte & Malouff, 2011), greater resilience to stress and more adaptive ways of coping with stressful situations (Hunt & Evans, 2004), higher levels of life satisfaction (Extremera & Fernandez-Berrocal, 2005), and less aggression (Vega et al., 2022). Other studies have indicated a positive correlation between social and emotional competencies and feelings of satisfaction, willingness to help others, and openness to accept help from others. In contrast, there is a negative correlation between social and emotional competencies and mental disorders, addictions, and somatic symptoms (Knopp, 2013).

Although different models are used to describe social and emotional competencies, the model created by the Collaborative for Academic, Social, and Emotional Learning (CASEL; 2021) is probably the most accepted one among researchers and practitioners (Durlak et al., 2022). This model includes the competencies of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Self-awareness is defined as the identification and recognition of one's own emotional states and the ability to recognize the connection between one's thoughts, emotions, and behavior. Self-management is defined as the ability to control and deal with one's emotions, as well as setting goals and being motivated to achieve them. Social awareness is defined as empathy and understanding of other people's emotions in different social contexts. Relationship skills are defined as the ability to initiate and maintain interpersonal relationships and the ability to communicate and cooperate. Responsible decision-making is understood as the ability to make constructive choices while respecting social norms (Durlak et al., 2011).

Although CASEL's model of social and emotional competencies is probably the most popular one worldwide, the number of instruments that measure these social and emotional competencies in a relatively short questionnaire is low (see Martinez Yarza et al., 2023). The Polish Psychological Testing Laboratory (n.d.) lists a total of 7 standardized tests designed to measure constructs of social and emotional learning (SEL). There are five tools to measure emotional intelligence: the INTE Emotional Intelligence Questionnaire by Schutte, Malouff, Hall, Haggerty, Cooper, Golden, and Dornheim; the DINEMO Two-Dimensional Inventory of Emotional Intelligence by Jaworowska, Matczak, Ciechanowicz, Stańczak, and Zalewska; the Popular Questionnaire of Emotional Intelligence (PKIE) by Jaworowska, Matczak, Ciechanowicz, Stańczak, and Zalewska; the Test of Understanding Emotions (TRE) by Matczak and Piekarska; and the Scale of Emotional Intelligence - Faces SIE-T by Matczak, Piekarska, and Studniarek. There are two questionnaires that measure social competence: the KKS Social Competence Questionnaire by Matczak and the PROKOS Social Competence Profile by Matczak and Martowska.

All of the aforementioned tools examine either emotional competency or social competency separately. Thus, it is still necessary to validate the questionnaires in order to measure social and emotional competencies in different geographic areas, including Poland. This would make it possible to study the dynamics of the development of these competencies, as well as to conduct comparative studies between different countries.

The Social and Emotional Competencies Questionnaire (SEC-Q; Zych et al., 2018) is a tool with excellent psychometric properties that is useful for measuring different competencies that are usually promoted through SEL. It has also been used in dozens of publications to study the relationship between social and emotional competencies and other variables, such as antisocial behavior (Nasaescu et al., 2021), school violence (Zych et al., 2018), or cyberbullying (Marin-López et al., 2020).

There is a need to measure social and emotional competencies among children and adolescents in Poland and to compare them with those of their peers in other countries. Unfortunately, there is no international tool validated in Poland that would measure all the constructs in CASEL programs in one measurement instrument. Thus, the aim of this study was to validate the SEC-Q among children and adolescents in Poland.

## Method

### Participants

The survey included 1,052 participants, 55% of whom were students at four elementary schools ( $n = 580$ ) and 45% of whom were students at two secondary schools ( $n = 472$ ). All the schools were located in Lesser Poland: four of them in a large city and the other two in a small town. The age of the participants ranged from 9 to 16 years ( $M = 12.53$ ;  $SD = 1.98$ ). Among the participants 54.4% were girls ( $n = 572$ ), 44.9% were boys ( $n = 472$ ), and 0.7% did not disclose their gender ( $n = 8$ ).

### **Design and Procedure**

This was a cross-sectional ex post facto study conducted using a paper-and-pencil version of the questionnaire. First, the SEC-Q was translated from English into Polish and back-translated (by a Polish native speaker fluent in Spanish), and then the translation was checked by a certified translator. The schools were then contacted and the required authorization and consent for the survey were obtained. The students completed the questionnaire during school hours under the supervision of a representative of the research project. The participants were told the purpose of the research and were asked to answer sincerely. They were informed that the research was anonymous and voluntary and that they had the right to refuse or withdraw their participation at any time. All participants agreed to complete the questionnaires and none chose to withdraw from the study. However, 26 students did not mark any responses, so their data were not qualified for further analysis. The study was conducted in accordance with international and national ethical standards, including the Declaration of Helsinki and data protection regulations.

### **Instruments**

The Social and Emotional Competencies Questionnaire (Zych et al., 2018) was used to measure the social and emotional competencies of children and adolescents. The SEC-Q is a self-report instrument consisting of 16 items, each of which is formulated as a statement. The respondents are asked to indicate on a five-point Likert scale the degree to which they agree with each statement (ranging from 1 [strongly disagree] to 5 [strongly agree]). The answers are used to calculate the score on four scales: Self-Awareness (e.g., “I know how my emotions influence what I do”), Self-Management and Motivation (e.g., “I pursue my goals despite the difficulties”), Social Awareness and Relationship Skills (e.g., “I offer help to those who need me”), and Responsible Decision-Making (e.g., “I do not make decisions carelessly”). The SEC-Q has good psychometric properties (Zych et al., 2018). The psychometric properties of this tool in a Polish study group are described in this article.



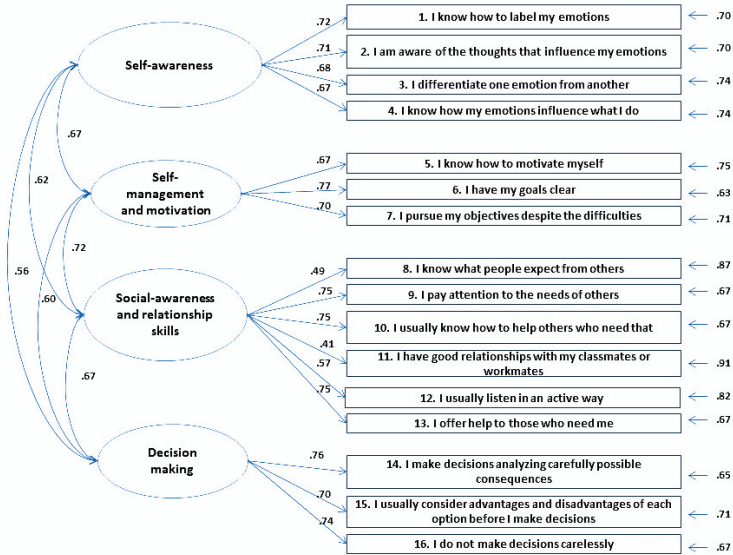
### **Data Analysis**

The psychometric properties of the SEC-Q were tested through Confirmatory Factor Analysis, performed with competencies maximum likelihood robust method and polychoric correlation (Satorra–Bentler chi-square) using the software program EQS 6.2. Model fit was tested through different indices such as the Normed Fit Index (NFI;  $\geq .90$ ), the Non-Normed Fit Index (NNFI;  $\geq .90$ ), the Comparative Fit Index (CFI;  $\geq .90$ ), and the Root Mean Square Error Approximation (RMSEA;  $\leq .08$ ) (Bentler, 1990). Descriptive statistics were calculated in PASW Statistics 20. Student's t-test was used to compare boys and girls and elementary- and secondary-school students. Polychoric alphas and omegas were calculated in FACTOR 10 (Lorenzo-Seva & Ferrando, 2015).

### **Results**

The Confirmatory Factor Analysis showed a very good fit of the original factor structure to the current data (see Figure 1). All factor loadings were above .40. The total alpha .91 and the omega = .91 (Factor 1: alpha = .83, omega = .83; Factor 2: alpha = .82, omega = .82; Factor 3: omega = .83, alpha = .82; Factor 4: alpha = .81, omega = .81).

**Figure 1. Confirmatory Factor Analysis of the Social and Emotional Competencies Questionnaire**



Satorra–Bentler chi-square = 285.48, df = 98,  $p > .05$ , CFI = .98, NFI = .98, NNFI = .97, RMSEA = .44, 90% CI = .038 - .050

The comparison between boys and girls in the entire sample showed no evidence of differences in self-awareness and self-management. On the other hand, the girls showed higher levels of social-awareness and relationship skills and decision-making than the boys (see Table 1).

**Table 1. Comparison between boys and girls on the Social and Emotional Competencies Questionnaire, by subscale**

	Boys M (SD)	Girls M (SD)	t	Total M (SD)
Self-Awareness	16.28 (3.61)	16.53 (2.79)	-1.20	16.41 (3.19)
Self-Management	12.19 (2.85)	12.07 (2.73)	.71	12.13 (2.78)
Social Awareness and Relationship Skills	23.48 (4.64)	24.21 (3.90)	-2.65**	23.88 (4.26)
Responsible Decision-Making	10.78 (3.11)	11.20 (2.82)	-2.26*	11.01 (2.96)
Total	62.96 (11.37)	64.11 (9.53)	-1.68	63.59 (10.41)

\*  $p < .05$ ; \*\*  $p < .01$

The comparison between elementary-school and secondary-school students revealed differences in all competencies in favor of the younger students.

**Table 2. Comparison between elementary- and secondary-school students on the Social and Emotional Competencies Questionnaire, by subscale**

	Elementary school M (SD)	Secondary school M (SD)	t	Total M (SD)
Self-Awareness	17.00 (2.97)	15.96 (3.28)	5.28**	16.41 (3.19)
Self-Management	13.03 (2.50)	11.45 (2.79)	9.58**	12.13 (2.78)
Social Awareness and Relationship Skills	25.71 (3.47)	22.44 (4.27)	13.48**	23.88 (4.26)
Responsible Decision-Making	11.91 (2.80)	10.34 (2.90)	8.82**	11.01 (2.96)
Total	67.65 (8.56)	60.23 (10.61)	12.17**	63.59 (10.41)

\*  $p < .05$ ; \*\*  $p < .01$

Percentiles for each scale and the total score are shown in Tables 3 and 4.

**Table 3. Percentiles for boys and girls in each subscale and the total score of the Social and Emotional Competencies Questionnaire**

	Self-Awareness	Self-Management and Motivation	Social Awareness and Relationship Skills	Responsible Decision-Making	Total score
	Boys/Girls	Boys/Girls	Boys/Girls	Boys/Girls	Boys/Girls
10	12/13	9/8	18/19	7/8	48/52
20	13/14	10/10	21/21	8/9	55/56
30	15/15	11/11	22/23	9/10	59/60
40	16/16	12/12	23/24	10/11	62/63
50	17/17	13/13	24/24	11/12	65/65
60	18/18	13/13	25/25	12/12	67/68
70	19/18	14/14	26/26	12/13	70/70
80	19/19	14/15	27/28	13/14	72/72
90	20/20	15/15	29/29	14/14	75/76

**Table 4. Percentiles for elementary and secondary education in each subscale and the total score of the Social and Emotional Competencies Questionnaire**

	Self-Awareness	Self-Management and Motivation	Social Awareness and Relationship Skills	Responsible Decision-Making	Total score
	Elementary/Secondary	Elementary/Secondary	Elementary/Secondary	Elementary/Secondary	Elementary/Secondary
10	13/12	10/7	21/17	8/6	55/48
20	15/14	11/9	23/20	10/8	61/52
30	16/15	12/10	24/21	11/9	64/56
40	17/16	13/11	25/22	12/10	66/59
50	18/17	13/12	26/23	12/11	69/62
60	18/17	14/13	27/24	13/11	71/64
70	19/18	15/13	28/25	13/12	73/67
80	20/19	15/14	29/26	14/13	75/69
90	20/20	15/15	30/27	15/14	78/72

## Discussion

Social and emotional competencies are studied around the world, as a high level is the basis of good mental and social functioning. Since the 1990s, programs have been conducted in many countries to promote these competencies in children and adolescents at various stages of education. A recent review of meta-analyses on social and emotional learning (Durlak et al., 2022) has located over 500 school-based interventions conducted with over one million students around the world and concluded that they effectively reduced behavioral problems. Unfortunately, the number of validated instruments that measure social and emotional competencies is still low, especially in some areas such as Poland. Those that do measure social and emotional competencies usually focus on one of their components instead of measuring a set of competencies in one tool. Thus, the aim of this study was to validate the SEC-Q in Polish children and adolescents.

The SEC-Q includes four scales: Self-Awareness, Self-Management and Motivation, Social Awareness and Relationship Skills, and Responsible Decision-Making. The questionnaire's structure coincides with the competencies promoted in many programs (Durlak et al., 2015). The original version of the questionnaire has excellent psychometric properties (Zych et al., 2018), which is also true for the Polish version of the SEC-Q. These properties have been confirmed through confirmatory factor analysis. The data showed an excellent fit to the model and all the subscales had very good reliability.

As expected, the results showed differences in social and emotional competencies by sex and age. Girls obtained higher scores in social awareness and relationship skills and decision-making, which may be caused by differences in the socialization of emotions between daughters and sons. Indeed, mothers' conversations with young girls are characterized by more frequent references to emotions than those with boys. In addition, girls are more likely to talk about emotions and mothers of daughters are more likely to refer to emotions than mothers of sons (Dunn et al., 1987). Higher social awareness and relationship skills may also result from girls' earlier acquisition of verbal skills, which translates into better articulation of their own emotions. Brody and Hall (1993) found that an earlier acquisition of verbal skills results in better communication with peers and better conflict resolution skills through dialogue. Girls emphasize cooperation as much as possible in their early social behavior, while boys rely on competition. Boys pride themselves on independence and autonomy, while for girls it is more important to take pride in satisfying interpersonal relationships.

Our findings also showed differences by age, with younger students demonstrating higher social and emotional competencies. Perhaps adolescence, which is undoubtedly associated with emotional lability, makes adolescents less able to understand and control their own emotions, which may also affect social relationships.

These results are in line with other studies on social and emotional competencies, which showed that boys use more emotional suppression than girls (Gómez-Ortiz et al., 2016). Previous studies also found that adult

women scored higher than men in emotional intelligence, but this difference almost disappeared when age was controlled for (Fernández-Berrocal et al., 2012). The current study showed gender differences in some variables, mostly related to social competencies, but future studies could be useful to clarify these differences.

The current study provided a validated questionnaire that can be used to measure social and emotional competencies in Poland. At the same time, the authors are aware of some limitations of this study, which are related to the selection of participants (convenience sampling) and the method of measurement (self-reported survey). It would be necessary to conduct a more extensive study, selecting schools at random and including a larger number of students in different age ranges. The survey also has some very important strengths, such as the strong theoretical background and large study group.

The study has important implications for research and practice. The SEC-Q is a very good tool for examining social and emotional competencies in clinical and educational settings. This instrument can also be very useful when evaluating prevention programs that promote social and emotional competencies in children and adolescents. Regarding research, the SEC-Q can now be used in Poland to study the relationships between social and emotional competencies and other important constructs. Comparative studies on social and emotional competencies, in Poland and other countries, can now also be conducted.

**Funding:** This research received no external funding.

## References

- Brody, L. R., & Hall, J. A. (1993). Gender and emotion. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 447–460). The Guilford Press.
- Calkins, S. D., Gill, K. L., Johnson, M. G., & Smith, C. L. (1999). Emotional reactivity and emotion regulation strategies as predictors of social behavior with peers during toddlerhood. *Social Development*, 8, 310–334.
- Carlton, M. P., & Winsler, A. (1999). School readiness: The need for a paradigm shift. *School Psychology Review*, 28(3), 338–352. <https://doi.org/10.1080/02796015.1999.12085969>
- Collaborative for Academic, Social, and Emotional Learning. (2021). The CASEL guide to schoolwide social and emotional learning. <https://schoolguide.casel.org>
- Corcoran, R. P., Cheung, A. C., Kim, E., & Xie, C. (2018). Effective universal school-based social and emotional learning programs for improving academic achievement: A systematic review and meta-analysis of 50 years of research. *Educational Research Review*, 25, 56–72.
- Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development*, 74(1), 238–256. <https://doi.org/10.1111/1467-8624.00533>
- DiPrete, T. A., & Jennings, J. L. (2012). Social and behavioral skills and the gender gap in early educational achievement. *Social Science Research*, 41(1), 1–15. <https://doi.org/10.1016/j.ssresearch.2011.09.001>
- Duckworth, A. L., & Yeager, D. S. (2015). Measurement matters: Assessing personal qualities other than cognitive ability for educational purposes. *Educational Researcher*, 44(4), 237–251. <https://doi.org/10.3102/0013189X15584327>
- Dunn, J., Bretherton, I., & Munn, P. (1987). Conversations about feeling states between mothers and their young children. *Developmental Psychology*, 23, 132–139. <http://dx.doi.org/10.1037/0012-1649.23.1.132>
- Durlak, J. A., Domitrovich, C. E., Weissberg, R. P., & Gullotta, T. P. (Eds.). (2015). *Handbook of social and emotional learning: Research and practice*. The Guilford Press.
- Durlak, J. A., Mahoney, J. L., & Boyle, A. E. (2022). What we know, and what we need to find out about universal, school-based social and emotional learning programs for children and adolescents: A review of meta-analyses and directions for future research. *Psychological Bulletin*, 148(11–12), 765.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based

- universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Extremera, N., & Fernandez-Berrocal, P. (2005). Perceived emotional intelligence and life satisfaction: Predictive and incremental validity using Trait Meta-Mood Scale. *Personality and Individual Differences*, 39, 937–948. <https://doi.org/10.1016/j.paid.2005.03.012>
- Extremera, N., Ruiz-Aranda, D., Pineda-Galán, C., & Salguero, J. M. (2011). Emotional intelligence and its relation with hedonic and eudaimonic well-being: A prospective study. *Personality and Individual Differences*, 51(1), 11–16. <https://doi.org/10.1016/j.paid.2011.02.029>
- Fernández-Berrocal, P., Cabello, R., Castillo, R., & Extremera, N. (2012). Gender differences in emotional intelligence: The mediating effect of age. *Behavioral Psychology-Psicología Conductual*, 20, 77–89.
- Gómez-Ortiz, O., Romera, E. M., Ortega-Ruiz, R., Cabello, R., & Fernández-Berrocal, P. (2016). Analysis of emotion regulation in Spanish adolescents: Validation of the Emotion Regulation Questionnaire. *Frontiers in Psychology*, 6, 1959. <http://dx.doi.org/10.3389/fpsyg.2015.01959>
- Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). Affective social competence. *Social Development*, 10(1), 79–119. <https://doi.org/10.1111/1467-9507.00150>
- Hunt, N., & Evans, D. (2004). Predicting traumatic stress using emotional intelligence. *Behaviour Research and Therapy*, 42(7), 791–798. <https://doi.org/10.1016/j.brat.2003.07.009>
- Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *American Journal of Public Health*, 105(11), 2283–2290. <https://doi.org/10.2105/AJPH.2015.302630>
- Knopp, K. (2013). *Kompetencje społeczne – pomiar i aplikacja praktyczna* [Social competences: Measurement and practical application]. Warsaw: Instytut Psychologii Uniwersytetu Kardynała Stefana Wyszyńskiego.
- Llamas-Díaz, D., Cabello, R., Megías-Robles, A., & Fernández-Berrocal, P. (2022). Systematic review and meta-analysis: The association between emotional intelligence and subjective well-being in adolescents. *Journal of Adolescence*, 94(7), 925–938. <https://doi.org/10.1002/jad.12075>
- Marín-López, I., Zych, I., Ortega-Ruiz, R., Hunter, S. C., & Llorent, V. J. (2020). Relations among online emotional content use, social and emotional competencies and cyberbullying. *Children and Youth Services Review*, 108, 104647.



- Martinez-Yarza, N., Santibáñez, R., & Solabarrieta, J. (2023). A systematic review of instruments measuring social and emotional skills in school-aged children and adolescents. *Child Indicators Research*, 1–28.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3–34). Basic Books.
- Moore, K. A., Lippman, L. H., & Ryberg, R. (2015). Improving outcome measures other than achievement. *AERA Open*, 1(2). <https://doi.org/10.1177/2332858415579676>
- Nasaescu, E., Zych, I., Ortega-Ruiz, R., Farrington, D. P., & Llorent, V. J. (2020). Longitudinal patterns of antisocial behaviors in early adolescence: A latent class and latent transition analysis. *European Journal of Psychology Applied to Legal Context*, 12, 85–92. <https://doi.org/10.5093/ejpalc2020a10>
- Palmer, B., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, 33(7), 1091–1100. [https://doi.org/10.1016/S0191-8869\(01\)00215-X](https://doi.org/10.1016/S0191-8869(01)00215-X)
- Polish Psychological Testing Laboratory. (n.d.). <https://www.practest.com.pl/catalog/1224>
- Portela-Pino, I., Alvariñas-Villaverde, M., & Pino-Juste, M. (2021). Socio-emotional skills in adolescence: Influence of personal and extracurricular variables. *International Journal of Environmental Research and Public Health*, 18(9), 4811. <https://doi.org/10.3390/ijerph18094811>
- Saarni, C. (1999). *The development of emotional competence*. Guilford Press.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185–211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>
- Schutte, N. S., & Malouff, J. M. (2011). Emotional intelligence mediates the relationship between mindfulness and subjective well-being. *Personality and Individual Differences*, 50(7), 1116–1119. <https://doi.org/10.1016/j.paid.2011.01.037>
- Trentacosta, C. J., & Izard, C. E. (2007). Kindergarten children's emotion competence as a predictor of their academic competence in first grade. *Emotion*, 7(1), 77–88. <https://doi.org/10.1037/1528-3542.7.1.77>
- Vega, A., Cabello, R., Megías-Robles, A., Gómez-Leal, R., & Fernández-Berrocal, P. (2022). Emotional intelligence and aggressive behaviors in adolescents: A systematic review and meta-analysis. *Trauma, Violence, & Abuse*, 23(4), 1173–1183. <https://doi.org/10.1177/1524838021991296>

- Zych, I., Beltrán-Catalán, M., Ortega-Ruiz, R., & Llorent, V. J. (2018). Social and emotional competencies in adolescents involved in different bullying and cyberbullying roles. *Revista de Psicodidáctica (English ed.)*, 23(2), 86–93. <https://doi.org/10.1016/j.psicoe.2017.12.001>
- Zych, I., Ortega-Ruiz, R., Muñoz-Morales, R., & Llorent, V. J. (2018). Dimensions and psychometric properties of the Social and Emotional Competencies Questionnaire (SEC-Q) in youth and adolescents. *Revista Latinoamericana de Psicología*, 50(2), 98–106. <https://doi.org/10.14349/rlp.2018.v50.n2.3>



**Agnieszka Weiner**

<https://orcid.org/0000-0001-5687-5090>

WSB University, Dąbrowa Górnicza, Poland

[aweiner@wsb.edu.pl](mailto:aweiner@wsb.edu.pl)

## Ontological (In)Security – Art Students’ Experience of Agency in the Educational Reality During the Pandemic

(pp. 203–221)

Suggested citation: Weiner, A. (2023). Ontological (In)Security – Art Students’ Experience of Agency in the Educational Reality During the Pandemic. *Multidisciplinary Journal of School Education*, 12(2(24), 203–221. <https://doi.org/10.35765/mjse.2023.1224.10>

### Abstract

**Objectives of the study:** The purpose of the study is to reconstruct the experiences of art students during the Covid-19 pandemic. The research question is as follows: What image of the everyday life of remote education emerges from the reconstruction of the experiences of students who were previously assigned to extreme groups in terms of their perceived proficiency?

**Research methods:** Due to the different objectives’ for specific questions – involving nomothetic explanation in some areas (basic descriptive statistics, comparison of selected subfields, logistic regression) and idiographic explanation in others (qualitative content analysis) – the research used a quantitative and qualitative strategy.

**Brief description of the context of the issue:** Art schools provide unique educational opportunities as teachers-artists have a personal influence on students through face-to-face interaction. The pandemic has presented these schools with an unprecedented challenge, on a scale that had not been seen before. In the research presented here, voice was given to the students, who were considered experts in their own cause. Their experiences, as a multidimensional construct, were located theoretically in the

context of the threefold framework of temporal order, space and relationship, and Bruner's concept of the role of support in child development.

**Research findings:** The results show a link between perceived levels of ontological security and the way students functioned at school during the pandemic. Psychological well-being was affected more strongly in those with a low sense of agency, who often balanced on the verge of ontological security and experienced reality in a traumatic way, while students with a high sense of agency tended to focus on the benefits rather than losses.

**Conclusions and/or recommendations:** Locating students on the continuum of a sense of agency brought a fresh perspective on the different ways in which young artists with and without a disturbed sense of ontological security experienced school during the pandemic. Important recommendations include continuing multidirectional support measures of a pedagogical and psychological nature undertaken by many institutions, which should be aimed at art students, their parents and teachers.

**Keywords:** ontological security, sense of agency, art school, Covid-19 pandemic

## Introduction

The experience of the global COVID-19 pandemic resulting in the introduction of obligatory remote education continues to be an interesting source of research and reflection. This is particularly true of art schools, where education involves direct contact between a teacher and a young student of music, visual arts or ballet. Were it not for the emergency situation necessitated by public health concerns, no one would probably not have come up with the idea of teaching art remotely. However, more than 700 schools with more than 85,000 students started such an experiment in March 2020.

The global and unprecedented event that was and is the SARS-CoV-2 epidemic puts us all on a trajectory of suffering (Nowak-Dziemianowicz, 2021, p. 132) and even creates a new perspective: "it is not the pandemic that is unreal – the time before the pandemic was fiction" (Yu, 2020).

My reconstruction of the pandemic (non-)everyday life as experienced by art school principals revealed a picture that is not entirely clear. It highlights the process of adaptation and maturation to better and better solutions and shows the difficulties and failures, the mistakes made, as well as the sense of impact and success (Weiner, 2021). In this article, I give the floor to art school students, whom I treat as experts in their own cause. I am interested in their experience at the remote education stage in the context of their perceived agency and ontological security.

### **Experiencing agency in everyday school life from the perspective of ontological security**

Daily life, including daily life at school, is based on experience or knowledge in action, born out of direct contact and time spent together. Some researchers believe that there is no need to construct a definition of it (Sulima, 2003), while others (Sztompka & Bogunia-Borawska, 2008, p. 25) consider reality to be “the most obvious, most real form of existence present in direct experience, emphatically imposing itself on our perception.”

The reality of the pandemic, especially its initial phase, can be interpreted in the context of a crisis in which previous ways of achieving goals became ineffective (Pergel & Psychogios, 2013, pp. 179–205) and caused an unprecedented increase in problems in education (Tempczyk-Nagórka et al., pp. 100–119). The nature of the crisis and its potentially destructive power in particular (Zybertowicz & Zybertowicz 2017, p. 521–538) focus our attention on the human condition in crisis. As Anthony Giddens (1990; 1991) and Zygmunt Bauman (2006) stress, every person must constantly reconstruct his/her social position because he/she is no longer surrounded by anything certain. This issue is the subject of the contemporary concept of ontological security, which, according to Giddens, is primarily concerned with uncertainty about one’s own identity, and according to Brent Steele (2008, pp. 2–3) with the subject’s sense of the meaning of existence in a particular space and time. The above theses correspond with the position of Dominique Moisi (2012, pp. 19–25), who

distinguishes three basic social emotions in the process of identity formation: hope, humiliation and fear. In a nutshell, ontological security can be described as an individual's sense that they retain an area of responsibility for the course of events which they perceive as significant for them. If the scope or pace of change exceeds the individual's adaptive capacity, their ontological security becomes compromised (Zybertowicz & Zybertowicz, 2017).

The discursive approach to ontological security (Pawłuszko, 2018) that considers the tenets of the constructivist approach and points to the key role of ideational factors in explaining social phenomena, fits into the theoretical foundations of this article. I consider school everyday life, following Thiersch (2000; Schugurensky, 2014) in the triple framework of temporal order, space and relationships and situate it in Bruner's concept of education supporting the development of students. Along these lines, I assume that the way students experience school determines the types of meanings they construct and that school is a space for experiencing oneself and the social world (Bruner, 2006, pp. 48–61).

Students can act with a sense of agency and autonomy when they experience everyday life as a challenge, a problem and a task that they are willing and able to solve. However, "the loss of a sense of agency, the passive submission to fate, the helpless surrender to foreign forces" can also appear as a specific form of exclusion from actively experiencing everyday life, especially in extraordinary situations that arouse strong and overwhelming emotions (Krzychała & Zamorska, 2008, pp. 17–19). The loss of a sense of agency corresponds to the loss of ontological security, which occurs only when the individual wants and is able to act, and the surrounding reality allows it, which links the category of agency to the sense of freedom (Nowicka-Koziół, 2000; Zybertowicz & Zybertowicz, 2017). In this article, the sense of agency is closest to the intersubjective perspective that takes account of social relations in a contextual manner (Nowakowski & Komedziński, 2014, pp. 251–261).

## Research issues

The main purpose of the research project was to reconstruct the experiences of art students (of music and visual arts) during the Covid-19 pandemic by outlining a picture of their everyday life in remote schooling. Due to the different objectives for specific questions, involving nomothetic explanation in some aspects and idiographic explanation in others, the research relied on quantitative and qualitative strategies (Rubacha, 2012, p. 22).

The survey (anonymous online questionnaire) was conducted from March to June 2020 and covered students of all types of art schools at the second and third educational stages in the Lublin Voivodeship (exhaustive study, target sampling). Out of the 464 respondents who completed the survey, 59% (n = 275) attended schools combining art education with general education (schools with a general education curriculum, e.g., a general music school, a secondary school of visual arts) while the remainder (41%, n = 189) were receiving art education in evening schools (music schools which do not cover obligatory general curricula). The link to the questionnaire was sent by the principals of the art schools after the students' parents consented to the survey. The results were sent directly to the researcher (without the intermediation of educational institutions).

The first stage consisted of describing the students' self-image (sense of agency) and the image of education in an art school during the pandemic. The relationship between these images was analyzed with the use of basic descriptive statistics, by comparing selected subpopulations using the Mann-Whitney test (Wiktorowicz, Grzelak, Grzeszkiewicz-Radulska, 2020). Logistic regression (Hosmer et al., 2013) was used to find determinants of the sense of agency (Weiner, in press). The above analysis referred only to the quantitative part of the study (diagnostic-relational study based on the material including questions with a scale).

In the second stage of the research, which is the focus of this text, the agency criterion was expanded by the framework of ontological security. Using statistical analysis, students with the highest and lowest sense of agency/ontological security were identified. The narratives of

students from the emerging extreme groups were subjected to qualitative content analysis (Szczepaniak, 2012) in order for the researcher to reconstruct their authors' experiences with remote education. I take the position that describing experience as a multidimensional construct requiring detailed insight is not possible with the use of quantitative categories only (Silverman 2012, pp. 149–150). In line with the demands of quantitative researchers and the essence of the method (Fiske 2009, p. 182; Goban-Klas 2009, pp. 131–132), I draw conclusions not only from what is recorded in the questionnaires, but also from what is left unrecorded (Lisowska-Magdziarz 2004, pp. 14–15; Rapley 2010, pp. 194–196). In this way, not only individual words determine the results, but also the overall meaning of the statements and their context (Szczepaniak, 2012).

The collected material allowed me to construct a categorization key, which was used to show the thematic distribution of the set of narratives and to arrange them according to an opposing relationship: a student with a sense of agency vs. a student whose ontological security is threatened – according to their membership in one of the strongly polarized group. When constructing the key, I took into account the frequency of the subject and the conditions of the key construction (Nowicka, 2021, pp. 105–121; Szczepaniak 2012). In accordance with the method, the key emerged at the analysis stage by grouping specific categories into more general ones, with a single respondent's statement considered the unit of analysis.

### **Sense of agency vs. risk of ontological insecurity – extreme groups**

As ontological security exists when an individual is willing and able to act (Zybertowicz & Zybertowicz, 2017) and the pace and scope of change do not exceed the adaptive capacity of individuals (including human minds), a student with a high sense of agency and ontological security was assumed to be one who selected the “appropriate” highest option indicated on the scale in each of the three questions referring



to independent learning, activity during remote lessons and well-being in mediated education. This condition was met for only 26 respondents (5.6% of respondents).

**Table 1. Students with high sense of agency (HSA) – condition met for all 3 questions n = 26**

		Frequency	Percentage	Valid percentage	Cumulative percentage
Important	.00	77	16.6	16.6	16.6
	1.00	208	44.8	44.8	61.4
	2.00	153	33.0	33.0	94.4
	3.00	26	5.6	5.6	100.0
	Total	464	100.0	100.0	

In the same way, by selecting answers that are extremely different from those described above (I never learn independently, I am hardly active /or not at all/ during remote lessons, my well-being in mediated education is always worse than during in-school learning), a group of students most at risk of losing ontological security emerged: only 27 people (5.8% of respondents) gave this answer. Thus, the polarized extreme groups are consistent with theoretical assumptions and numerically equivalent.

**Table 2. Students at risk of ontological insecurity – condition met for all 3 questions n = 27**

		Frequency	Percentage	Valid percentage	Cumulative percentage
Important	.00	124	26.7	26.7	26.7
	1.00	228	49.1	49.1	75.9
	2.00	85	18.3	18.3	94.2
	3.00	27	5.8	5.8	100.0
	Total	464	100.0	100.0	

I subjected the narratives of the two extreme groups to textual analysis and searched the material for recurring and relatively constant sets

and configurations of elements, ideological structures describing various aspects of the students' functioning in the reality of the pandemic. In my analysis, I considered the tenets of the constructivist perspective, which points to the key role of ideational factors in explaining social phenomena (Bevir & Rhodes, 2006, pp. 131–152; Hopf 1998, pp. 171–200).

### The image of school daily life of young art students

The narratives of art school students referred to various areas of pandemic reality. They were both descriptive and evaluative. The selection of extreme groups made it possible to reconstruct the experiences of young artists in an attractive perspective and create a picture of their functioning during the period of social isolation. According to the respondents' statements, I reconstructed the following areas: school during the pandemic, vision of future art education, and family life. In order to overview the source material, I decided to include tables containing thematically grouped quotes (the most representative ones) on the basis of which key categories were created.

**Table 3. School during the pandemic – students with a high sense of agency (SP-HSA)**

School during the pandemic	
Difficulty level of remote classes (DL)	"Generally speaking, learning online was the same as at school." "Choir lessons are the worst, the microphone distorts the voice."
Homework/art assignments (HW)	"I believe that homework is necessary, because otherwise there would be no grades." "Sometimes it is difficult, but usually I am able to understand everything." "It is necessary to gain skills." "It is the same as in the normal course of teaching." "It is okay, manageable." "It is nice and interesting, sometimes even very funny."
Negatives of remote education (NE)	"I can't see the blackboard, the teacher or my friends like in real life." "The teacher did not explain everything to me, there is interference on the phone." "I miss live examples." "I don't miss anything."

Positives of remote education (PE)	<p>"I don't have to leave the house, I'm in touch online."</p> <p>"I don't waste my time commuting."</p> <p>"I have more time for myself."</p>
Emotions during remote classes (EU)	<p>"I was surprised that the choir is no longer just about singing, but rather about getting sheet music for independent work."</p> <p>"I am worried that we may not return to school this year."</p> <p>"I am annoyed by Internet issues."</p> <p>"I am annoyed that I have to learn on my own and record the tracks."</p> <p>"I am concerned about the lack of IT training among teachers."</p>

**Table 4. School during the pandemic – students with a low sense of agency (SP-LSA)**

School during the pandemic	
Difficulty level of remote classes (DL)	<p>"awful"</p> <p>"It would be best not to have these classes at all."</p> <p>"I don't understand most of the classes due to remote education."</p> <p>"I can't cope because everything is so cut off from reality that I can't focus and I find myself in this situation all the time."</p>
Homework/art assignments (HW)	<p>"We get too little information on assignments and low grades because it's not what the teacher was expecting."</p> <p>"There is no point in doing homework because it is not even graded."</p> <p>"difficult and a lot of it"</p> <p>"I don't have the energy to do it sitting at home all the time."</p>
Negatives of remote education (NE)	<p>"I need a lot of explanation and motivation."</p> <p>"I miss meeting with people."</p> <p>"I have no room at home, I can't draw."</p> <p>"I miss doing the work under the supervision of a teacher, who comments and corrects me on an ongoing basis."</p> <p>"nothing here is true"</p> <p>"I no longer enjoy anything."</p> <p>"I have problems with the simplest information."</p> <p>"I'm fed up, I can't sleep at night."</p> <p>"I have more free time for doing nothing."</p> <p>"remote classes limit me"</p>
Positives of remote education (PE)	-----
Emotions during remote classes (EU)	<p>"I was surprised to find out that learning was so hard."</p> <p>"I was astonished that teachers often do not come to classes."</p> <p>"Difficulties only, it's not possible to learn to play an instrument on your own."</p> <p>"Being at the mercy of the internet connection is frustrating."</p> <p>"I'm worried by too much work and lack of appropriate equipment."</p> <p>"I'm worried about worse grades and high expectations of teachers."</p> <p>"Learning to play an instrument when the Internet connection keeps crashing is a nightmare."</p> <p>"I'm getting more and more stupid."</p>

To students with a high sense of agency (HSA), obligatory remote education in art schools seems difficult but acceptable. Even though they miss their peers, the classrooms and their teachers' competencies, they are able to accept the changes and treat them as to-do tasks. They are able to find aspects of the new situation that are beneficial to them, and they remain vigilant and critical of the current daily school life.

The second group (LSA) focused almost entirely on the negative aspects: lack of possibilities and abilities to adapt to the new situation, obstacles to doing remote tasks, and lack of influence on the learning process. The element of suffering, exhaustion, sense of insecurity, dissatisfaction and low self-esteem was very prominent in the narratives. Even the deficiencies of the school were formulated as critical remarks about themselves. For this group of respondents, remote education remains unacceptable.

**Table 5. Vision of future education – students with a high sense of agency (VE-HSA)**

Vision of future art education	
Vision of school (VS)	"Online theory classes and real-life classes with instruments." "The most important thing is to have lessons in school." "The same as it is now, I can't imagine it otherwise." "I have no idea." "There is nothing that need to be changed."
Perfect teachers (VT)	"There are no perfect teachers." "There are perfect teachers in my school." "kind, demanding, respectful of the student" "building a good atmosphere, motivating" "passionate"

**Table 6. Vision of future education – students with a low sense of agency (VE-LSA)**

Vision of future art education	
Vision of school (VS)	"I don't know." "only in school" "I wouldn't change anything, it's fine." "some teachers"
Perfect teachers (VT)	"I don't know." "There are no perfect teachers." "appreciative but also demanding" "teachers who understand what we are going through" "being competent is enough" "I already have the perfect teacher."

An attempt to depict the art school of the future during remote learning forced by the pandemic brought very similar results in the two groups. Both students with a low sense of agency (LSA) and those whose ontological security is not at risk (HAS) made very similar statements about the school of the future. Many of them said they had no idea and did not even try to answer the question, while some said that the current model of art education suits them very well. They agreed that the return of face-to-face interaction in education is most important. A similar convergence can be observed when analyzing narratives about the perfect teacher. Students in both groups said that there is no perfect teacher, and many stressed that they were satisfied enough with the teachers they already had at school. Several of the students attempted to describe a perfect teacher with similar traits mentioned in both groups.

**Table 7. Pandemic – students with a high sense of agency (PR-HSA)**

Pandemic	
Self (IS)	"I don't need to commute, I have more time for myself and I am less stressed." "It's the same as it used to be." "The school taught me to look at the world in a different and positive way." "My self-discipline and sensitivity to the beauty of music has improved." "I feel better, I can play." "I have more time for myself." "It's more interesting."
My loved ones (IR)	"anxiety, sadness, uncertainty about the future." "We talk to each other more, we talk about problems, and at the same time there are quarrels." "Nothing has changed." "The ties have become stronger."

**Table 8. Pandemic – students with a low sense of agency (PR-HSA)**

Pandemic	
Self (IS)	"I can't do anything." "I get stressed, I've lost weight, my hair is falling out." "I can't get out of bed, I'm slowly dying." "I got lazy, I have no motivation whatsoever." "Things have changed for the worse." "Chaos has entered my life, and when I used to go to school, things were better during the day."
My loved ones (IR)	"I feel needed and responsible for someone." "only bad things" "depressive moods" "problems only" "We have not grown closer to each other, on the contrary, we have moved further apart."

The reality of the pandemic as seen through the filter of young people's sensibilities shows its different faces. Students with a high sense of agency (HAS) focus on the gains they achieved and are able to recognize them. Students in the opposite group (LSA) stress losses only and are inclined to underestimate themselves and their actions. Their perception of themselves translates into relationships with their loved ones. Young people who cope with isolation, while recognizing the negative aspects of the pandemic are searching for new patterns of action and do not neglect family relationships. For students with a low sense of agency, every course of events represents another step toward suffering.

### Summary

The students' experiences seem consistent with the image of the young artist community emerging from the reconstruction of the narratives of school principals (XXX, 2021, pp. 130–131). In each of the areas, cognitive, relational and emotional, the reality of school during the pandemic could only be captured on a continuum of specific characteristics, dispositions or descriptions. Acknowledging the diversity of the students' world indicated the reflexivity of school leaders, but did not explain the reasons for the discrepancies.

It was only when the student's (non)daily school life was examined through the lens of their sense of agency and ontological security could light be shed on this issue. Embedding the self-image of art school students within the framework defined by the above concepts determined the boundaries of the continuum, locating a similar small group of individuals (less than 6% at each end of the continuum) within them.

The two groups of students have in common only the "horizon of thinking about school" (Klus-Stańska, 2016, pp. 53–69). The school they know is the only one possible for them. The common experience and mental barrier inhibit the prospect of a different everyday school life ir-  
 respectively of their sense of agency.

However, its level is relevant to all other areas analyzed. The belief in one's agency, the ability to feel it, changes the outlook on experiencing

the pandemic. Dealing with suffering and challenges becomes possible by focusing on one's own self and on oneself as a goal achiever (Wojciszke 2010, p. 173), the capability of self-reflection, building more mature relationships with oneself and with loved ones, and ultimately redefining one's identity (Nowak-Dziemianowicz, 2021, p. 133). The study confirmed reports in the literature that agency is beneficial to the individual: the higher the agency, the greater the happiness, self-esteem, task-based responses to stress, and the significantly lower the propensity for depression and anxiety (Wojciszke 2010, pp. 173–177). High levels of agency are also seen as an important component of the innovative personality construct (Inkeles & Smith, 1984, pp. 432–465; Myszka-Strychalska, 2020).

The sense of agency should be treated as a basic prerequisite of a sense of human subjectivity (Kozielecki, 1988, p. 45; Ratajczak, 1991, p. 147), which is why one cannot remain indifferent to its absence among the remaining art school students (especially in the extreme group). Lack of a sense of agency is linked to a belief in having no influence on events (Łukaszewski, 1984, p. 435), a lack of a sense of freedom, control and competence (Hamer, 2005, 139), and a sense of isolation from peers (Pyżalski, Walter, 2021). Therefore, such people expect poorer results and believe that success is rather unlikely (Kowalczyk-Walędziak, 2012, pp. 64–76), thus presenting an attitude that is not conducive to development (Zysk, 1990, p. 199). Since, according to E. Wysocka and B. Ostafińska-Molik (2014, pp. 233–254), degrees of agency and feelings of helplessness distinguish groups of properly functioning adolescents from socially maladjusted adolescents, appropriate diagnoses should be considered important at each stage of their education.

When the pace and scope of change experienced by an individual exceeds his or her adaptive capacity, another universal human need, i.e. – ontological security – is violated. When reacting to the loss of ontological security, people take actions to simplify the world in an attempt to regain the sense of agency. Because ontological security can be prioritized over physical security, such actions can be destructive (Zybertowicz & Zybertowicz, 2017).

The time of the pandemic posed a unique challenge for art education. The organization of a safe learning environment was not without impact

on the psychosocial functioning of students. In light of the research presented, it appears that psychological well-being was affected more strongly in those with a low sense of agency, who often functioned on the edge of ontological security, traumatized by their experience of reality.

In this context, multidirectional pedagogical and psychological support activities, undertaken by a number of institutions and addressed both to students and to teachers and parents, should be considered necessary and continued. Such projects can not only help combat the effects of isolation, but also develop good practices for a post-pandemic future of schools.

**Funding:** This research was co-funded by the WSB University, Dąbrowa Górnicza.



## References

- Bauman, Z. (2006). *Płynna nowoczesność [Liquid Modernity]* (T. Kunz, Trans.). Wydawnictwo Literackie. (Original work published in 2002)
- Bevir, M., & Rhodes, R. (2006). Teoria interpretacjonistyczna [Interpretive Theory] (J. Tegnerowicz, Trans.). In D. Marsh & G. Stoker (Eds.) *Teorie i metody w naukach politycznych [Theory and Methods in Political Science]*, (pp. 131-152). Wydawnictwo UJ. (Original work published in 2002).
- Bruner, J. (2006). *Kultura edukacji [The Culture of Education]* (T. Brzostowska-Tereszkiewicz, Trans.). Wyd. Universitas. (Original work published in 1996)
- Fiske, J. (2009). *Wprowadzenie do badań nad komunikowaniem [Introduction to Communication Studies]* (A. Gierczak, transl.). Wydawnictwo ASTRUM. (Original work published in 1982).
- Giddens, A. (1990). *The Consequences of Modernity*. Stanford.
- Giddens, A. (1991). *Modernity and Self-identity: Self and Society in the Late Modern Age*, Stanford.
- Goban-Klas, T. (2009). *Media i komunikowanie masowe. Teorie i analizy prasy, radia, telewizji i Internetu [Media and Mass Communication. Theories and Analyses of Press, Radio, Television, and the Internet]*. Wydawnictwo Naukowe PWN.
- Hamer, H. (2005). *Psychologia społeczna: teoria i praktyka [Social psychology: theory and practice]*. Wydawnictwo Difin.
- Hosmer, D.W. Jr., Lemeshow, S., & Sturdivant, R.X. (2013). *Applied logistic regression*. John Wiley & Sons Inc.
- Hopf, T. (1998). The Promise of Constructivism in International Relations Theory. *International Security*, 23(1), 171-200. <https://doi.org/10.1162/isec.23.1.171>
- Inkeles, A., & Smith, I.N. (1984). W stronę definicji człowieka nowoczesnego [Towards a Definition of Modern Man]. In J. Kurczewska, & J. Szacki (Eds.), *Tradycja i nowoczesność [Tradition and Modernity]* (pp. 432-465). Czytelnik.
- Klus-Stańska, D. (2016). Jak wyjść poza horyzont pomyślenia szkoły i zrehabilitować wiedzę? Pod pretekstem reminiscencji z Autorskiej Szkoły Podstawowej „Żak” [How to Go Beyond the School Horizon of Thinking and Vindicate Knowledge? On the Pretext of Reminiscence from the 'Żak' Authorial Primary School]. *Studia i Badania Naukowe. Pedagogika*, 10(1), 53-71.

- Kowalczyk-Wałędzak, M. (2012). *Poczucie sprawstwa społecznego pedagogów. Studium teoretyczno-empiryczne [Educationists' Social Self-Efficacy. A Theoretical-Empirical Study]*. Impuls.
- Kozielecki, J. (1998). *O człowieku wielowymiarowym. eseje psychologiczne [On Multi-Dimensional Man. Psychological Essays]*. Wydawnictwo PWN.
- Krzychała, S., & Zamorska B. (2008). *Dokumentarna ewaluacja szkolnej codzienności. [Documentary Evaluation of School Everyday Life]*. Wydawnictwo DSW.
- Lisowska-Magdziarz, M. (2004). *Analiza zawartości mediów. Przewodnik dla studentów [Analysis of Media Content. A Guide for Students]*. Wydawnictwo UJ.
- Łukaszewski, W. (1984). *Szanse rozwoju osobowości [Chances of Personality Development]*. Książka i Wiedza.
- Moisi, D. (2012). *Geopolityka emocji. Jak kultury strachu, upokorzenia, nadziei przeobrażają świat [The Geopolitics of Emotion. How Cultures of fear, Humiliation and Hope Are Reshaping the World]* (R. Włoch, Trans.). PWN. (Original work published in 2008).
- Myszka-Strychalska, L. (2021). Znaczenie poczucia sprawstwa w procesie aktywności i partycypacji społecznej młodzieży [The Importance of a Sense of Agency in the Process of Youth Activism and Social Participation]. *Rocznik Pedagogiczny* 43, 37-61.
- Nowak-Dziemianowicz, M. (2021). Style zarządzania w sytuacji krytycznej oraz ich konsekwencje w perspektywie edukacyjnych badań zaangażowanych [Management Styles in a Critical Situation and Their Consequences in the Perspective of Committed Educational Studies]. In J. Łukasik, I. Nowosad, & M.J. Szymański (Eds.), *Szkoła i nauczyciel w obliczu zmian społecznych i edukacyjnych [School and Teachers in the Face of Social and Educational Change]* (pp. 125-152). Impuls.
- Nowakowski, P., & Komedziński, T. (2010). Poczucie sprawstwa: ujęcie interdyscyplinarne [Self-Efficacy. An Interdisciplinary Approach]. In M. Pąchalska, & G.E. Kwiatkowska (Eds.), *Neuropsychologia a humanistyka [Neuropsychology and Humanities]* (pp. 251-261). Wydawnictwo UMCS.
- Nowicka, M. (2021). Rodzice o nauczycielach w czasach pandemii – doniesienia badawcze z forów dyskusyjnych [Parents' Opinion on Teachers in the Times of the Pandemic – Study Reports from Discussion Forums]. In M. Nowicka, & J. Dziekońska (Eds.), *Cyfrowy tubylec w szkole. diagnozy i otwarcia T. IV*

- Edukacja zdalna w cieniu pandemii – wielogłos akademicki [A Digital Native at School. Diagnoses and Openings vol. 5 Remote Education in the Shadow of the Pandemic – A Multipart Academic Study]* (pp. 105-121). Wydawnictwo Adam Marszałek.
- Nowicka-Kozioł, M. (2000). Wprowadzenie. Poczucie odpowiedzialności moralnej [Introduction. Sense of Moral Responsibility]. In M. Nowicka-Kozioł (Ed.), *Poczucie odpowiedzialności moralnej jako aspekt podmiotowy [Sense of Moral Responsibility as a Subjective Aspect]*, (pp.233-254). Wydawnictwo Akademickie "Żak".
- Wysocka E.K., & Ostafińska-Molik B. (2014). Nastawienie życiowe młodzieży niedostosowanej społecznie i prawidłowo przystosowanej: analiza porównawcza [Life Attitudes of Socially Maladjusted and Well-Adjusted Adolescents: a Comparative Analysis]. *Przegląd Naukowo-Metodyczny. Edukacja dla Bezpieczeństwa*, 7(22(1)), 233-254.
- Pawłuszko, T. (2018). Bezpieczeństwo ontologiczne państwa – koncepcja i zastosowanie [Ontological Security of a State – Concept and Application]. *Doctrina. Studia Społeczno Polityczne*, 15(15), 235-252.
- Pergel, R., & Psychogios A. G. (2013). Making Sense of Crisis: Cognitive Barriers of Learning in Critical Situations. *Management Dynamics in the Knowledge Economy*, 1(2), 179-205.
- Pyżalski J., & Walter N. (2021). Edukacja zdalna w czasie pandemii COVID-19 w Polsce – mapa głównych szans i zagrożeń. Przegląd i omówienie wyników najważniejszych badań związanych z kryzysową edukacją zdalną w Polsce [Remote Education During the COVID-19 Pandemic in Poland – a Map of the Main Opportunities and Threats. Overview and Discussion of Results of the Most Important Studies Related to Crisis Remote Education in Poland]. Wydawnictwo UAM.
- Rapley, T. (2010) *Analiza konwersacji, dyskursu i dokumentów [Doing Conversation, Discourse and Document Analysis]* (A.Gąsior-Niemiec, Trans.). Wydawnictwo Naukowe PWN. (Original work published in 2007).
- Ratajczak, Z. (1991). *Elementy psychologii pracy [Elements of Work Psychology]*. Wydawnictwo UŚ.
- Rubacha, K. (2012). *Metodologia badań nad edukacją [Methodology of Studies on Education]*. Oficyna Wydawnicza Łośgraf.

- Rutkowiak, J. (1995). „Pulsujące kategorie” jako wyznaczniki mapy odmian myślenia o edukacji [‘Pulsatory Categories’ as Determinants of the Map of Variations of Thinking about Education]. In J. Rutkowiak (Ed.), *Odmiany myślenia edukacji [Variations of Thinking in Education]*, (pp. 13-46). Oficyna Wydawnicza Impuls.
- Schugurensky, D. (2014). Social Pedagogy and Critical Theory: A Conversation with Hans Thiersch. *International Journal of Social Pedagogy*, 3(1):2, 4–14. DOI: <https://doi.org/10.14324/111.444.ijsp.2014.v3.1.002>
- Silverman D. (2012). *Interpretacja danych jakościowych [Interpreting Qualitative Data]* (M. Głowacka-Grajper & J. Ostrowska, Trans.). Wydawnictwo Naukowe PWN. (Original work published in 2001).
- Steele, B.J. (2008). *Ontological Security in International Relations. Self-Identity and the IR State*, Routledge.
- Sulima, R. (2003). Znikająca codzienność [The Disappearing Everyday Life]. In R. Sulima (Ed.), *Życie codzienne Polaków na przełomie XX i XXI wieku [Everyday Life of Poles in the late 20th and Early 21st Centuries]*. Oficyna Wydawnicza Stopka.
- Szczepaniak, K. (2012). Zastosowanie analizy treści w badaniach artykułów prasowych – refleksje metodologiczne. [Application of Content Analysis in the Study of Press Articles – Methodological Reflections]. *Acta Universitatis Lodzianis. Folia Sociologica*, 42, 83-112.
- Sztompka, P. & Bogunia-Borawska, M. (2008). *Socjologia codzienności [Sociology of Everyday Life]*. Wydawnictwo Znak.
- Tempczyk-Nagórka, Ź., Czarnecka, M., Jastrzębska, J., & Paluch, M. (2022). Znaczenie poradnictwa psychologiczno - pedagogicznego w przeciwdziałaniu konsekwencjom pandemii COVID- 19 [The Importance of Psychological and Educational Counselling in Countering the Consequences of the COVID-19 Pandemic]. In K. Kuracki, & Ź. Tempczyk-Nagórka (Eds.), *Wsparcie psychologiczno-pedagogiczne w polskiej szkole w sytuacji pandemii i post pandemii. Od wsparcia online po zmiany offline [Psychological and Pedagogical Support in Polish Schools in a Pandemic and Post-Pandemic Situation. From Online Support to Offline Changes]*( pp. 100-119). Wydawnictwo Adam Marszałek.
- Thiersch, H. (2000). *Lebensweltorientierte Sozialarbeit [Lifeworld-orientated social work]*. Weinheim.

- Weiner, A. (2021). *Szkolna (nie)codzienność – doświadczenia dyrektorów szkół artystycznych z okresu pandemii COVID-19 [School (Non-)Everyday Life – Experiences of Art School Directors form the Period of the COVID-19 Pandemic]*. Wydawnictwo. Naukowe AWSB.
- Weiner, A. (in press). Time - space – relationships – an art school student in the face of the pandemic educational experiment. *Studia z Teorii Wychowania*.
- Wiktorowicz, J., Grzelak, M.M., & Grzeszkiewicz-Radulska, K. (2020). *Analiza statystyczna z IBM SPSS Statistics [Statistical Analysis with IBM SPSS Statistics]*. Wydawnictwo Uniwersytetu Łódzkiego.
- Wojciszke, B. (2010). *Sprawczość i wspólnotowość. podstawowe wymiary spostrzeżenia społecznego [Agency and Community. The Fundamental Dimensions of Social Perception]*, GWP.
- Yu, Ch. (2020, July 2). *The Pre-pandemic Universe Was the Fiction*. The Atlantic. <https://www.theatlantic.com/culture/archive/2020/04/charlesyu-science-fiction-reality-life-pandemic/609985/>
- Zybertowicz, K. & Zybertowicz, A. (2017). Okiełznać zmianę. Bezpieczeństwo ontologiczne, rozwój technologiczny a kryzys Zachodu [To Harness Change. Ontological Security, Technological Development and Crisis of the West]. *Filo-Sofija*, 17(36), 521-538. <http://www.filo-sofija.pl/index.php/czasopismo/article/view/1095>
- Zysk, T. (1990). Orientacja prorozwojowa [Development Orientation]. In J. Reykowski, K. Skarżyńska, & M. Ziółkowski (Eds.), *Orientacje społeczne jako element mentalności [Social Orientations as an Element of Mentality]* (pp.183-205). Wydawnictwo Nakom.





**Agata Cudowska**

<https://orcid.org/0000-0001-5035-2985>

University of Białystok, Poland

[a.cudowska@uwb.edu.pl](mailto:a.cudowska@uwb.edu.pl)

## School in the Cultural Discourse of Real Virtuality

(pp. 223–242)

Suggested citation: Cudowska, A. (2023). School in the Cultural Discourse of Real Virtuality. *Multidisciplinary Journal of School Education*, 12(2(24)), 223–242. <https://doi.org/10.35765/mjse.2023.1224.11>

### Abstract

**Objectives of the research:** The purpose of the theoretical research is to understand the importance of school in the culture of real virtuality and to point out the challenges that this phenomenon poses to pedagogy, especially school pedagogy. The research question is as follows: Does understanding the nature of the relationship between contemporary media and the partners of school dialogue help us better understand the changing educational reality which relies heavily on modern technologies and enable more accurate planning of pedagogical interactions?

**Research methods:** The study used the desk research method, which involves compiling, analyzing and processing data from existing sources, and then formulating conclusions based on them regarding the problem under study. A meta-analysis of the concepts and categories comprising the title research problem was performed using interdisciplinary sources and selected international reports.

**Brief description of the context of the issue:** The article presents a discourse analysis of the place of school in the culture of virtual reality (VR). The basic features of this culture are described within the paradigm of informationism, in which modern digital technology enables the integration of all modes of communication. Attention is paid to the interactive nature of hypermedia and its specific logic of flow beyond time and historical context. The role

of the recipient of the message in the communication chain is highlighted as the one who ultimately gives it meaning in accordance with their own perception and experience of reality. The dialogical nature of communication in virtual space and polyphony leading to the creation of hypertexts that combine multiple narratives is emphasized.

**Research findings:** The results show the importance of the links between the school's implementation of basic educational and teaching functions and the tools offered by modern digital technologies. The special role of the teacher in the process of preparing students to discuss media messages and discover their polemical nature is revealed.

**Conclusions and/or recommendations:** The analysis made it possible to formulate the tasks facing contemporary schools in terms of preparing young people to consciously and actively engage in the multimedia system of communication according to its logic, language and methods of encoding meanings. The importance of a dialogical, open and creative attitude of the teacher in the process of forming empowered participants of communication in the culture of real virtuality is emphasized.

**Keywords:** virtual reality, interactive communication, school, student, teacher

## Introduction

The purpose of the article is to present the issue of the importance of school in the culture of real virtuality and to identify the challenges that this phenomenon poses to pedagogy, and school pedagogy in particular. The quest to understand the complexity of the functioning of the school in the interactive space of modern media dominated by the discourse of modern technology requires presenting the paradigm of informationism and the specifics of communication in the virtual space of flows. The role of the teacher in the hypermedia space is used to explain the school's place in the culture of real virtuality. Understanding the nature of the relationship between contemporary media and the partners of school dialogue helps us better understand the changing educational reality that relies on modern technologies and enables more accurate



planning of educational interactions. The study used the desk research method, which involves compiling, analyzing and processing data and information from existing sources, and then formulating conclusions based on them about the problem under study. A meta-analysis of the concepts and categories comprising the title research problem was performed using interdisciplinary sources and selected international reports. The analysis of the phenomenon of a school seeking its place in the narrative of real virtuality is of particular importance for the pedagogical understanding of the challenges facing education. Despite the enormous impact of technology on the everyday life of partners in educational dialogue, or perhaps because of it, the need to shape the meeting space at school, to develop a dialogical attitude and creative development was highlighted.

The role and place of education in the individualistic culture of real virtuality, which creates dominant global narratives nowadays, is fraught with ambivalence. Today, the school is dependent on many phenomena and processes that painfully affect it, although it neither causes nor influences them. Being torn between (often contradictory) societal expectations, the need to preserve traditions, develop a sense of national identity in students, while at the same time preparing them for life in a global information society in an unpredictable future, it must additionally cope with new problems caused by the pandemic and the war in Ukraine. School everyday life, which is always full of direct social interactions rooted in the axiological intersubjectivity of the participants, becomes even more complicated today, especially in the sphere of unintentional educational measures. Experiencing and reacting to the difficult political, economic and social situation in the world, combined with the personal idiosyncrasies of participants in educational dialogue, leads to a number of new social problems. Online communication, used on an unprecedented scale during the pandemic, the development of social networks, virtual communities and an interactive society, as well as the emergence of a symbolic multimedia environment, leading to the diversification of the mass audience of new media, make up the culture of real virtuality, in which the modern school must find itself.

### The paradigm of informationism and virtual narrative

Modern information technology, which integrates all modes of communication, both typographic and multisensory, plays a decisive role in the culture of real virtuality. This way of organizing the communication system is based on the production and consumption of signs, which leads to levelling the differences between reality and its symbolic representation (Castells, 2010). Educational messages revolve in the space of a vast, timeless, ahistorical hypertext alongside political persuasion, economic rhetoric, information on the world of arts, and various types of entertainment, because multimedia encompasses the majority of diverse cultural expressions without dividing them into good and bad, or popular and high culture. The term “virtuality” originates from the Latin *virtualis*, or “efficacious” and *virtus*, or “potency”, “virtue”. “Virtual” is understood to mean “almost complete”, “almost but not exactly or in every way”, and “created by computer technology and appearing to exist but not existing in the physical world.” It is used to describe something that can be done or seen with the use of computers or the Internet instead of going to a physical place or meeting people in person, etc. (*Cambridge Dictionary*, 2022). Thus, it means something that could exist; it uniquely combines potentiality with reality, i.e. with what really exists. This creates a special concept, a kind of antonym, combining two opposite qualities.

Virtual reality creates a unique communication system in which all messages have been absorbed by the medium, creating a multifaceted semantic context made up of a random mix of different meanings (Castells, 2010). Not all people cope well in this reality. Some have the knowledge and skills needed to make choices about the channel of communication, select and critically interpret messages, and consciously interact with the media. Others, however, lack the necessary competences and become absorbed by the media. This puts before education the extremely important task of preparing people of all ages to establish subjective relationships with hypermedia and cope with a virtual space that brings as many opportunities as threats to human development and social functioning. Pioneers of virtual reality have long emphasized its creative and philosophical

potential. Jaron Lanier, the father of VR technology, argued that the greatest value of virtual reality is that it has a cathartic effect. We become accustomed to various phenomena in our lives and in the world; we take them for granted. If we accustom our nervous system to the virtual world and then return to reality, we will have a chance to experience a rebirth in the microcosm. The most ordinary surface, a piece of wood or dust on the road then shines like a diamond (Lanier, 2018). How we are perceived in the virtual world due to the characteristics of our avatars (e.g. height, age, and appearance) can change how we think about ourselves, our decisions and our social relationships. The social functions of virtual reality seem to be the main reason why the power of immersive technologies will continue to grow (Brzezińska, 2020).

Hypermedia makes it possible for texts to be freely used and combined with various kinds of code, as well as created, processed and shared online (Gajda, 2003). Unlike mass media, in which information is centrally distributed, hypermedia is interactive, has multiple sources, with individuals acting as senders and receivers of information at any time. These individuals also create their own world of values and function within a certain axiological space of socially acceptable norms and standards, which they often violate, offering instead simulacra (copies without the original) and a game of appearances and evasions. Fewer and fewer people today come in contact with printed materials, and more and more people around the world are watching the same commercials and soap operas. In addition, media messages are difficult to reinterpret, as they elicit strong affective reactions in the audience. According to 2020 data, over half of the virtual reality market is based on games, 38% is used in the medical industry, 28% in education, and 24% in other areas of professional activity. At the same time, 91% of companies and organizations are using or planning to use virtual reality in their daily operations, such as employee training (PerkinsCoie, 2020). Virtual reality today offers many opportunities and is increasingly entering the mainstream of modern societies: it is no longer just a technological curiosity or entertainment, as it finds its place in various areas of human work, e.g. in science, education, medicine, etc.

People of all ages, with different levels of education and technological experience, respond to the media in similar ways, regardless of personal and cultural differences (Berger and Luckman, 2010). Those who do not interact with the media consciously, but are absorbed by it, often equate virtual reality with real life. This applies not only to children or adolescents, but also to students, business people, and scientists who use computers for work. Human interaction with television and hypermedia is as natural and social as in real life. People project personality traits that match their own onto the computer. The media influence people's memory, change their attitudes to the world around them and their perception of what is natural, and often activate stereotypes, such as those related to gender or race. Frequently, people do not even realize how much they depend on the media (Reeves & Nass, 1996). Despite the passage of time and the emergence of many new technological developments, the relationship between people and the media described here is still true and will remain so regardless of the development of the media and artificial intelligence (AI).

With the development of hypermedia, our awareness of the dangers of (increasingly autonomous) functioning in virtual reality is growing. The goal of the media is to make us believe that they are, in fact, our world, our only reality. They seem to show less of the external world and more of themselves. At many stages of the communication chain, there is some manipulation of the content and form of the message, so as to make the viewer feel that he or she can become part of the media and have an impact on them. It is less and less important whether the media show the truth; instead, they are becoming the truth and value simply because they exist, not because of what they offer people. Mass media not only offer – or even push – a particular ideology, but have become an ideology themselves, with their own value system (Eco, 1998). They radically transform the fundamental dimensions of human life, i.e., space and time. In the new communication system, the narrative takes place beyond the cultural, historical and geographic context of meaning. It creates new functional networks, producing the space for placeless and timeless flows that can combine the past, present and future in a single message. In this way, the space of flows and timeless time are the foundations of a new culture (Castells, 2010).

---

## **Communication in the virtual space of flows**

However, the new location of dialogical relations in the mediated space of virtual reality does not invalidate the basic meanings present in each message. The context of communication is determined by four basic paradigms: 1) clarity of expression: we must agree on the linguistic standard of expression; 2) truthfulness of the message: we must agree to accept the content as true; 3) attitude of credibility: we must accept the intentions expressed; 4) adequacy of the standards adopted: we must agree on the standards presented (Habermas, 1983). These assumptions create a dialogical space, allow us to agree on meanings and enable mutual understanding in the communication process. The interactive character of hypermedia results in a variety of communication channels and makes each participant in the virtual space both a sender and a receiver, which, obviously, complicates and obscures the process of communication. However, each recipient of a message always has some freedom, manifested in the right to interpret it freely. Each interpretation may differ from the others since it is made from someone's own axiological and cultural vantage point, and may deviate from what the sender of the message assumed. Recipients give different meanings to messages depending on the code they use, and thus, being at the end of the communication chain, have real power over the message in the media (Eco, 1998).

Highlighting the role of the recipient in the age of communication as part of the real culture of virtuality culture is extremely important for education, as it offers hope for increasing the agency of the individual. Irrespective of the source and channel of the message, each person can fill it with personal meaning, endow it with a purpose and interpret the messages in accordance with their own intersubjective axiological space. In the processes of lifelong learning and education, people should acquire knowledge on the importance of hypermedia in life and develop the skills of challenging media messages. Education should prepare individuals to interpret the content of messages according to their own phenomenological experience and understand them in a creative way,

not only critically, but also with a view to building new qualities in the process of self-actualization. The processes of education and upbringing in the culture of real virtuality must include sensitizing people to the importance of media in their daily lives. It is crucial for them to learn and understand the essence of the relationship they may have with the media and the intricacies of the media context of reality. This results in an awareness of the role that each individual plays in the complex communication chain, both as an addressee and sender of media messages. Wherever there is a sender and receiver of a message, there are two perspectives of the world, and true understanding requires creative contribution to what is sent and what is received (Andrukowicz, 2001).

Multimedia education makes it possible to engage all communication channels, and thus affects almost all human senses. This makes the teaching process more effective, as it increases the effectiveness of teaching, accelerates the pace of learning, saves time and enables more information to be assimilated (Bednarek, 2006). However, what constitutes an opportunity for education can also increase our susceptibility to various types of manipulation, both marketing and political.

### **Digital technology in education**

Pedagogical analyses of the importance of media in education emphasize a) the processes of social change resulting from the impact of media on people and society, b) the dangers of new media shaping public opinion; c) education using media with particular emphasis on remote education and creative and collaborative activities; and d) educational methodology that highlights teachers' skills in using new media (Siemieńiecki, 2021). The discussion about the need for media education has been going on for many years around the world, as well as in Poland. It has already gone beyond the early stage of fascination with new technologies, which were perceived as a panacea for various shortcomings in education, and it no longer perceives new media mainly as a source of threat (Federowicz, Ratajski, 2015).

Information and communications technologies (ICT) have been used in education for 100 years, beginning with the popularization of radio in the 1920s. However, it is the use of digital technology over the last 40 years that has the greatest potential to transform education. An education technology industry has emerged, which in turn has focused on the development and distribution of educational content, learning management systems, language applications, augmented and virtual reality, personalized learning and testing. Breakthroughs in artificial intelligence (AI) methods have increased the effectiveness of educational technology tools, leading to speculation that technology may even replace human interaction in education. Over the last 20 years, students, teachers and institutions have made extensive use of digital technology tools. The 2018 Program for International Student Assessment (PISA) survey shows that 65% of 15-year-old students in OECD countries attended schools whose principals agreed that teachers had the technical and pedagogical skills to integrate digital devices into teaching, and 54% attended schools where an effective online learning support platform was available. By 2022, about 50% of junior high schools worldwide had access to the Internet for pedagogical purposes (UNESCO, 2023).

Artificial intelligence, as one of the most important trends shaping contemporary reality, creates new requirements for preparing people for the increasingly rapid changes in the world of everyday life and taking intensive efforts in the field of education. In the process of education, it is necessary to make people aware of the opportunities and threats posed by the development of artificial intelligence. Data processing, machine learning and the networking of devices and people require new competencies that will enable individuals and society to respond efficiently and effectively to the challenges of artificial intelligence. This is especially true since most artificial intelligence solutions are being developed for the commercial benefit of those who use them. Artificial intelligence should help optimize pricing methods, routing in logistics networks, energy management, etc. (Fazlagić, 2022). Its application in the education system, in learning processes that require creative effort and proficiency of learners, conscious investigation and search for solutions,

internalization of values and deep ethical insight into the world of ideas, may bring negative consequences for the development of individuals and society in the future. Therefore, it is important to properly use artificial intelligence as a tool supporting the learning process, assisting teachers in carrying out administrative tasks, and as an instrument in managing the education system at various levels.

Digital technology has changed education, but not transformed it. Digital technology tools have been widely adopted by students, teachers and institutions. The number of students taking massive open online courses in 2021 reached at least 220 million. The educational app Duolingo had 20 million daily active Internet users in 2023, and Wikipedia had 244 million page views per day in 2021. Globally, the percentage of Internet users increased from 16% in 2005 to 66% in 2022. The undoubted advantage of using digital technology in education is that it limits the time that teachers and students spend on less important tasks, time that could be used for other, more educationally relevant activities. However, digital technology is evolving too quickly to allow for a meaningful assessment of its importance in education.

Findings that apply in some contexts may not always prove replicable in others. The use of digital technology has brought many changes to education and learning. The set of core skills that young people should learn at school has expanded to include a wide range of new skills that will help them navigate the digital world. Higher education has the highest rate of digital technology adoption, with online management platforms replacing some campuses. The use of data analytics in education management has increased. Technology has made a wide range of informal learning opportunities available. However, in many parts of the world, education systems remain relatively intact. Even in some of the most technologically advanced countries, computers and devices are not used in schools on a massive scale. Digital technology is lowering the cost of access to education for some disadvantaged groups, but access to the internet and devices remains highly unequal. Digital technology encourages engagement and facilitates collaboration and networking, but personalized approaches to education limit students'



opportunities for real-world learning and negatively impact their well-being and privacy (UNESCO, 2023).

New technologies have become an inseparable element of the reality of contemporary youth, who spend time, get news, seek entertainment, contact their loved ones and make new friends in cyberspace. New technologies serve them as a means of exchanging information due to the mobility and speed of data transfer. However, there is still a lack of effective education about the risks associated with new technologies. The scale of the threat is vast and is constantly growing. In the opinion of students, the most common method of communication among young people is social networking sites, indicated by 100% of respondents, followed by phones and instant messengers such as Facebook, Messenger, Gadu-Gadu, Skype, etc. mentioned by 95% of respondents. Students use instant messaging at every possible moment. Research has shown that young people are mostly unaware of the dangers of using communication technologies. Nearly half of those surveyed are unaware of the risks, and those who can name them most often point to fraud, theft of private photos and extortion. However, young people have greater knowledge about the negative aspects of building relationships through communication technologies (Jagodzińska, Mucha, 2019).

### **The role of the teacher in the space of hypermedia**

The ability to challenge media messages is a basic emancipatory competence that should be developed at school. It implies not only a critical attitude and deconstruction of the content of media messages, with special consideration of who uses them and why they were sent, but also the reinterpretation and creative construction of new meanings and senses, leading to the enrichment of one's own experience. One of the most important aspects of the change occurring in education in an interactive environment is the stress on dialogical forms of co-creating the space of learning, teaching and education, the transmission and assimilation of patterns, norms and values of the culture of real virtuality. In addition,

the circle of partners to the dialog is widening. A third “partner” appears between the teacher and the student: the medium, universal, diverse, so flexible that it absorbs the entirety of human experience in a single multimedia text. This fits in with the perception of education as a lifelong process of supporting a person in their development, allowing them to realize their creative potential so as to better understand the world they live in and participate in creating it for the sake of the “common good”.

“The contemporary school has not kept up with the rapid development of modern information technologies. In this area it has become an unattractive place for everyone: students, teachers and parents. Current solutions are proving ineffective, while the pace of media development is so fast that the school, no matter how it tries, falls behind” (Pęczkowski, 2015, p. 45). Today, after two years of remote learning during the pandemic, we know that the use of hypermedia in education does not solve many social problems but actually creates new ones. Advanced technologies, modern media and related devices are not equally accessible to everyone. This deepens the already existing social inequalities and contributes to new divisions into those who “interact” with new media and those who become “absorbed” by them. Therefore, education in the culture of real virtuality should allow as many people as possible to become those interacting, that is, to consciously, purposefully engage in polysemic cultural discourse and creatively participate in the network of interactive electronic communication within selected communities.

This requires teachers to engage in professional and non-professional tasks oriented at providing knowledge about the new media and developing media skills and communication competencies, including the ability to question media messages and to display an active, creative attitude to the process of constructing the world of everyday life. First, however, teachers themselves must be trained to do this, since the effectiveness of their educational activities depends on their professional attitude, their continuous learning along with their professional activity, and their reflective attitude toward their own pedagogical practice. This places special demands on teacher training institutions, universities, colleges and professional development centers.

Unfortunately, the practice of academic pedagogical training of future teachers does not inspire much optimism about the likelihood of the new generation of young teachers making a significant educational change. Action research carried out using the group discussion technique between November 2021 and January 2022 among sixty fourth-year students of preschool and early school education at the faculty of education of one university showed that when discussing how to improve education, students mostly highlight the need to equip schools with computers and to be able to use the Internet during classes. They also point to friendly relationships between students and teachers, but make no mention of issues connected with preparing students to consciously interact with the media, debate interactive messages or the importance of the role of the sender and receiver of messages. As if equipping a school with more computers with Internet access automatically makes it a place of modern, higher quality education. This is the case although as part of their university education, students take many courses designed to sensitize them to the importance of critical analysis of media discourse, and, in addition, they also participate in this discourse, alternately playing the role of sender and receiver of messages in the interactive communication space. It appears that the knowledge gained from scientific literature, learning about various theories and the findings of many studies, not to mention the meta-knowledge of their own learning process, does not have an influence on the practice of students' daily lives and the perception of their professional role.

Surveys of early childhood education students have shown the remarkable persistence of the traditional image of school based on the passive role of the student reacting to external stimuli, which refers the behaviorist model. Thus, prospective teachers, young people about to graduate from university, who should bring to schools refreshing ideas about new theories and the zeal for transforming the existing educational practice, are interested only in maintaining the status quo. Everyday life and common-sense knowledge are at the center of students' know-how, although scientific language and colloquial language belong to completely separate systems of knowledge systems. Students are unable

to incorporate scientific facts into their cognitive resources, they do not use scientific language to describe pedagogical practice, and after several years of university education they continue to use common-sense constructs to interpret educational reality (Zbróg, 2019).

One of the important consequences of including most forms of cultural expression into an integrated communication system based on electronic production, distribution and exchange of signals is the weakening of the symbolic power of traditional senders, i.e., teachers, so acutely felt in school today. Teachers experience a peculiar ambiguity: on the one hand, they are obliged to transmit to students historically rooted values, patterns, authorities and norms of the national cultural heritage, which is essential for the preservation of the nation's identity; on the other hand, they should introduce students to the space of interactive virtual culture, teach them the ability to navigate freely and consciously through the vast, diverse, ahistorical space of meanings and symbols that make up the great hypertext of global culture. Another problem results from the difference in generational experience, as children who are now beginning their school careers were born and raised in a cultural space of "technopoly" (Postman, 1992), permeated with the logic and narrative of interactive media. The environment of digital socialization is natural to them: they are extremely skillful in using hypermedia and quickly learn to use new technological gadgets, but they are by no means able to consciously interact with them. On the contrary, they are often absorbed by the media, lured by yet another digital gadget. However, such technological proficiency is not enough to become an empowered, knowledgeable and proficient partner to communication in the network of interactive media. For teachers, especially the more experienced ones, raised in a different cultural context created by mass media, interactive virtual reality will always be something unnatural, secondary and perhaps even odd.

The adoption of digital technology has undoubtedly brought many changes to education and learning, but digital technology should not replace, but complement face-to-face interaction with teachers. The use of digital technology varies depending on the community and its socioeconomic status, the willingness and training of teachers, the level

of education and the income of the country. Except in the most technologically advanced countries, computers and devices are not used in classrooms on a large scale. Moreover, the evidence on their impact is inconsistent. The short- and long-term costs of using digital technology appear to be significantly underestimated. The most disadvantaged are usually denied the opportunity to benefit from them. The focus should be on learning outcomes, not digital inputs. Technology has made a wide range of informal learning opportunities available. However, it is unclear to what extent technology has changed education. The changes resulting from the use of digital technology are gradual, uneven and greater in some contexts than in others (UNESCO, 2023).

Meanwhile, the enormous popularity of social media among increasingly young children and adolescents raises many opportunities for educational and pro-developmental interactions, although it also carries serious risks. The attractiveness of this type of communication obliges teachers and educators to use it in formal and informal education. Remote work and learning, meetings with friends via video instant messaging, virtual tours of museums, webinars and the possibility of taking care of many things remotely in offices and various institutions are forcing a wider inclusion of social media into the daily processes of education at school. Although distance learning during the pandemic exposed numerous inadequacies and problems associated with the functioning of schools in the real virtual space, it also showed trends and prospects of development of modern societies. More and more areas of human activity are moving into the realm of virtual and augmented reality (AR), that is, enriched with new elements that are “overlaid” in real time on the real world with the help of a computer. Properly used, social media can be a valuable tool for education and communication between teachers, students and their parents, a place for the exchange of experiences between teachers, as well as a source of personal development for all partners of school dialogue (Borkowska, Witkowska, 2017).

Two different worlds of cultural socialization meet at school, and the possibility of their mutual understanding and mutual learning depends on many complex factors and processes. Undoubtedly, of key importance

here is that the teacher adopts a dialog-oriented, open-minded and creative attitude to support students at all stages of their educational journey in the process of getting to know themselves and the world, learning to critically approach social phenomena, to question cultural messages, and consciously interact with the media. The significance of this task is also evidenced by the events of recent months, the tragedy of people experiencing the atrocities of war, which should never have happened in the middle of Europe in the 21st century. Western societies have placed great hopes in education for peace, perceiving opportunities to maintain world peace in the theory and practice of this approach. Again, political interests, lust for power and hate speech have made a cruel mockery of the humanistic ideals of making the world more ethical and safer through education (Cudowska, 2003; Cudowska, Kunikowski, 2007). Therefore, it is all the more imperative today to make greater educational effort to achieve a common, non-egoistic good in a social space immersed in a culture of real virtuality.

## Conclusion

Education and technological innovation are inextricably linked. New ideas lead to digital transformation, which in turn helps us improve education systems. Education and technology together can lead to holistic quality improvement at the system level and to greater equity. The conscious and purposeful use of technology to achieve educational goals is becoming a key skill for 21st century education leaders. As a basic educational institution, schools should play a decisive part in preparing young people to function in a multimedia, multilateral and highly diverse communication system.

Conscious and agential participation in this system requires people to adapt to its logic, language, ways of encoding and decoding. Is the departure from traditional writing instruction to the use of computers for this purpose at the earliest stage of schooling a sign of such adaptation? In several U.S. states, learning to write by hand is already optional and

can be replaced by learning to type fast. Similar regulations are being introduced in Finland. This may be justified by the fact that children are entrenched in the digital culture of real virtuality, which is a natural environment for them, but it also involves specific developmental risks, because when typing on a keyboard, the human brain is much less active than when writing by hand. Computers prevent creative thinking, interpersonal interaction or the ability to concentrate, as confirmed by a growing number of studies.

The material basis of the culture of real virtuality in which we live is the space of flows and timeless time. However, the school – rooted in the meritocratic educational doctrine of individualistic Western culture – still functions in accordance with the logic of place and time, beyond the space of flows, in which information and the global network count the most. Changing the logic of school functioning is extremely difficult, as it requires changing the social mentality and educational policy. Because of decades of neglect, the expenditure for education in Poland should be increased substantially, and for many years to come. It is necessary to replace the economically-driven, free-market rhetoric with humanistically and axiologically motivated activities in education, thus treating it as a value in itself. Of course, these are not the only conditions needed to bring Polish schools into the space of flows of the culture of real virtuality, but they are certainly fundamental and of prime importance, vital for further changes, such as proper pedagogical preparation of teachers, adequate for the new conditions of the information society. According to experts, the optimal model of school corresponding to the new type of culture and society is the school as a learning organization and a self-organizing system, improving in daily life through the creative work of all actors of the educational scene (CERI, 2001). And yet, there are many indications that previous bureaucratic and market tendencies, as well as political entanglement, are becoming even stronger in education. Therefore, it is necessary to build a new school culture that will empower all partners in the educational dialogue, allow for a real meeting of the student and the teacher, their mutual learning and support on the way to achieving personal freedom and developing their own potential for the common good.

While technology promises easier access to education, the reality is that digital divides still exist. In poorer countries and among some of the world's most marginalized groups, its use in education remains limited. During the Covid-19 pandemic, nearly a third of students did not have effective access to distance learning. Only 40% of elementary schools worldwide currently have access to the Internet. Even if connectivity were widespread, from a pedagogical point of view, it is still necessary to consider the real value of digital technology in terms of effective learning, especially given the risks associated with it. It is also paradoxical that despite the desire to make education a global common good, the role of commercial and private interests in education is constantly growing, with all the uncertainties that this entails, and so far only one in seven countries legally guarantees the privacy of educational data. The welfare of students must always take precedence over all other considerations, especially commercial ones, and technology must be seen as a means, not an end. It is necessary to ensure the fair and safe development of educational technology, which requires an appropriate normative framework and the establishment of standards for privacy, data access, non-discrimination and screen time. There is a need for public action and international cooperation, to promote access to communications and open educational resources, and to train teachers in these new and constantly changing issues (UNESCO, 2023).

**Funding:** This project was supported by the University of Białystok.



## References

- Andrukowicz, W. (2001). *Edukacja integralna* [Integral education]. Oficyna Wydawnicza „Impuls”.
- Bednarek, J. (2006). *Multimedia w kształceniu* [Multimedia in education]. Wydawnictwo Naukowe PWN.
- Berger, P.L., Luckmann, T. (2010). *Spółeczne tworzenie rzeczywistości* [The social construction of reality]. Transl. J. Niżnik. Państwowy Instytut Wydawniczy.
- Borkowska, A., Witkowska, M. (2017). *Media społecznościowe w szkole* [Social media at school]. NASK – Państwowy Instytut Badawczy.
- Brzezińska, A. (2020). *Od mediów do rzeczywistości. Jakie ryzyka i szanse niesie ze sobą popularyzacja VR?* [From media to reality: What risks and opportunities does the popularization of VR bring?]. SpołTech Project Report.
- Castells, M. (2010). *The rise of the network society*. Blackwell Publishers.
- Centre for Educational Research and Innovation. (2001). *What schools for the future?* OECD, <https://doi.org/10.1787/9789264195004-en>
- Cudowska, A. (Ed.). (2003). *Czynić świat bardziej etycznym* [Making the world more ethical]. Trans Humana.
- Cudowska, A., Kunikowski, J. (Eds.). (2007). *Czynić świat bardziej bezpiecznym* [Making the world a safer place]. Podlaska Academy Publishing House.
- Eco U. (1998). *Semiologia życia codziennego* (Semiologia Quotidiana). Transl. J. Ugniewska and P. Salwa. „Czytelnik”.
- Fazlagić, J. (2022). Rozwój sztucznej inteligencji jako wyzwanie dla systemu edukacji [The development of artificial intelligence as a challenge for the education system]. In J. Fazlagić (Ed.), *Sztuczna inteligencja (AI) jako megatrend kształtujący edukację. Jak przygotowywać się na szanse i wyzwania społeczno-gospodarcze związane ze sztuczną inteligencją?* [Artificial intelligence (AI) as a megatrend shaping education: How to prepare for socio-economic opportunities and challenges related to artificial intelligence?], (pp. 25–37). Instytut Badań Edukacyjnych.
- Federowicz, M., Ratajski, S. red. (2015). *O potrzebie edukacji medialnej w Polsce* [On the need for media education in Poland]. Polish Committee for UNESCO, National Broadcasting Council.
- Fisher, M. (2023). *W trybach chaosu. Jak media społecznościowe przeprogramowały nasze umysły i nasz świat* [The chaos machine: The inside story of

how social media rewired our minds and our world]. Transl. M. Borowski. Szczeliny.

Gajda, J. (2003). *Media w edukacji* [Media in education]. Oficyna Wydawnicza „Impuls”.

Habermas, J. (1983). *Teoria i praktyka. Wybór pism* [Theory and practice: Selected writings]. Transl. M. Łukasiewicz, Z. Krasnodębski. Państwowy Instytut Wydawniczy.

Jagodzińska, M., Mucha, M. (2019). Wpływ nowych technologii komunikacyjnych na relacje rówieśnicze i komunikację międzyludzką [The impact of new communication technologies on peer relationships and interpersonal communication]. In V. Tanaś, W. Welsko (Eds.), *Mass media we współczesnym świecie* [Mass media in the modern world], (pp. 31–42). Academic Publishing House of the College of Business and Health Sciences.

Lanier, J. (2018). *The dawn of the new everything a journey through virtual reality*. Penguin Random House.

Pęczkowski, R. (2015). Media w szkole – i co dalej? [Media at school – and what next?]. *Edukacja-Technika-Informatyka*, 3(13), 42–46.

Postman, N. (1992). *Technopoly: the surrender of culture to technology*. Alfred A. Knopf.

Reeves, B., Nass, C. (1996). *The media equation: How people treat computers, television, and new media like real people and places*. Cambridge University Press. *Virtual* (2022, May 22). *Cambridge Dictionary*. Cambridge University Press. <https://dictionary.cambridge.org/pl/dictionary/english/virtual>

Siemieniecki, B. (2021). *Pedagogika medialna* [Media pedagogy]. Wydawnictwo Naukowe PWN.

UNESCO (2023). *Global Education Monitoring Report 2023: Technology in education – A tool on whose terms?* Paris, UNESCO.

Zbróg, Z. (2019). *Wiedza pedagogiczna przyszłych nauczycieli w perspektywie teorii reprezentacji społecznych* [Pedagogical knowledge of future teachers in the perspective of social representation theories]. Publishing House of the Academy of Special Education.

DOI: 10.35765/mjse.2023.1224.12

Submitted: 13.01.2023

Accepted: 16.11.2023

Published: 30.12.2023

243

**Alina Dworak**

<https://orcid.org/0000-0002-5909-8896>

University of Silesia in Katowice, Poland

[alina.dworak@us.edu.pl](mailto:alina.dworak@us.edu.pl)

**Agata Rzymelka-Fraćkiewicz**

<https://orcid.org/0000-0002-7173-2407>

University of Silesia in Katowice, Poland

[agata.rzymelka-frackiewicz@us.edu.pl](mailto:agata.rzymelka-frackiewicz@us.edu.pl)

**Teresa Wilk**

<https://orcid.org/0000-0002-7356-6502>

University of Silesia in Katowice, Poland

[teresa.wilk@us.edu.pl](mailto:teresa.wilk@us.edu.pl)

## Does Today's School/Education Respond to Society's Needs and Expectations of Reality and the Future?

(pp. 243–256)

Suggested citation: Dworak, A., Rzymelka-Fraćkiewicz, A., & Wilk, T. (2023). Does Today's School/Education Respond to Society's Needs and Expectations of Reality and the Future? *Multidisciplinary Journal of School Education*, 12(2(24)), 243–256. <https://doi.org/10.35765/mjse.2023.1224.12>

### Abstract

**Objectives of the research:** The aim of our study was to show that education, although rooted in the past and drawing heavily from the present, especially in modern times, is focused on the upcoming future, on preparing for life in a future marked by rapid changes in the development of civilisation and the hopes, threats and challenges associated with it.

**Research methods:** A critical analysis of scientific/research texts was carried out.

**A short description of the context of the issue:** The everyday reality of our lives increasingly proves that there is a great need for the harmonious and comprehensive development of the personality of children and young

people. Living in a world of constant re-evaluation and clearly articulated tendencies close to ethical relativism, in a world of ecological threats, chaos in the field of beauty criteria and rapidly increasing diseases of civilisation at the end of the twentieth century (no less so two decades later), people must have a clear and distinct perspective on what they should be aiming at, on which values they should base their lives and how they should live as free, rational and responsible beings (Śnieżyński, 1999, p. 27).

**Research findings:** The modern school becomes a place of creating needs related to the future as well as a place for locating the intentional expectations of young people and their parents in relation to functioning in reality and in the future. School has become an institution that is required to prepare young people well for life/social functioning in an unknown future.

**Conclusions and/or recommendations:** At this point, one should ask whether the institution of a modern school is able to equip a young person with everything necessary to experience success, generally speaking, so that they will not be excluded or marginalised in the global world (Rzymelka-Fraćkiewicz, 2020, pp. 93–108; Rzymelka-Fraćkiewicz & Wilk, 2014, pp. 83–94).

**Keywords:** schooling, education, school, social development, contemporary educational, cultural and health needs

### **“School” – a response to social, political and economic needs**

When analysing individual education systems over the decades, we discover an undoubted dependence. “In each epoch, education was adapted to the needs of shaping a specific ideal of man” (Sawisz, 1989, pp. 80–81), in accordance with the policy and needs of the state, which from the beginning of compulsory education took upon itself the burden of creating and maintaining the education system, while ensuring control over its content. The school system was and still is important from the point of view of the state because it guarantees the upbringing (or, more broadly, socialisation) of children and adolescents in accordance with the needs and adopted assumptions in economic, social or political terms.

In principle, the education system has always been a reflection of the needs of the times, the realities of the time. When examining the history and content of individual educational reforms in various countries, as Anna Sawisz (1989, pp. 18–19) notes in her book, *School and the Social System*, it is easy to see how the school system was always adapted to the current needs of the state. Industry and other branches of the economy require workers who are able to quickly acquire the necessary qualifications. An awareness of such a need makes it necessary for the creators of the school system to respond quickly to new needs.

Urbanisation and industrialisation, associated with the industrial revolution and the beginnings of capitalism, interrupted the “peaceful” course of life: citizens existing without the universal, compulsory institution of schooling. Masses of people were forced to abandon their homes and farms and move to the cities to work in industry. The factory created a need for a large, disciplined workforce and determined a different way of life for which those working in households or a workshops were not prepared. There was a need to form a new type of worker. The factory established a new type of worker, but above all it created the need for a new educational model, for a new social institution: a centrally created and centrally managed universal school for the masses.

Today, the school system must respond to the new challenges of an extremely fast-changing reality. It must mould human beings capable of realising themselves in these times. Within the social contexts outlined above, there is undoubtedly an essential challenge for educational institutions to educate individuals who are active, creative and able to adapt to changing circumstances (Puślecki, 1999, pp. 7–10). The challenge of contemporary people, at a time when democracy and the free market are firmly establishing themselves, is to create a new personality ideal. The task is to create a new model of civic education, a concept of a citizen that would be considered adequate for today's reality (Melosik, 1998, p. 35). Today, education is about preparing children and adolescents – as well as adults – to take an active part in a process of change that often has an undefined direction and that often surprises us (Radziewicz-Winnicki, 1999, p. 22).

Education has almost always been a response to the requirements of new inventions and technologies. Thus, the state responding to innovation sets new educational goals for the education system. Education produces people according to the direction in which a society is heading. It is the schools that prepare people (or at least should do) for the necessary social changes or innovations at crucial moments. It is the schools that engage people in the wider social system, educating the citizens of the state and training the skilled workers of the economy (Sawisz, 1989, pp. 122, 5). The execution of this interest may seem closest to the traditional description of education, centred on knowledge acquisition and transmission, yet the essential difference lies in the functional subordination of knowledge to modern, technological civilisation, writes Lech Witkowski (1991, p. 134). Even the students' diligent mastery or the schools' coercive enforcement of knowledge that does not conform to the industrialising ethos of civilisation can give rise to a sense of inferiority, condemning to spiritual mutilation and developmental retardation and making the school an alien creation, itself developmentally backward (Witkowski, 1991, p. 134). Dynamic changes in one social system require an immediate reaction in another. Contemporary changes in the economic sphere must cause the education system to adapt to liberal conditions (Bielska et al., 2005, pp. 52–65). The education system must keep pace with new technology and techniques so that young people entering adult life can function flexibly in reality without remaining on the periphery of social functioning.

### **The foundations of the “third wave” – the post-industrial era**

According to the well-known concept of the American sociologist and futurologist Alvin Toffler (1974a), we are standing on the threshold of the third wave. Today's reality reveals a crisis of second-wave institutions: from health care and education, through the value system to local government structures. We face the challenge of creating third-wave institutions. According to Toffler, the rapid development of civilisation causes

a legitimate psychological shock in established societies, which consists of complex phenomena that accompany the process of change. These include transience, the short-lived nature of human relationships due to the constant change of residence, contact with other people, things rapidly losing value and the constant reshuffling of organisational frameworks of life, norms of behaviour and ideas. Everything that has so far been permanent and important in understanding one's place in the world is replaced by values of a fleeting, doubtful and unreliable nature. The profound difficulties of adapting are intensified by the onslaught of novelty, unexpected, surprising events, the cause of which is the rapid development of science and its proposed applications.

In the new society, standard mass culture will give way to a diverse means of information exchange. Everyone will be able to transmit and not just receive information. Also, the standard production of identical goods will be replaced by short series of products manufactured on demand. The factory will cease to be the main centre of social life and a model for other institutions, including the school. Thanks to computers, there will be no need to travel to work. It will be possible to work in one's own home at a time convenient for everyone. Long-distance communication will replace transport. The transfer of work to the home will result in a change in the family model and a strengthening of human ties in local communities. The home will take on a whole new meaning, once again becoming a place to live and work, as well as fulfilling educational, medical and social functions, argues Toffler (1974a; cf. Bell, 1976, pp. 43–51).

In the new era of tomorrow, machines will be in charge of execution and people will be in charge of supplying the necessary information and ideas. Therefore, the technology of tomorrow will require people to think critically, be able to find their way in a new environment, make connections and see sense in a constantly changing world. People educated following the rules of the old system – poorly educated, only able to perform routine tasks, obey orders and submit to superiors for little money – will become redundant. Educating the future, according to Alvin Toffler (1974b, pp. 435–468), requires changing the organisational structure of the education system, revolutionising curricula and promoting and

strengthening orientation towards the future. Curricula should include future-orientated subjects, such as logic, philosophy, computer programming, probability theory, aesthetics or the basics of communication. An important postulate is to draw a strict line between teaching facts and teaching skills. The school of the future is to teach not only facts and how to use them, but also to prepare for outdated ideas to be rejected and replaced with new ones. Introducing a diversity of education types will increase one's chances on the labour market. This principle calls for a move away from universal, standardised, identical teaching for a multitude of people to individualised, diverse, specialised education (Toffler, 1974b, pp. 435–468).

Observing the performance of the current school, Alvin Toffler is convinced that “we are still stuck in a ‘factory’”. If we are still teaching children as if we want to adapt them to factory work – giving them repetitive tasks and ordering them to do as others do – nothing good will happen. We are operating on the basis of the programmes we created in the 19th century, when business wanted to industrialise people from a young age. Schools were then created as copies of factories (Żakowski, 2009).

Under capitalism, the school was a response to the need to create and reproduce a new workforce, where the education system, as a set of specialised institutions instilling certain cultural elements in individuals, fulfilled two basic functions: the production and recreation of the institutional conditions of their own existence and the survival and reproduction of so-called cultural self-will (Bonsunowska-Kuśka & Radziejewicz-Winnicki, 1993, pp. 33–35). According to Pierre Bourdieu's theory, the school system, having been created by the ruling classes, imposes on the rest of society by means of “symbolic violence” the body of cultural patterns in force, the definition of the complete, educated man (Sawisz, 1978, pp. 242–244). Peter Berger and Thomas Luckmann (1991) ask where decisions are made about the form of the social order and who decides on the transfer of the valid version of reality (Berger & Luckmann, 1991; Morrow & Torres, 1995, pp. 19–38). These questions are relevant to the transformations in the education system dictated by the pace of the transformation of social reality. It is worth considering whether the current



education system is beneficial to individuals' acquisition of the competences of modern civilisations: a sense of agency, responsibility, creativity and autonomous action. Who is responsible for the curricula and are they aware of what competences the post-industrial reality requires? Who really decides on the applicable definition of reality in the education system?

Undoubtedly, today's reality calls for us to be increasingly aware of and committed to the purposeful construction of our future on the basis of social, educational, cultural (Wilk, 2022) or health development (Dworak, 2020). Any attempt by young people to reproduce the life patterns of their grandparents or even their parents' generation should be regarded as insufficient. The unpredictability of tomorrow makes it impossible to apply the solutions that have so far been known and common (Bauman, 2000). Not only should new universals be found, but they should also be constantly searched for to be relevant to the constantly changing reality.

The new techniques and technology must be followed by the education system so that young people entering adult life can function easily without remaining on the periphery of social functioning.

### **The value of education – is education generally worthwhile today?**

The value of education in our times is rapidly increasing, a natural consequence of the transition from lower levels of civilisational and technological development to the realities of the information society, a world based on knowledge. In an increasingly complex social reality, one cannot understand the world and "be oneself" in this world without adequate knowledge. A person who does not understand the world, who does not understand social problems, who does not read many important phenomena of contemporary culture becomes more or less excluded, incomplete and condemned to vegetating on the periphery of contemporary life in limited, "primitive" circles. At every step, they feel their lack of competence and inability to act, which, after all, depends on previous educational achievements. They cannot get a well-paid and

prestigious job, they have no chance of a decent salary and they are unable to realise themselves professionally. Personal fulfilment is also questionable, as hardly anyone is prepared to associate, even socially, with a functionally illiterate person, who has virtually no background or resources with which to gain sympathy and recognition from others. Well-educated people, on the other hand, have many advantages. First and foremost, the profound personal knowledge gained through careful education, professional work and participation in culture gives them the feeling of being full members of modern society (Szymański, 2013, p. 152).

Education has an ever-increasing significance for one's social positioning. It determines one's chances of taking up professional activities and meaningful work (Gerlach, 2010; Kwiatkowski, 2012), of participating in social life and contemporary culture, of functioning in one's family and of achieving success in life. It is indispensable for successfully solving one's personal problems, forming one's identity, self-acceptance and self-esteem and rationally creating a sense of meaning in life (Szymański, 2013, p. 153).

In modern society, an increasingly high level of education is becoming the norm, writes Mirosław Szymański (2013). The universality of education, which has been strived for since the Enlightenment, mainly concerned the basic level and primary education; it became increasingly extended to secondary education and now also applies to post-secondary and higher education. Societies are becoming richer and can afford to realise people's educational aspirations and related life plans more fully. In turn, a universally high level of education in society is seen as a factor of further development of the economy and various areas of culture (Szymański, 2013, p. 154).

The value of education is not limited to certain periods of life. It is no longer the case that concern for education relates to childhood and youth, the years spent at school and primarily devoted to study. Today, everyone from preschool children to pensioners should be active in education. Very rapid scientific and technological progress, dynamic social and economic change, turbulent political life and ever-newer facts, events and phenomena in culture are factors that make it necessary

to react and adapt to change. Thanks to lifelong learning, people can change their occupation (1) and the nature of their work, improve themselves professionally (Wołk, 2009), react to rapid social and technological changes and new phenomena in the world of culture (Szymański, 2013, p. 155; Bratland, 2019).

According to Andrzej Radziejewicz-Winnicki (2004, p. 26; cf. Mazurek-Lipka, 2012), in information societies with the highest level of development, the situation has already arisen in which completing a university degree is no guarantee of a more favourable professional position, but it is also an observable truth that whoever has not completed a university degree today has relatively poor chances in the competition for a qualified job. It is definitely better to have an education than to be completely deprived of the chance to meet life's needs at an appropriate level. Today, education not only allows access to the labour market, prestige, income or power. In modern societies, education is also one of the basic mechanisms for determining an individual's social value (Dolata, 2013, p. 18). Thus, the school is becoming a place that now and, in future, will determine the face of the world, societies and individuals. The family, despite all its educational power, will be limited mainly to building the emotional foundations of development. Intellectual, social and civilisational development, while impossible without it, will in future be solely the work of the school (Pilch, 2016, p. 192; Pilch, 2001). Without schooling and education, we are deprived of the possibility to function independently in society.

### **In summary – we once again ask the most important questions**

It is worth considering whether the current form of the education system is conducive to individuals acquiring the competences of modern civilisations: a sense of agency, responsibility, creativity and autonomous action? Who is responsible for the education system and the content being taught? Are they aware of what competences the present and the future require? Who truly decides on the prevailing definition of reality in the education system? Because it is undoubtedly education and

the value of education that determines our chances on the labour market and our place in the hierarchical structure of society. Who is responsible for the curricula and are they aware of what competences are required by reality and the near future. Who decides (or should decide) the current definition of reality in the education system?

**Funding:** This research received no external funding.

## References

- Bauman, Z. (2000). *Liquid modernity*. Polity Press.
- Bauman, Z. (2017). *Retrotopia*. Polity Press.
- Bell, D. (1976). *The coming of post-industrial society: A venture in social forecasting*. Basic Books.
- Berger, P., & Luckmann, T. (1991). *The social construction of reality: A treatise in the sociology of knowledge*. Penguin Books Ltd.
- Bielska, E., Radziewicz-Winnicki, A., & Roter, A. (2005). *Social and Educational problems in Poland: Essays and chosen conceptions at the background of the EU accession*. Śląska Wyższa Szkoła Zarządzania im. gen. J. Ziętka w Katowicach.
- Bonsunowska-Kuśka, E., & Radziewicz-Winnicki, A. (1993). Rola systemu oświaty w modelu kulturowej reprodukcji Pierre'a Bourdieu. In A. Radziewicz-Winnicki (Ed.), *Współcześni socjologowie o wychowaniu. Zarys wybranych koncepcji* [Contemporary sociologists on education: Outline of selected concepts] (pp. 28–36). Wyd. Uniwersytetu Śląskiego.
- Bratland, E. (2019). *Neoliberal reforms, knowledge and the sociology of education: What concept of knowledge is behind neoliberal education reforms, and what are the organizational principles underlying this type of knowledge?* Wydawnictwo OR TWP w Szczecinie.
- Dolata, R. (2013). Możemy obudzić się w kraju o strukturze kastowej [We may wake up in a country with a caste structure]. In *Edukacja. Przewodnik Krytyki Politycznej* [Education: A guide to political criticism]. Wydawnictwo Krytyki Politycznej.
- Duraj-Nowakowa, K. (2012). Uniwersalność wartości kultury kształtowania profesjonalnej gotowości pedagogów / nauczycieli [The universality of the value of culture in shaping the professional readiness of educators/teachers]. In I. Nowakowa-Kempna (Ed.), *Uniwersalne wartości kultury w edukacji i terapii* [Universal values of culture in education and therapy] (pp. 225–242). Wyd. WAM.
- Dworak, A. (2020). Instytucja szkoły wobec wzrastających oczekiwań prozdrowotnych pokolenia XXI wieku [The institution of school in the face of the growing health expectations of the 21st-century generation]. In A. Rzymelka-Frąckiewicz & T. Wilk (Eds.), *Problematyczność rozwoju człowieka w obszarze edukacji i kultury współczesnej. Socjopedagogiczne szkice polemiczne* [The

- problematic nature of human development in the area of education and contemporary culture: Socio-pedagogical polemic sketches] (pp. 109–118). Wyd. Edukacyjne AKAPIT.
- Gerlach, R. (Ed.). (2010). *Pedagogika pracy w perspektywie dyskursu o przyszłości* [Work pedagogy in the discourse about the future]. Wydawnictwo Uniwersytetu Kazimierza Wielkiego.
- Kwiatkowski, S. M. (Ed.). (2012). Zawód i praca w świecie urynkwienia i konkurencji globalnej [Profession and work in the world of marketization and global competition]. *Studia Pedagogiczne*, LXV.
- Mazurek-Lipka, O. (2012). *Constructions of social advancement in the United States: Between university diploma and media success*.
- Melosik, Z. (1998). Wychowanie obywatelskie: nowoczesność, ponowoczesność (próba konfrontacji) [Civic education: Modernity and postmodernity (an attempt at comparing)]. In Z. Melosik & K. Przyszczypkowski (Eds.), *Wychowanie obywatelskie. Studium teoretyczne, porównawcze i empiryczne* [Civic education: A theoretical, comparative and empirical study] (pp. 32–54). Wyd. EDYTOR.
- Moore, R. (2007). *Education and society: Issues and explanation in the sociology of education*. Polity Press.
- Morrow, R. A., & Torres, C. A. (1995). Education and the reproduction of class, gender and race: Responding to the postmodern challenge. In C. A. Torres & T. R. Mitchell (Eds.), *Sociology of education: Emerging perspectives*. State University of New York.
- Pilch, T. (2001). Pedagogika społeczna wobec procesów marginalizacji [Social pedagogy towards marginalization processes]. *Pedagogika Społeczna*, no. 1.
- Pilch, T. (2016). *Uczniowie na drogach Warmii i Mazur. Narodziny nierówności* [Students on the roads of Warmia and Mazury: The birth of inequality]. Wydawnictwo Uczelniane WSzIe TWP w Olsztynie.
- Puślecki, W. (1999). *Wspieranie elementarnych zdolności twórczych uczniów* [Supporting students' elementary creative abilities]. Oficyna Wyd. IMPULS.
- Radziejewicz-Winnicki, A. (1999). *Modernizacja niedostrzeganych obszarów rodzimej edukacji* [Modernization of overlooked areas of domestic education]. Oficyna Wyd. IMPULS.

- Radziewicz-Winnicki, A. (2004). *Spółczesność w trakcie zmiany. Rozważania z zakresu pedagogiki społecznej i socjologii transformacji* [A society in transition: Considerations in the field of social pedagogy and sociology of transformation]. Gdańskie Wydawnictwo Psychologiczne.
- Rzymelka-Frąckiewicz, A. (2020). Współczesna edukacja/szkoła odpowiedzią na społeczne potrzeby i oczekiwania wobec rzeczywistości i przyszłości [Contemporary education/school is a response to the social needs and expectations for reality and the future]. In A. Rzymelka-Frąckiewicz & T. Wilk (Eds.), *Problematyczność rozwoju człowieka w obszarze edukacji i kultury współczesnej. Socjopedagogiczne szkice polemiczne* [The problematic nature of human development in the area of education and contemporary culture: Socio-pedagogical polemic sketches] (pp. 93–108). Wyd. Edukacyjne AKAPIT.
- Rzymelka-Frąckiewicz, A., & Wilk, T. (2014). *Logic of some selected concepts in contemporary education: Between education and perception of committed art/theatre*. Wyd. Edukacyjne AKAPIT.
- Sawisz, A. (1978). System oświaty jako system przemocy symbolicznej w koncepcji Pierre'a Bourdieu [The education system as a system of symbolic violence in the concept of Pierre Bourdieu]. *Studia socjologiczne*, no. 2.
- Sawisz, A. (1989). *Szkoła a system społeczny. Wokół problematyki „nowej socjologii oświaty”*. [School and the social system: On the issue of the “new sociology of education”]. Wyd. Szkolne i Pedagogiczne.
- Śnieżyński, M. (1999). Czy szkoła może wychowywać [Can school educate?]. In E. Górnikowska-Zwolak, A. Radziewicz-Winnicki, & A. Czerkawskiego (Eds.), *Pedagogika społeczna w Polsce – między stagnacją a zaangażowaniem* [Social pedagogy in Poland: Between stagnation and commitment] (pp. 27–42). Wyd. Uniwersytetu Śląskiego.
- Szymański, M. J. (2013). *Socjologia edukacji. Zarys problematyki* [Sociology of education: Outline of the issues]. Oficyna Wyd. IMPULS.
- Toffler, A. (1974a). *Trzecia fala* [The third wave]. Państwowy Instytut Wydawniczy. (Original work published 1980)
- Toffler, A. (1974b). *Szok przyszłości* [Future shock]. Państwowy Instytut Wydawniczy. (Original work published 1970)

- Wilk, T. (2022). *Kultura w szkolnej i środowiskowej edukacji młodzieży poprzez sztukę. Edukacyjne doświadczenia z przeszłości, realia teraźniejszości, perspektywa przyszłości* [Culture in the school and community education of young people through art: Educational experiences from the past, realities of the present, and prospects for the future]. Wyd. Uniwersytetu Śląskiego.
- Witkowski, L. (1991). Uwagi o funkcjach edukacji [Notes on the functions of education]. *Kultura i Społeczeństwo*, no. 3.
- Wołk, Z. (2009). *Kultura pracy, etyka i kariera zawodowa* [Work culture, ethics, and professional career]. Wyd. Naukowe Instytutu Technologii Eksploatacji – Państwowego Instytutu Badawczego.
- Żakowski, J. (2009). Wciąż tkwimy w fabryce. Czy kapitalizm się skończy? Rozmowa z Alvinem Tofflerem, amerykańskim socjologiem i futurologiem [We're still stuck in the factory. Will capitalism end? An interview with Alvin Toffler, American sociologist and futurologist]. *Tygodnik Wprost*, no. 4.





**Tamara Cierpiałowska**

<https://orcid.org/0000-0002-5167-2128>

Ignatianum University in Cracow, Poland

[tamara.cierpialowska@ignatianum.edu.pl](mailto:tamara.cierpialowska@ignatianum.edu.pl)

## Action Research as a Path to Change in the Teaching/Learning Process

(pp. 257–275)

Suggested citation: Cierpiałowska, T. (2023). Action Research as a Path to Change in the Teaching/Learning Process. *Multidisciplinary Journal of School Education*, 12(2(24)), 257–275. <https://doi.org/10.35765/mjse.2023.1224.13>

### Abstract

**Objectives of the research:** The aim of this article is to present the action research method and the methodology for its implementation, using the example of a framework report of research conducted by the author. The research presented herein was designed to capture the changes in the teaching/learning process in a selected classroom following the implementation of the Universal Design for Learning (UDL) approach.

**Research methods:** The method used in the research was the action research method.

**A short description of the context of the issue:** In a rapidly changing world, education researchers face the challenge of how to study and analyze the educational process, which is (and must remain) changeable in order to keep up with the changing reality. Action research is an interesting methodological proposal. Three cycles of research are presented; for each cycle, the planning process (including research questions), actions taken, data collection methods, and results were specified separately.

**Research findings:** The analysis shows that the research and innovative activities resulted in the development of students' skills in planning, organizing, and managing their learning, as well as the development of their independence, responsibility, creativity, and problem-solving skills. Their willingness to cooperate also increased. As a result, they became more

active (self-)learners. At the same time, the teachers shifted from their traditional, central role of teaching others to that of facilitators, creating learning conditions for a diverse group of students.

**Conclusions and recommendations:** It was demonstrated that action research is a valuable way of bringing about reflective change in the teaching/learning process. Action research is worth promoting to teacher-practitioners, as it is an effective way to introduce bottom-up changes that optimize the educational process.

**Keywords:** Action research, universal design in education (UDL), inclusive education, teaching/learning process, change in the educational process

## Introduction

The world today is undergoing extreme changes. Clearly, these changes also affect the educational process, since it is through education alone that a person gets the chance to face the new and diverse challenges of modern times. For all students, school should be not only an environment that stimulates cognitive development and the acquisition of knowledge that meets the needs of the 21st century, but also – and perhaps above all – a place where relationships are established and developed, including the ability to cooperate, solve problems, take responsibility for oneself and others, and be open to diversity and change in the broadest sense.

According to the current regulations (Minister of National Education, 2020) as well as those being prepared, the Polish education system for children and young people with special educational needs should be largely based on mainstream schools and should take the form of *inclusive education*. At the same time, the concept of *students with special educational needs* is changing. This group is no longer limited to students with disabilities, chronic illnesses, or exceptional talents; many other factors are being identified which may cause a present-day student to manifest needs, either permanently or temporarily, which require an individual approach from the teacher. It has been particularly evident since

the early 2020s, when the COVID-19 pandemic first gripped the world; shortly afterwards, a bloody war broke out beyond our eastern border, threatening the security of the entire world, and many Ukrainian children – war refugees – appeared in Polish educational institutions. However, an analysis of the needs and abilities of today's students leads us further: practically every student is – in a certain sense – different, and therefore, everyone's needs can be, and are, different. But how far can individualization go when students are so diverse? Isn't the demand for individualization in this situation illusory and, in fact, impossible to implement (Domagała-Zysk, 2017, p. 14)?

The question arises: Should the direction of change be reversed? Instead of far-reaching individualization, perhaps it is worth focusing on organizing education in a universal manner, so as to provide each student with whatever will enable them to succeed at their own level. One interesting way of optimizing the operation of an inclusive school and preparing students for the challenges of the modern world is to implement solutions based on the idea of Universal Design for Learning (UDL) (Rose, Meyer, & Hitchcock, 2005).

### ***Universal Design for Learning as a concept for optimizing inclusive education***

UDL is a broadly defined model or philosophy of education which, based on psychological, educational, and neuroscientific research, proposes the development of a flexible learning environment to meet the diverse, including special, learning needs of students (Rose, Meyer, & Hitchcock, 2005). By implementing the educational process in accordance with UDL, education at all levels has the potential to become:

- accessible and attractive to all learners, regardless of their difficulties,
- flexible in form and adapted to the learner's preferences and abilities,
- intuitive and accessible to all, including students with limited language or communication skills,

- perceptually accessible, also to students with visual or hearing difficulties,
- user-friendly because it is carried out in a space designed according to the needs of the learners (e.g., limiting the number of stimuli and allowing quiet time for those who need it), and
- uncomplicated thanks to teaching materials that are easy to use (Domagała-Zyśk, 2017, p. 14).

An undeniable value of inclusive education as implemented in the UDL model is that it creates choices for students in many different aspects, such as the specific goals they want to pursue, the form in which they want to learn (individual, pair, or group work), the didactic means they want to use, or the form of expression of the knowledge or skills they learn (Capp, 2017; Rose, Meyer, & Hitchcock, 2005; Rose, Gravel, & Gordon, 2014). Students thus have the opportunity to take responsibility for their own education through authentic engagement, as well as to help their peers through peer tutoring (Nowak, 2009). In this context, the role of the teacher also changes. From the asymmetrical position of one who teaches, they can become a tutor and a partner of the students in their own activity.

The action research method can be considered the most appropriate for tracking the changes in the teaching/learning process influenced by the implementation of the UDL approach (Czerepaniak-Walczak, 2014; Pilch & Bauman, 2010; Sagor, 2011; Szymańska, 2018; Szymańska et al., 2018). Not only does it allow for the realization of change, but at the same time, it facilitates the fullest exploration and understanding of the (changing) object of study.

### **Action research – an introduction to the method**

The concept of action research has not yet been named clearly in the Polish literature on the subject; it is sometimes referred to by different terms, such as *badanie przez działanie* (research through action) (Smolińska-Theiss, 1990; Szmidt, 2001), *badanie przez wspólne doświadczenie* (research

through shared experience) (Wyka, 1993), or very generally, *badanie praktyki oświatowej* (research into educational practice) (Pachociński, 1993). The term *badania w działaniu* (action research) is most often used (Czerepaniak-Walczak, 2014; Pilch & Bauman, 2010; Skulicz, 1998; Szymańska, 2018), and sometimes the original English phrase is retained.

Action research stems from the tradition created by Kurt Lewin (1946, as cited in Smolinska-Theiss, 1990), who was the first to use the term to describe research consisting, in short, of planning, data collection, and analysis. Action research aims to solve real problems of a social nature. It is a form of self-reflective research undertaken by participants in a social situation to improve their own actions and better understand both the social practice and the wider context in which that practice is carried out (Carr & Kemmis, 1997). As Maria Czerepaniak-Walczak (2014) notes, action research

encourages people to organize themselves around jointly identified problems (usually local, experienced here and now) and to work together in the process of solving them. It strengthens bonds and mutual trust and unites the research and action community, thereby contributing to democratic relationships and mutual learning. (p. 185)

This approach coincides with that of Tadeusz Pilch and Teresa Bauman (2010), according to whom

action research is the study of a social situation in which the researcher finds themselves, with the intention of improving it, that is, improving the quality of their actions in the process. This research is the systematic collection of information about phenomena that produce some kind of change, with the researcher as an inspirer and active participant in the events. (p. 307)

Action research thus allows the boundary between theory and practice to become blurred. "Action research is carried out when an opportunity to improve a situation is perceived, a project to improve it is prepared, put into practice, and the outcome is observed" (Pilch & Bauman 2010, p. 307). An undeniable advantage of action research is that its informal

nature facilitates the improvement of the educator's work and serves to improve educational and pedagogical practice (Czerepaniak-Walczak, 2014, p. 185; Pilch & Bauman, 2010, p. 307).

Action research is participatory in nature and requires constant evaluation from the researchers and the adaptation of further stages (called cycles) to the changing research subject. The strengths of educational action research are its focus on innovation in practice and the implementation – by the educators – of reflective intervention in

the educational policy of the institution, in the improvement of curricula, in the evaluation processes of the quality of the school (university) and the conditions it creates for the development of teachers and their students. Educational action research is seen less and less as a research methodology and increasingly as a philosophy of life that supports educational transformation and initiates changes in the consciousness of the action research participants, who become active, reflective subjects striving for personal and social empowerment. (Wołodźko, 2010, p. 118)

### **Methodological assumptions of self-directed action research<sup>1</sup>**

The object<sup>2</sup> of the research presented herein is one class of a primary school in Krakow (19 students and the four teachers who teach in this class) and the process of change taking place in this team following the implementation of the UDL strategy.

<sup>1</sup> The research presented in this article as an example of the action research method was carried out within an international research project entitled *Preconditions of Transformation of Education Process in Different Educational Context by Applying Inclusive Education Strategies*, coordinated by Prof. Alvyra Galkiene from VMU in Kaunas, Lithuania, in which the author worked as a researcher together with Dr. Jolanta Baran, Professor Emeritus of UP, and Dr. Ewa Dyduch, Assistant Professor Emeritus of UP.

<sup>2</sup> The definition of the object of research was taken from Janusz Sztumski (1995, p. 7), according to whom it can be "everything that makes up the so-called social reality, that is, social communities and groups, social institutions, and social processes and phenomena."

When the research began, the study group was in Year 5; the students were then aged 11–12. The study covered three semesters and ended when the students were 13–14. The research was conducted in three cycles; each cycle covered one semester of education (approximately 5 months). According to the current educational legislation in Poland, the class was a so-called “integration class.” Some students had a documented need for special education. The remaining students had not been issued such a document, but this does not mean that they did not have different educational needs, including special needs. To identify them, the strengths and weaknesses of each student in the class were identified before the research.

The community of active researchers consisted of four teachers, three of whom taught individual subjects (Polish, mathematics, and history) and one who acted as a facilitator, accompanying the students in most of the lessons, and three academics from Krakow universities. It allowed for the triangulation of empirical data (Kubinowski, 2010).

The research sought to capture the simultaneous *teaching/learning* process taking place in the study group, which is in line with the understanding of schooling as an interactive relationship between two simultaneous sub-processes: *teaching* (teacher activity and reflexivity) and *learning* (student activity and reflexivity) (Rose, Meyer, & Hitchcock, 2005).

As regards the ethical aspects of the research, before it began, parents were asked to give written consent for their child’s participation, including recording interviews with students and observing them in class. To ensure high ethical standards in the research, efforts were also made to guarantee the anonymity of the research participants by keeping sensitive data confidential.

In the analysis of the empirical material collected during the research, the constant comparative analysis method was applied, which serves to identify themes and threads of detail in the collected data, which was subjected to transcription and coding (Creswell, 2013). To ensure the accuracy and reliability of the analysis, a communicative validation procedure was applied (Szmids & Modrzejewska-Śmigulska, 2014), which consists of presenting the themes and threads that emerged during the analysis to the research subjects and coordinating the interpretations made with them.

### **Action research framework<sup>3</sup> report**

The main part of the study is a report containing the framework characteristics of the action research process in the first, second, and third research cycles. For each cycle, in accordance with the action research procedure described in the methodological literature, the research problems, the action plan, a synthetic description of the activities undertaken, the means of data collection, and the main conclusions (reflections) resulting from the given cycle (which formed the basis of the next cycle) were defined in turn.

#### ***The first cycle of action research***

The following two research questions were initially formulated:

- Are changes consistent with the UDL philosophy necessary and possible in this class?
- What barriers to implementing UDL strategies in the class can be identified among students and teachers?

The following actions were planned concerning the above research questions:

- Attempts to persuade teachers and students to implement changes, for example, changing individual students' seats and positioning the teacher in the classroom during working time (moving away from frontal teaching to promoting collaboration between students)
- Familiarizing the teachers with the principles of UDL and demonstrating examples of solutions in line with this approach

The following activities were carried out in the first cycle:

- The researchers provided teachers with suggestions on how to give students choices and organize teamwork in a differently structured classroom.

---

<sup>3</sup> A detailed analysis of selected aspects of the completed research project is included in Galkiene & Moncevičienė (2021), which is an open-access publication.



- The students were given a voice through:
  - collaboratively designing an ideal classroom space and
  - encouraging students to reflect on their expectations of the teaching/learning process (free comments to the question, “What would be the ideal lesson you would like to participate in?”).
- The students were offered a self-diagnosis for learning to identify their own learning style.
- The teachers were given suggestions on ways to diversify activities in the teaching/learning process, taking into account the different learning styles of students.

The following data collection methods (techniques) were used in the first cycle:

- Observation of teacher and student activities during selected lessons
- Interviews with students on the topic of the ideal lesson they would like to participate in
- Focus group interviews with students in order to identify their own learning style and ability to choose effective learning strategies
- Focus group interviews with teachers about the values of UDL and how they can be implemented in their pedagogical practice and suggestions for teachers on how to diversify activities (choice of objective, working method(s), didactic means, and forms of work) in the teaching/learning process, taking into account the students’ different learning styles

The reflections that emerged from the implementation of the first cycle led to the following conclusions:

- The group of students appeared to be very diverse in terms of their motivation to learn, skills, learning styles, and interests.
- The students stated that they liked school and the teachers and that they felt safe at school; at the same time, they showed considerable passivity resulting from the view that it was the teacher’s exclusive

role to teach students and that each student should be taught the same thing in the same way.

- The teachers used traditional teaching strategies, although they tried to modify their procedures to take account of the diversity of the students.
- The teachers and students reconciled themselves to continuing traditional, routine ways of teaching/learning and found it very difficult to imagine the possibility of stepping out of the usual patterns.
- The teachers and students signaled their fear of the proposed change or felt anxious about the proposed change.
- The teachers and students perceived many barriers to implementing UDL strategies and did not see the need to overcome them.
- Even when teachers and students, to a small extent, felt the need for change and had ideas for it, they did not see a chance of implementing it.

The teachers' and students' resignation regarding the traditional, routine ways of teaching and learning, their perceived fear of the proposed change, and the many barriers they perceived to implementing UDL strategies became a particular focus for planning further activities and research. Irrespective of the extent, the teachers agreed to continue with the measures to introduce the UDL approach into their work in the second cycle.

### ***The second cycle of action research***

In the next cycle of the action research, a further set of research questions was formulated:

- In what ways have teachers' and students' actions in the Polish, mathematics, and history classes changed as a result of implementing the UDL strategy?
- What changes have occurred in the reflective evaluation of the teaching/learning process experienced by teachers and students since implementing the UDL strategy?

The planned measures included:

- Initiating and encouraging teachers and students to modify existing classroom routines, including
  - Making students aware of the purpose(s) of the lesson and emphasizing the opportunity to apply the knowledge gained in school to real life,
  - Suggesting that the teachers allow the students to choose the form in which they achieve their objectives, act, and express themselves,
  - Giving a choice in the form of work (as individuals, in pairs, or in a small group formed by the students themselves) and encouraging the students to work together, and
  - Initiating reflective evaluation of the teaching/learning process by teachers and students as a result of implementing the UDL strategy.

The measures for the second cycle focused primarily on the teachers' implementation of the selected UDL strategies that were suggested by the researchers, including the following:

- Giving students the lesson objective(s) and demonstrating the lessons' relevance to life
- Giving students a choice of how to achieve a given objective by providing them with a variety of modes of action
- Encouraging students to work collaboratively.

The data in the second cycle was collected using the following techniques:

- Longitudinal, multi-participant observation of teachers' and students' activities (preparing protocols from observations of Polish, math, and history lessons according to a fixed schedule)
- Individual interviews with teachers immediately after the observed lessons
- Interviews with students after each observed lesson
- Questionnaires completed by teachers after each lesson
- Focus group interview with teachers

Some of the reflections that emerged from the implementation and analysis of the second cycle included

- Teachers and students recognizing the value of the change associated with the UDL strategy and the reduced/eliminated anxiety associated with it, including
  - teachers recognizing the value of making students aware of the lesson objectives and the students appreciating the opportunity to put into practice the knowledge and skills acquired in the lesson,
  - teachers noticing that students became more engaged in class, which was related to an increase in students' motivation observed by teachers, and students' expression of satisfaction with the different forms of action and expression available in class, and
  - teachers and students noticing the value of cooperating in class, thanks to which students became more creative, more responsible, and better able to solve problems,
- Teachers and students identifying factors that facilitate the implementation of UDL strategies, and
- Teachers and students continuing to recognize the barriers to change associated with implementing UDL strategies, but taking a proactive stance towards these barriers, seeking to overcome them, including
  - Teachers identifying the following barriers: too short a duration of each unit, fear of not being able to fully implement the core curriculum, time-consuming preparation of lessons according to UDL principles, and fear of pressure from parents who equate their child's educational success with a high score in secondary school exams rather than well-being and
  - Students desiring to always work together in the same group.

The general reflection after the second research cycle took the form of an assertion that it is worth trying and introducing routine-breaking changes in the teaching/learning process.

### ***The third cycle of action research***

The third cycle of action research commenced at the end of February 2020, when the SARS-CoV-2 virus appeared in Europe, including Poland, and the pandemic began. Despite the unexpected situation, the research was able to continue using remote tools. The research problem adopted for the third cycle of research, based on the conclusions of the previous cycle, was initially formulated in the form of a question:

- How does teachers' and students' readiness for changes in the teaching/learning process and the continuation of changes initiated by the project manifest itself?

The initial plan was to

- introduce teachers to different, more innovative ways of assessing students' work,
- introducing students to self-evaluation and self-monitoring (encouraging them to move from extrinsic to intrinsic motivation), and
- co-developing a "Lesson Action Guide" as a tool to activate students and encourage self-reflection (reflective learning).

The pandemic and resulting lockdown, including the closure of schools and the introduction of remote learning, forced a redefinition of the research problems. Ultimately, the research problems for the third cycle took the form of the following questions:

- How and to what extent did teachers and students use their experience and continue to implement UDL strategies into the teaching/learning process during the remote learning period, which was difficult for the course of education?
- Did the experience of applying the UDL strategy positively influence the teaching/learning process during the remote learning period and how?
- Were there difficulties in implementing UDL strategies in the remote teaching/learning process?

The plan of action for the third cycle had to be modified due to the lockdown. The situation was so surprising that the researchers initially feared that the research project would have to be suspended. Polish schools were implementing various forms of remote learning quite quickly. Still, it was an extremely difficult situation for everyone involved in the educational process, from educational authorities to teachers, parents and, above all, students, who were now inevitably expected to be much more involved in their education than ever before. Therefore, the researchers simply assumed that they would remind teachers of the UDL strategies and encourage them to implement them in remote forms of educational work as well.

Thus, the measures taken in the third cycle consisted mainly in:

- Encouraging and mobilizing teachers to plan and implement remote education, taking into account UDL principles, and
- Providing teachers with methodological support and ongoing discussion of issues arising in the course of remote learning.

The methods of data collection for the third cycle came down to:

- Polish, math, and history teachers completing questionnaires about their reflections on the application of UDL principles in their selected, remote lessons,
- One-to-one telephone interviews with teachers,
- One-to-one interviews with students via the Zoom platform about their teaching/learning experiences during remote learning, and
- A focus group interview with teachers via the Zoom platform.

The reflections arising from the implementation of the third cycle of action research can be presented as follows:

- The teachers and students used their previous experience in implementing UDL strategies in the teaching/learning process during the remote learning period, which was difficult for the educational process, although they did not do so as often as in the traditional form of schooling.

- 
- The previous experience of teachers and students in implementing UDL strategies in the teaching/learning process during the remote learning period had a positive impact on the pedagogical and social aspects of teachers' and students' functioning, by
    - Enabling teachers and students to remain highly motivated to continue the teaching/learning process in an e-learning environment,
    - Positively sustaining and even developing cooperation between teachers, students, and parents, as well as among students themselves,
    - Promoting the maintenance of students' autonomy and responsibility for their own and their group's learning outcomes,
    - Promoting the development of creativity and problem-solving of teachers and students in the new experience of remote learning during school closures, mainly through cooperation and mutual support, and
    - Giving teachers the feeling that students – engaged, taking responsibility, and willing to cooperate – would cope with the difficult situation.

## **Conclusion**

In a rapidly changing world, the educational process must also change, because it is through education that people have the opportunity to meet the new and diverse challenges of today. However, change requires an effort to significantly transform the reality of schooling. At the same time, it is important to recognize that effective and meaningful change in education cannot be top-down or radical. It is necessary to identify existing barriers element by element; to plan, take, and modify actions; to evaluate and reflect on their effects; and to take the next step in the transformation of education.

Action research in education is extremely helpful in this regard, as it allows for a change in the teaching/learning process that is optimally

---

adapted to the needs of a given environment, provides an opportunity to solve real problems of a social nature (Smolińska-Theiss, 1990), fosters closer ties, unites the researching and acting community (Czerepaniak-Walczak, 2014), and is even formative (Walulik, 2018).

This article presents a framework report of research aimed at capturing the changes that occurred in the teaching/learning process in a selected class following the implementation of a Universal Design for Learning approach. The analysis shows that the research and innovative activities implemented during the study resulted in the development of students' skills in planning, organizing, and managing their learning, as well as the development of their independence, responsibility, creativity, and problem-solving skills. Their willingness to cooperate also increased. As a result, they became more active (self-)learners. At the same time, teachers shifted from their traditional, central role of teaching others to that of facilitators, creating learning conditions for a diverse group of students. The framework report presented herein can provide an example of how to conduct action research; it can also be an incentive for teachers to implement change.

**Funding:** This research received no external funding.



## References

- Capp, M. J. (2017). The effectiveness of universal design for learning: A meta-analysis of literature between 2013 and 2016. *International Journal of Inclusive Education*, 8(21), 791–807.
- Carr, W., & Kemmis, B. (1997). *Becoming critical education, knowledge and action research*. The Falmer Press.
- Creswell, J. W. (2013). *Projektowanie badań naukowych. Metody jakościowe, ilościowe i mieszane* [Designing scientific research: Qualitative, quantitative, and mixed methods]. Wydawnictwo Uniwersytetu Jagiellońskiego.
- Czerepaniak-Walczak, M. (2014). Badanie w działaniu w kształceniu i doskonaleniu nauczycieli [Action research in teacher education and development]. *Przegląd Badań Edukacyjnych*, 19(2), 181–194.
- Domagała-Zyśk, E. (2017). Projektowanie uniwersalne w edukacji osób z wadą słuchu [Universal design in the education of people with hearing impairments]. In M. Nowak, E. Stoch, & B. Borowska (Eds.), *Z problematyki teatrolologii i pedagogiki* [On the issues of theater studies and pedagogy] (pp. 553–568). Wydawnictwo Katolickiego Uniwersytetu Lubelskiego.
- Galkiene, A., & Monkeviciene, O. (Eds.). (2021). *Improving inclusive education through Universal Design for Learning*. Springer.
- Kubinowski, D. (2010). *Jakościowe badania pedagogiczne. Filozofia. Metodyka. Ewaluacja* [Qualitative pedagogical research: Philosophy, methodology, and evaluation]. Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.
- Minister of National Education. Obwieszczenie Ministra Edukacji Narodowej z dnia 9 lipca 2020 w sprawie ogłoszenia jednolitego tekstu rozporządzenia Ministra Edukacji Narodowej w sprawie warunków organizowania kształcenia, wychowania i opieki dla dzieci i młodzieży niepełnosprawnych, niedostosowanych społecznie i zagrożonych niedostosowaniem społecznym [Notice of the Minister of National Education of July 9, 2020 regarding the publication of the consolidated text of the Regulation of the Minister of National Education on the conditions for organizing the education, upbringing, and care of children and adolescents with disabilities and those who are socially maladjusted or at risk of social maladjustment]. *Dz.U. poz. 1309* [Journal of Laws, item 1309].
- Pachociński, R. (1993). Problemy epistemologiczne badań pedagogicznych [Epistemological problems of pedagogical research]. *Edukacja*, 3, 17–26.

- Pilch, T., & Bauman, T. (2010). *Zasady badań pedagogicznych. Strategie ilościowe i jakościowe* [Principles of pedagogical research: Quantitative and qualitative strategies]. Wydawnictwo Akademickie Żak.
- Rose, D. H., Gravel, J. W., & Gordon, D. T. (2014). Universal design for learning. In L. Florian (Ed.), *Sage handbook of special education* (pp. 475–489). Sage.
- Rose, D. H., Meyer, A., & Hitchcock, C. (2005). *The universally designed classroom: Accessible curriculum and digital technologies*. Cambridge University Press.
- Sagor, R. (2011). *Badanie przez działanie. Jak wspólnie badać, żeby lepiej uczyć* [Action research: How to research together to teach better]. Centrum Edukacji Obywatelskiej.
- Skulicz, D. (1998). Badanie w działaniu [Action research]. In S. Palka (Ed.), *Orientacje w metodologii badań pedagogicznych* [Orientations in the methodology of pedagogical research]. Wydawnictwo Uniwersytetu Jagiellońskiego.
- Smolińska-Theiss, B. (1990). Badanie przez działanie w pedagogice społecznej [Action research in social pedagogy]. *Kultura i społeczeństwo*, 1990, 1, 32–43.
- Szmidt, K. J. (2001). Szkolne inhibitory twórczej aktywności uczniów w świetle wyników badań typu action research [School inhibitors of students' creative activity in light of the results of action research]. In B. Śliwerski (Ed.), *Nowe konteksty (dla) edukacji alternatywnej XXI wieku* [New contexts (for) alternative education in the 21st century] (pp. 305–328). Oficyna Wydawnicza „Impuls”.
- Szmidt, K. J., & Modrzejewska-Świgulska, M. (2015). Walidacja komunikacyjna w analizie wyników badań pedagogicznych [Communication validation in the analysis of pedagogical research results]. *Przegląd Badań Edukacyjnych*, 2(19), 235–255.
- Szymańska, M. (2018). Badania w działaniu [Action research]. In M. Ciechowska & M. Szymańska (Eds.), *Wybrane metody jakościowe w badaniach pedagogicznych* [Selected qualitative methods in pedagogical research] (pp. 225–272). Wydawnictwo WAM.
- Szymańska, M., Ciechowska, M., Pieróg, K., & Gołąb, S. (Eds.). (2018). *Badania w działaniu w praktyce pedagogicznej. Wybrane przykłady* [Action research in teaching practice: Selected examples]. Wydawnictwo WAM.
- Walulik, A. (2018). Formacyjny charakter badań w działaniu [The formative nature of action research]. In M. Szymańska, M. Ciechowska, K. Pieróg, & S. Gołąb (Eds.), *Badania w działaniu w praktyce pedagogicznej. Wybrane przykłady*

---

[Action research in teaching practice: Selected examples] (pp. 9–20). Wydawnictwo WAM.

Wołodźko, E. (2010). Badania w działaniu. Refleksja – wiedza – emancypacja [Action research: Reflection – knowledge – emancipation]. In H. Kędzierska (Ed.), *Jakościowe inspiracje w badaniach edukacyjnych* [Qualitative inspirations in educational research] (pp. 103–126). Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego.

Wyka, A. (1993). *Badacz społeczny wobec doświadczenia* [Social researcher and experience]. Wydawnictwo IFiS PAN.





**Dallel Sarnou**

<https://orcid.org/0000-0001-8426-9717>

University of Abdelhamid Ibn Badis, Mostaganem, Algeria

[dalalsarnou@gmail.com](mailto:dalalsarnou@gmail.com)

**Hanane Sarnou**

<https://orcid.org/0000-0003-0433-2785>

University of Abdelhamid Ibn Badis, Mostaganem, Algeria

[bh\\_sarnou@yahoo.fr](mailto:bh_sarnou@yahoo.fr)

## Teaching Algerian Third-Year Elementary-School Pupils English Vocabulary Through Songs: An Effective Instructional Tool to Enliven English Classes

(pp. 277–296)

Suggested citation: Sarnou, D. & Sarnou, H. (2023). Teaching Algerian Third-Year Elementary-School Pupils English Vocabulary Through Songs: An Effective Instructional Tool to Enliven English Classes. *Multidisciplinary Journal of School Education* 12(2(24), 277–296. <https://doi.org/10.35765/mjse.2023.1224.14>

### Abstract

**Research objectives (aims), issues or problems:** The study accentuates the significant role that integrating songs into the teaching of English vocabulary has for third-year elementary-school pupils in Algeria. It aims to make English vocabulary acquisition effortless and fun for young learners and seeks to facilitate teaching English as a second foreign language for newly recruited instructors. In fact, a major query of this research concerns the incomprehensible lack of songs, poems, and nursery rhymes in the English textbook for third-year pupils, who are 8 to 9 years old, i.e., at an age when musical activities help them become motivated and interested in class activities.

**Research methods:** To test the efficacy of songs in teaching English vocabulary to young third-year learners, the researchers opted for a true experimental research method. An experimental group of 26 pupils was exposed to nursery rhymes about numbers, colors, and family members, while a control group of 25 pupils was taught the same vocabulary items for three weeks using lessons from the textbook only.

**A short description of the context of the presented issue:** The experiment took place in one of elementary schools in the city of Mostaganem, where the researchers' former student works as a teacher of English. The experiment lasted three weeks: from January 10 to January 31, 2023.

**Research findings:** The findings of this research indicate that the use of songs considerably improved the average vocabulary scores for the 26 young pupils in the experimental group compared to the control group. Therefore, this research paper concludes that songs enhance natural and effortless vocabulary acquisition among third-year pupils who are learning English for the first time.

**Conclusions and/or recommendations:** Moreover, this study encourages elementary-school English teachers to give more pedagogical consideration to the use of children's songs in teaching English to their pupils so as to enliven the lessons and to raise the pupils' motivation to learn this foreign language.

**Keywords:** English as a second foreign language, English vocabulary, songs, Algerian third-year elementary pupils

## Introduction

It took more than a decade for policymakers in Algeria to decide to add English as a second foreign language to the curriculum of elementary-school education. On September 2022, the Ministry of National Education officially added it as a second foreign language (FL2) alongside French; the latter has been for over 40 years and still is considered a first foreign language (FL1) by thousands of Algerians. In fact, French has been taught in elementary schools since Algeria's independence in 1962, while English has been taught in middle and secondary schools since the early 1990s. It was only in July 2022 that the president of Algeria, Abdelmajid Tebboune, made a final decision on the subject of teaching English at the elementary level, and thus English has become part of the elementary curriculum since September 2022. As a matter of fact, integrating English

as a foreign language (EFL) in Algerian elementary schools has raised concerns among educators and researchers in the fields of teaching foreign languages and elementary education didactics over the viability and feasibility of including English as a new foreign language starting from the third year of elementary school. The inclusion of English in the elementary curriculum as a significant reform involves many motives, including primarily the englishization and anglicization of education in Algeria to meet globalized needs. Nonetheless, this sudden integration of English in the elementary curriculum from the third grade has been the subject of controversy on local media and social media since its announcement.

A 2018 study conducted by Berrahma (2018, p. 28) from the University of Tlemcen revealed that the majority of the researcher's participants, 40 parents, had positive attitudes toward the inclusion of English as a school subject in elementary education instead of delaying it until middle school. Conversely, the same study also disclosed that some participants had been exposed to negative attitudes toward introducing English in elementary school. These respondents reported a clear preference to maintain only French at this level of education.

In fact, other concerns were raised by experts in various fields, notably in child education and psycholinguistics. One of these concerns is Algerian children's ability to learn two foreign languages at once from an early age: 8 to 9 years old. For instance, Boualem Amoura, the general secretary of the Autonomous Union of Education and Training Workers, claims that the government's decision "is not sufficiently studied" and "hasty" (Middle East Eye, n.d.; author's translation). Similarly, Messaoud Boudiba, who is the spokesman of the CNAPEST union, contends that this decision must be subject to a profound reform of the elementary education sector and an overhaul of the language education system. The issue of learning two new foreign languages at once, French and English, has also recently been discussed and evoked by educators, researchers, and especially parents. Mohamed Belamri, the National Secretary of the Algerian Union of Educational Workers, claims that it is of paramount importance to take into account the "linguistic transmission," which should be effective and smooth. This integration must be supervised carefully,

scientifically, and well by Algerian experts who know the intricacies of such a process (Actors in education, 2022).

Also, according to Ben Zuhair Bilal, the spokesman of the Algerian Union of Education Workers, there must be an evaluation process in order to know the strengths and weaknesses of integrating English at this level. He suggests that English should be the first foreign language instead of French at the level of elementary education. He explains that having two foreign languages is a heavy burden on young schoolchildren's cognition. Ben Zuhair adds that there must be a careful recruitment of teachers to teach English at this level (Echaab.dz, 2023). In fact, there are thousands of professionals with a BA degree in English all across the country, and this might be itself challenging given that so far the conditions for recruiting teachers in elementary schools have not been clearly identified by the ministry. It is obvious and evident that teaching English for young learners 8 and 9 years old is quite different from teaching English to adults. For Pransiska (2016), teaching English to young learners refers to a more specialized area of teaching English that deals with younger students; it is totally different from teaching adults. When teaching young learners, we constantly have to keep in mind the fact that what we have in front of us is a mixed class with varied abilities, expectations, motivation levels, knowledge, and – last but not least – different learning styles. Thus, what seems complex and crucial is rather the way English should be taught to young learners and how to motivate them to learn this foreign language at this early age, and not whether English will compete with French.

The above statement represents the main motive behind the present study. Indeed, as experienced teachers of English, who have been practicing in various educational contexts and for different types of learners, the two researchers believe that teaching English to young learners might be more interesting and allows for a wide variety of teaching methods and techniques. In other words, the instructor is more free and independent in choosing the most suitable pedagogical tools to manage language difficulties in their classes. Correspondingly – and due to the incomprehensible lack of songs, poems, and nursery rhymes in the English textbook for third-year pupils – the two researchers hypothesized



that songs can be the most effective teaching material to make learning EFL easy and fun for young beginners, mainly with regard to learning new vocabulary items. Therefore, this study aims to emphasize how integrating children's songs in English classes for third-year pupils might be beneficial for learners and teachers in terms of facilitating the learning of vocabulary and increasing learners' motivation to learn English as a second foreign language alongside French.

## Literature review

### Child education and foreign language learning

The early childhood phase that spans the period up to age of 8 years is the most striking and remarkable stage in the life of children, as it is critical for their cognitive, social, emotional, and physical development. During these early years, the child's newly developing brain is highly plastic and responsive to any kind of change, as billions of integrated neural circuits are established through genetic, environmental, and experiential interactions. Therefore, favorable brain development does require support, a stimulating environment, adequate nutrition, and attentive interaction with the members of the child's social environment. In this regard, as the most influential figures in developmental psychology, Piaget's (1962b, 1964, 1972, 1983) and Vygotsky's (1978) theories explain how children develop their cognitive and social abilities. Piaget focused on providing children with opportunities and supporting them to expand their current level or input hypothesis ( $i+1$ ), as Stephen Krashen (1981, 1985) calls it.

By input hypothesis " $i+1$ " (where " $i$ " is the learner's interlanguage and " $+1$ " is the next stage of second-language acquisition), the linguist Stephen Krashen (1981, 1985) means that learning is most effective when adding one language difficulty level to the learners' current level; in other words, Krashen attempted to explain that acquiring a second language requires meaningful interactions in the target language through natural communication, in which speakers concentrate on the communicative act.

In fact, both Piaget (1964) and Vygotsky (1978) argue that knowledge is constructed and that children's abilities would be reachable and shaped depending on their cognitive development and environments (informal/formal education and culture). They both supported child-centered learning approaches and peer learning. Also, for Vygotsky (1978), the association between culture and language helps children develop their mental abilities with the support they receive from "more knowledgeable others" to pursue their learning.

### **Piaget's cognitive theory in relation to how children learn**

As one of the most influential figures in the field of cognition and early childhood child development, Jean Piaget (1964) highlights in his theory of cognitive development four significant stages of childhood cognitive growth:

- A. sensorimotor stage: birth to 2 years
- B. preoperational stage: ages 2 to 7
- C. concrete operational stage: ages 7 to 11
- D. formal operational stage: ages 12 and over

For Piaget (1964), children are more active in receiving knowledge and understanding the nature of intelligence through a continual process of building children's cognitive abilities. He believes that children take an active role in the learning process to discover the world through observation, going through assimilation and accommodation. They easily interact with their environment, continually add new knowledge, and build upon existing knowledge in order to develop their innate linguistic competence. In this respect, learning at the age of 5 to 9 years establishes the foundation from which the child learns. This stage is challenging in a child's educational journey. It is a crucial childhood phase, so parents and teachers should pay adequate attention to the child's physical, cognitive, and psychological growth during this phase. Both parents and teachers must impart sufficient knowledge to children at this stage regarding academic concepts, play activities, arts, sports, games, and good manners (Saracho, 2021). On the other hand, teachers and parents must

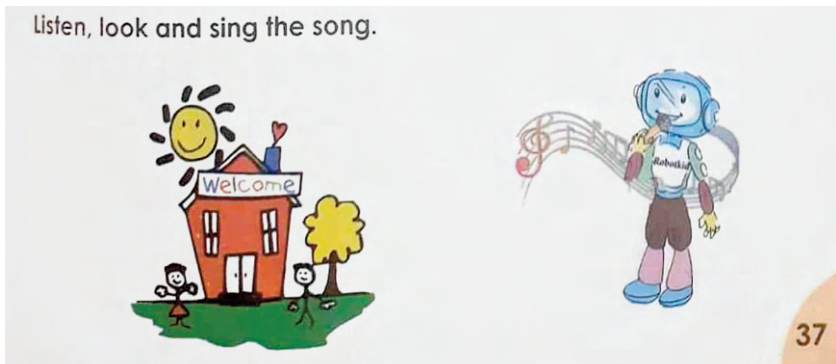
ensure that children learn playfully and joyfully. Teachers, in particular, must believe that play versus learning represents a false dichotomy in education (Hirsh-Pasek & Golinkoff, 2008). By the same token, Zosh et al. (2018) contend that play and learning mutually support one another and that teachers must connect learning goals to children's play. Therefore, by maximizing children's choices, promoting wonder and enthusiasm for learning, and leveraging joy, playful learning pedagogies support development across domains and content areas and increase learning relative to more didactic methods (Alfieri et al., 2011; Sim & Xu, 2017).

As for learning foreign languages during early childhood, this process represents both a challenge and a reward for children and their parents. In this respect, many experts believe that learning a foreign language before the age of ten allows children to speak it correctly and fluently. Therefore, the earlier children become familiar with a foreign language, the better chances they have of speaking it proficiently. In fact, because language learning does improve many skills – cognitive, psychological, and communicative – young learners need lifelong abilities for different walks of life; many researchers and child education experts advocate learning at least two foreign languages at an early age (Waning et al., 2014; Gimatdinova, 2018; Qu & Damian, 2019). Ghasemi and Hashemi (2011) contend that children learn foreign languages naturally. They believe that exposing children to a foreign language allows them to optimize their learning potential and helps develop their brains at their most flexible stage. With this logic and for this purpose, Algeria's policymakers have decided to incorporate English into elementary education since September 2022.

Nonetheless, as former instructors of EFL in elementary education, we strongly argue that exposing our children to foreign languages only in schools does not develop their language skills. Moreover, when reading through the textbook of English for third-year pupils, we noticed that there are very few interesting games that may make learning playful and joyful. Nevertheless, we are skeptical regarding the practicality of these games, knowing that the time allotted for English during a week is only an hour and a half. We contend that this amount of allotted time does

not allow the English teachers to introduce these games since, in most elementary schools in Algeria, the minimum number of pupils per class exceeds 20. Therefore, we believe that the few games that the textbook contains do not bring enough fun and playfulness to English classes. Moreover, as for the exposure to the language, the number of English sessions per week needs to be increased for learners to be exposed to the language. Two sessions a week does not provide teachers with extra time to have gamified activities such as those contained in the textbook *My Book of English 3<sup>rd</sup> Year Elementary School* (2022, p. 37).

**Figure 1. Listen, look and sing the song activity (*My Book of English for 3<sup>rd</sup> Year Primary School*)**



Indeed, the two hours a week of English lessons are by no means sufficient for young learners to be exposed to the language, as argued above. The two sessions of English are not long enough to create a productive language learning environment. In the words of Baroto (2017, pp. 3–4), the language learning environment includes macro-environmental and micro-environmental factors. The former refer to exposure to the target language, whether natural or formal, while the latter are the broad overall characteristics of the language environment – the specific structures the learner hears. Dulay et al. (1982) investigated the effect of micro-environmental factors: salience, feedback, and frequency. The effect of a macro-environmental factor refers to the naturalness of exposure.

Therefore, exposure can be categorized into two types: natural and formal. When the speaker's focus is on the form of the language, the language environment is formal and when the focus is on the content of communication, the language environment is natural. By the same token, Galatro (2022) asserts that children have environmental advantages over most adults when learning a language. For Galatro, young children should not be formally instructed in languages like adults and older children. Young children learn by being immersed in multilingual environments. They passively "absorb" the language through contact. When formally instructed, it is through games and songs, not verb conjugation and exams. Unfortunately, foreign language learning in Algerian elementary education, whether for French as a foreign language or EFL, does not correspond to what Galatro refers to. As a response to this inadequacy of the Algerian elementary curriculum in child language learning, the aim of this research is to emphasize and draw attention to the priority that should be given to exposing third-graders to a natural language learning environment through songs, games, and role-playing – through which they get immersed in learning.

In the foreign language classroom, songs and games in particular promote pedagogical diversity and contribute to effective learning, especially in regards to pronunciation, fluency, listening comprehension, memorization of vocabulary and grammatical structures, and cultural awareness (Arleo, 2000, p. 5). In the following section, we analyze how songs, music, and nursery rhymes are an effective pedagogical foreign language teaching tool in elementary education.

### **Songs, music, and nursery rhymes for playful foreign language learning in elementary education**

As EFL instructors for more than ten years, we assert and emphasize that one of the best ways for learners to learn a foreign language is by listening to songs and nursery rhymes. This claim is backed up with a myriad of arguments by many other researchers (Degrave, 2019; Jamouille, 2017; Tse, 2015; Engh, 2013) who have revealed that foreign language teachers are often positive regarding the crucial role that songs and nursery rhymes

play in child language learning. Many language teachers believe that songs can promote foreign language acquisition and can help learners gain major language skills, mainly for children. Songs also serve as motivational tools for encouraging young learners to learn the foreign language outside the classroom, as they continue singing and repeating the songs and nursery rhymes pleasurably. Many researchers, like Jamouille (2017), also argue that songs create a good, enjoyable, relaxing atmosphere and that they lower stress levels mainly for children who are learning a foreign language for the first time, as is the case for third-year pupils in Algerian elementary schools.

In fact, it is obvious that songs significantly impact the young learners' capacity to memorize vocabulary in a foreign language. In this regard, numerous studies have proved that the potential effect of musical foreign language teaching methodology on vocabulary recall is highly significant. For instance, De Groot's study (2006) analyzes the effect of background music on vocabulary recall in 36 university students, while Murphy (1990, pp. 55–56) argues that songs could help one easily remember vocabulary or phrases. Murphy states that an involuntary mental rehearsal does occur after a period of contact with a foreign language in which the new information repeats without the speaker's intentional effort. He adds that the rehearsal of language from music, or the phenomenon of a song "stuck in one's head," helps foreign language learners remember a significant number of words effortlessly (1990, p. 59). Unfortunately, in the Algerian context, very few studies and surveys have been undertaken to test and prove the viability of integrating songs and nursery rhymes in English classes, mainly for middle school learners, given that teaching English in elementary schools, as mentioned earlier, is recent and incompletely implemented.

There could be many reasons behind the disregard for the pedagogical role of songs and nursery rhymes in English classes in Algerian schools. One of the main factors that cause teachers to avoid using songs in teaching English in Algerian schools is the overloaded curriculum and the insufficient time allotted for such activities. While private schools may allow teachers some space or freedom to include musical activities and

songs, teachers in public schools are often reluctant to add these activities due to the condensed syllabus and the crowded classes they have. In fact, teachers must be aware of the salient role that nursery rhymes, in particular, can play in EFL classes for young children between 7 and 8 years old. York (2011) describes children's songs as simple poetry in nature written with a specific language that young children can learn and enjoy. Mello et al. (2022, p. 1916) explain that language acquisition among elementary school children can be heightened by using rhymes and songs in the classroom, because they enclose new lexis, culture, pronunciation, and intonation in an easy and adaptable package. This done in a way that is quite easy for the children to follow and learn steadily. Based on this assumption, the research study was embarked upon, as we believe that what is lacking in the pedagogical aspect of the English textbook for third-year elementary pupils is songs.

Knowing that many Algerian parents nowadays make their children watch and listen to children's songs and nursery rhymes in English on YouTube, and having noticed that English language learning among young children has become very common in Algerian society over the last few years, we can anticipate that the integration of songs in teaching English for young learners will receive positive attitudes and perceptions from the schoolchildren, their parents, and therefore, the teachers. In the following sections, then, we present various details of our research study, including the context, participants, and data collection tools.

## Method

To test our hypothesis about employing songs in English classes for third-year pupils and its benefits for the learners and teachers in terms of facilitating vocabulary learning and increasing learners' motivation, we opted for a true experimental design. In the words of Skidmore (2008), experimental designs are distinguished as the best method to respond to questions involving causality; in our study, the ultimate objective was to investigate whether the integration of songs in teaching English to

young learners would augment the vocabulary memorized and/or increase the learners' motivation.

To put our experiment into effect, we agreed with our former student, who is currently an elementary-school English teacher in one of Mostaganem's schools, to involve her and her pupils as our participants. The teacher's two classes represent our control and experimental groups. The first class consisted of 25 pupils and comprises the control group, which was not exposed to changes: they were taught only with the textbook. The second class consisted of 26 pupils and comprises the experimental group, which was taught through nursery rhymes.

### Procedure

The experiment lasted only three weeks because of the short time allotted for English classes. It started on January 10 and ended on January 31. Pupils of the experimental and control group were observed during their English lessons so as to identify the changes that would have occurred throughout the experiment. Both groups were administered the pre-test during the first week, consisting of 20 questions that test the pupils' knowledge of basic English vocabulary. These questions were divided into two tasks. The first task entailed ten questions about numbers and colors in English. The second task also contains ten questions, and it asks the pupils to match pictures with the corresponding words about family members (father, brother, grandpa, grandma, etc.).

During the first week, at the end of the session and in no more than ten minutes, the teacher started preparing the learners for the second-week experiment to find out their preferences and prepare them by asking some questions: (1) Do you watch YouTube song videos at home? (2) If yes, with whom and how often do you watch song videos per day? (3) Would you please name one or two songs? At the same time, the teacher began to observe the learners' reactions and attitudes toward the given songs.

Starting from the second week, the experimental group pupils were taught lessons about numbers, colors, and family members using song



videos. The children's songs selected for these lessons were "Number Song 1–20 for Children | Counting Numbers | The Singing Walrus," "Dream English Kids' Color Song for Kids: Learn 9 Colors," and "Our Family – Nursery Rhymes for Children." We selected these videos for the funny and cartoonish animations they contain and for their conciseness. The three lessons took place over two weeks. As for the control group pupils, they were taught the same vocabulary items using the textbook only. The teacher used Task 11 on page 12 to teach the pupils numbers. She used Tasks 3 and 4 on page 20 to teach them colors and Task 8 on page 11 to teach "family members" vocabulary.

After two weeks, the researchers provided the teacher with the post-test tasks and questions to test the difference in vocabulary acquisition in the two groups. These were the same as the pre-test tasks to detect the improvements that each group had made. In the following section, we present the scores of each group. By analyzing these scores, we deduce whether the pupils were able to learn effortlessly and joyfully the English vocabulary through songs or textbook tasks.

## Results and Discussion

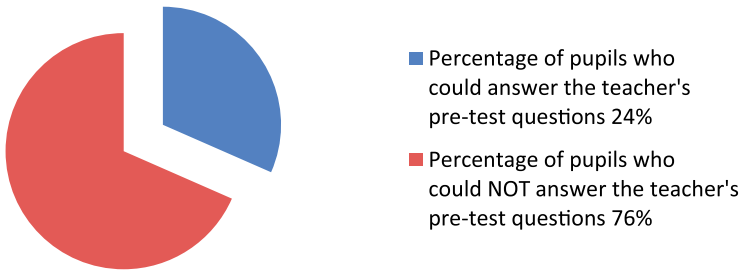
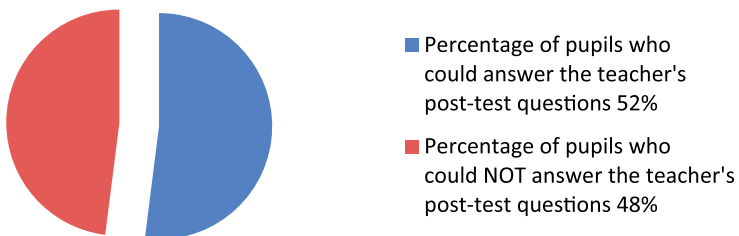
In the pre-test, both groups performed similarly in answering the questions. In the control group, 19 out of 25 pupils (76%) could not respond to the two tasks, while six pupils (24%) could easily answer our questions properly. These six pupils are exposed to English in their family environment through YouTube videos and mobile applications. In the experimental group, 21 pupils (80.77%) could not answer the two tasks and only five pupils (19.23%) responded to the two tasks almost correctly. Thus, these percentages reveal that there was no significant difference between the scores of the control group and the experimental group in terms of vocabulary knowledge.

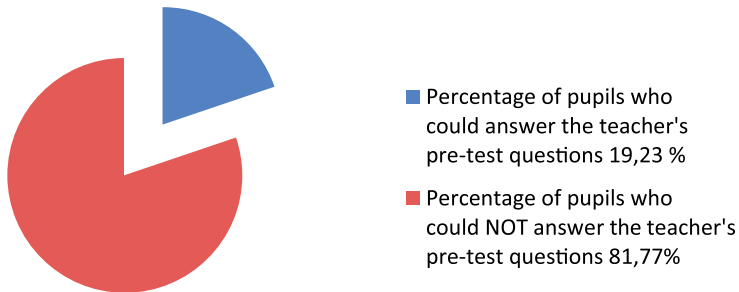
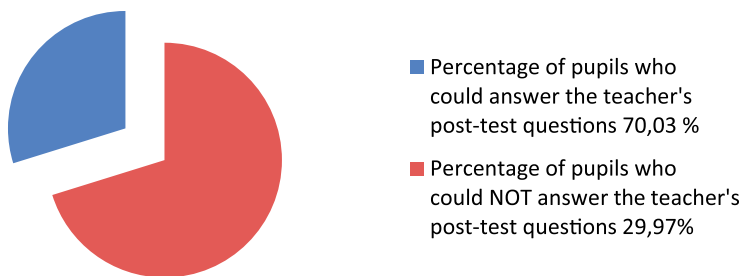
In the post-test, however, the scores of the experimental group had significantly increased, while those of the control group remained average, as presented in Table 1.

**Table 1**

Group	Pre-test score	Post-test score
Control group	24%	52%
Experimental group	19.23%	70.03%

Below, the researchers recapitulate the results they obtained from their former student, who was in charge of the experiment.

**Figure 2. Pre-test results of the control group****Figure 3. Post-test results of the control group**

**Figure 4. Pre-test results of the experimental group****Figure 5. Post-test results of the experimental group**

Figures 2–5 present the overall results of the study conducted by the teacher of the two groups. These graphs clearly show that the percentage of pupils who were able to answer the tasks given to them before the experiment (pre-test) was very low in both groups in comparison to the percentage of who could answer the post-test questions and had retained the target vocabulary in the experimental group. Figures 2 and 3 represent the scores of the control group, which was not exposed to nursery rhymes, before and after the experiment. The percentage of pupils in this group who remembered the vocabulary about numbers, colors, and family members increased from 24% to 52% (from 6 pupils to 13); obviously, this is not a significant improvement. This result was expected by the teacher herself.

As for Figures 4 and 5, they display the pre-test and post-test scores of the experimental group, which was taught the selected vocabulary items with nursery rhymes. The percentage of the pupils who were able to answer the tasks and had retained the target vocabulary increased from 19.23% to 70.03%, that is to say, from 5 to 19 pupils; this is a significant and remarkable improvement.

The other variable we tested before and after the experiment was the pupils' motivation. The teacher observed that the level of motivation to learn English vocabulary in the two groups was almost the same in the pre-test, but increased after the experiment in the post-test; in other words, the pupils in the two classes were excited to learn English words through meaningful interactions (Krashen, 1982) and to develop their cognitive and social abilities. Pupils' excitement and motivation significantly increase when they are learning in a playful, joyful, and fun environment, as already proven by Piaget (1962b, 1964, 1972, 1983) and Vygotsky (1978). In fact, the pupils' level of motivation was related to the teacher herself in the pre-test phase. However, according to the teacher again, during the experiment, pupils in the experimental group were highly motivated and energized to learn and sing. There was clear playfulness during her sessions with the experimental group, as the whole class sang the songs cheerfully. However, most pupils in the control group were passive during the same sessions when reading and doing tasks from the textbook. The rise of motivation for the experimental group while learning through nursery rhymes and music corresponds to what Piaget (1964) referred to when he argued that children take an active role in the learning process to discover the world through observation – going through assimilation and accommodation – and they can easily interact with their environment. This is exactly what happened with the experimental group when they learned in a joyful, playful, and fun environment through singing.

Therefore, the results above show that the use of nursery rhymes with the experimental group significantly increased the vocabulary acquisition scores among pupils in this group. As for the results of the control group, they clearly need to improve in terms of vocabulary acquisition

and even the level of motivation. Therefore, we can deduce from comparing the two scores that using children's songs during English class does help young pupils in developing their vocabulary.

## Conclusion

The aim of the study was to reveal the significant role of songs in teaching English to third-year learners of elementary school in Algeria. As a response to the absence of songs and nursery rhymes in the third-year textbook of English, this research aims to expose this weakness – mainly to novice teachers of English who are chiefly responsible for successfully teaching this new foreign language to our elementary school-children. In fact, this article has proven that teaching English vocabulary in the classroom for young learners through songs not only increases the rate of retaining various vocabulary items effortlessly, but also raises the pupils' motivation to learn in a joyful, lively environment.

On the other hand, although our experiment was with only one teacher and her two classes of third-year elementary level, we contend that the findings of this study are replicable in other socioeconomic contexts; in other words, whether in rural or urban areas of Algeria, or in private or public schools, young children will always love to learn English through songs because it is amusing and cheerful.

Indeed, this research targets novice teachers of English in Algerian elementary schools, mainly those recruited without prior experience in teaching children this foreign language. We also estimate that this study will represent for other researchers a good perspective from which to embark upon similar research so as to authenticate the present study's findings.

**Funding:** This research was funded by the research unit PRFU 2022.

## References

- Actors in education: Teaching English in primary school is a correct and courageous decision.* (2022, August 1). <https://www.echaab.dz>
- Alfieri, L., Brooks, P. J., Aldrich, N. J., & Tenenbaum, H. R. (2011). Does discovery-based instruction enhance learning? *Journal of Educational Psychology*, 103(1), 1–18. <https://doi.org/10.1037/a0021017>
- Arleo, A. (2000). Music, song and foreign language teaching. *Les cahiers de l'APLIUT*, 14 (4). Retrieved February 15, 2023 from [https://www.persee.fr/doc/apliu\\_0248-9430\\_2000\\_num\\_19\\_4\\_3005](https://www.persee.fr/doc/apliu_0248-9430_2000_num_19_4_3005)
- Baroto, M. A. (2017). The effects of language input, learning environment, and motivation toward second language acquisition. *Linguistics, Literature and English Teaching Journal*, 6(2). <http://dx.doi.org/10.18592/let.v6i2.1456>
- Berrahma, M. (2018). *Parents' attitudes towards introducing English in the Algerian elementary school* [Master dissertation, Abou Bakr Belkaid University].
- Degrave, P. (2019). Music in the foreign language classroom: How and why? *Journal of Language Teaching and Research*, 10(3), 412. DOI: 10.17507/jltr.1003.02
- De Groot, A. M. B. (2006). Effects of stimulus characteristics and background music on foreign language vocabulary learning and forgetting. *Language Learning*, 56(3), 463–506. <https://doi.org/10.1111/j.1467-9922.2006.00374.x>
- Dulay, H., Burt, M., & Krashen, S. D. (1982). *Language two*. Newbury House, Rowley.
- Engh, D. (2013). Effective use of music in language-learning: A needs analysis. *Humanising Language Teaching*, 15(5).
- Fisher, K. R., Hirsh-Pasek, K., Golinkoff, R. M., & Gryfe, S. G. (2008). Conceptual split? Parents' and experts' perceptions of play in the 21st century. *Journal of Applied Developmental Psychology*, 29(4), 305–316.
- Galatro, T. (2022). *Why do children learn languages faster than adults?* <https://tessais.org/children-learn-languages-faster-adults/>
- Ghasemi, B., & Hashemi, M. (2011). The study of the characteristics of successful English language teachers from the viewpoint of the English language students of Islamic Azad University, Hamedan Branch. *Procedia Social and Behavioral Sciences*, 28, 411–415. <https://doi.org/10.1016/j.sbspro.2011.11.078>
- Gimatdinova Çağaç, F. (2018). Benefits of learning a foreign language at an early age. *Journal of International Social Research*, 11(59), 132–137. DOI: 10.17719/jisr.2018.2622

- Jamoulle, N. (2017). Music incorporation in ESL classrooms and teachers' attitude toward music's use in the language classroom: An examination of French-speaking secondary schools in Brussels [Unpublished MA dissertation]. Vrije Universiteit Brussel.
- Krashen, S. D. (1981). *Second language acquisition and second language learning* (Vol. 2). Pergamon Press.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. Longman.
- Matt (2012, November 28). Color Song for Kids: Learn 9 Colors. [Video]. YouTube. <https://www.youtube.com/watch?v=k-2X98IsdNY>
- Mello, G. de, Ibrahim, M. N. A., Arumugam, N., Husin, M., Omar, N. H., & Sathiyaseenan, S. D. (2022). Nursery rhymes: Its effectiveness in teaching of English among pre-schoolers. *International Journal of Academic Research in Business and Social Sciences*, 12(6), 1914–1924. DOI:10.6007/IJARBS/v12-i6/14124
- Middle East Eye. (n.d.). <https://www.middleeasteye.net/fr/reportages/algerie-anglais-langue-ecole-primaire-enseignement-education>
- Murphy, T. (1990). The song stuck in my head phenomenon: A melodic din in the lad? *System*, 18(1), 53–64. [https://doi.org/10.1016/0346-251X\(90\)90028-4](https://doi.org/10.1016/0346-251X(90)90028-4)
- Piaget, J. (1962a). *Comments on Vygotsky's critical remarks*. The M.I.T. Press.
- Piaget, J. (1962b). The stages of the intellectual development of the child. *Bulletin of the Menninger Clinic*, 26(3), 120–128.
- Piaget, J. (1964). Development and learning. In R. Ripple & U. Rockcastle (Eds.), *Piaget rediscovered*. Cornell University Press.
- Piaget, J. (1972). *La représentation du monde chez l'enfant*. [The child's conception of the world]. Presses Universitaires de France. (Original work published 1926)
- Piaget, J. (1983). Piaget's theory. In P. Mussen (Ed.), *Handbook of child psychology* (Vol. 1; pp. 103–128). Wiley.
- Pransiska, R. (2016). Requirements of teaching English for young learners: An overview in Padang, West Sumatra. In *Prosiding of the 4th International Seminar on English Language and Teaching* [ISBN 978-602-7443t].
- Qu, Q., & Damian, M. F. (2019). The role of orthography in second language spoken word production: Evidence from Tibetan Chinese bilinguals. *Quarterly Journal of Experimental Psychology*, 72(11), 2597–2604. <https://doi.org/10.1177/1747021819850382>

- Saracho, O. N. (2023). Theories of child development and their impact on early childhood education and care. *Early Childhood Educ J*, 51, 15–30. <https://doi.org/10.1007/s10643-021-01271-5>
- Sim, Z. L. & Xu, F. (2017). Infants preferentially approach and explore the unexpected. *British Journal of Developmental Psychology*, 35(4), 596–608.
- Skidmore, S. (2008). Experimental design and some threats to experimental validity: A primer [Paper presented at the *Annual Meeting of the Southwest Educational Research Association* (New Orleans, LA, February 6, 2008)]. <http://sera-edresearch.org/>
- Super Simple Songs (2023, March 30). Our Family - Nursery Rhymes for Children. [Video]. YouTube. <https://www.youtube.com/watch?v=KjI5sPWcD-o>
- Tamrabet, L., & Chenni, A. (2022). *My Book of English: Primary school Year Three*. (Algeria textbook). Ministry of Education. Onsp. Algeria.
- The Singing Walrus. (2018, August 21). Number song 1-20 for children | Counting numbers. [Video]. YouTube. <https://www.youtube.com/watch?v=D0Ajq682yrA>
- Tse, A. Y. (2015). Malaysian teachers' perspectives on using songs in English language teaching. *International Journal of Social Science and Humanity*, 5(1), 87–89.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Waninge, F., Dörnyei, Z., & de Bot, K. (2014). Motivational dynamics in language learning: Change, stability, and context. *Modern Language Journal*, 98(3), 704–723.
- York, J. (2011). Music and MEXT: How songs can help elementary school English teachers teach and their students learn. *The Language Teacher Journal*, 6, 250–261.
- Zosh, J. M., Hirsh-Pasek, K., Hopkins, E. J., Jensen, H., Liu, C. C., Neal, D., Lynneth Solis, S., & Whitebread, D. (2018). Accessing the inaccessible: Redefining play as a spectrum. *Frontiers in Psychology*, 9, 1–12. <https://doi.org/10.3389/fpsyg.2018.01124>





**Benjamin Eni-itan 'F. Afolabi**

<https://orcid.org/0000-0003-3712-830X>

Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria

[afolabi.benjamin@oouagoiwoye.edu.ng](mailto:afolabi.benjamin@oouagoiwoye.edu.ng)

**Tolulope Aduke Falusi**

<https://orcid.org/0009-0000-8492-1138>

Afe Babalola University, Ado-Ekiti, Ekiti State, Nigeria

[tolulopef@abuad.edu.ng](mailto:tolulopef@abuad.edu.ng)

## Skits and Comic Illustrations: Means of Transmedia Storytelling and a Platform for Social Change through Healthy Learning

(pp. 297–317)

Suggested citation: Afolabi, B. E. F. & Falusi, T. A. (2023). Skits and Comic Illustrations: Means of Transmedia Storytelling and a Platform for Social Change through Healthy Learning. *Multidisciplinary Journal of School Education* 12(2(24), 297–317. <https://doi.org/10.35765/mjse.2023.1224.15>

### Abstract

**Objectives of the study:** The quest to establish how skits and comic illustrations have made an impact through healthy learning for social change prompted this study that focuses on students of Rufus Giwa Polytechnic, Owo, (RUGIPO) Ondo State. As a result, the research questions that guided this study were: what is RUGIPO students' extent of exposure to skits programs and educational comic illustrations? What are the health benefits of their exposure to comedy skits and comic cartoons? What is the impact of skits and comic illustrations on the students' lifestyles, and lastly, what are the similarities and differences in the two media that determine their transmedia rendering components.

**Research method:** The method used in this study is essentially a survey method, which is crucial for obtaining opinions from the target population. A descriptive research approach was also used in clarifying essential concepts.

**A brief description of the context:** Transmedia storytelling is narration across multiple media, each contributing to the story; in that regard, it becomes innovative. Skits with comic illustrations are forms of media that can be used in the teaching process. Their core component is humor, very popular in Nigeria, which is experiencing all forms of social problems, also evident in academia. Social learning theory, developmental media theory and the Socio-Ecological Model are the theoretical frameworks adopted in this study. They are based on the media and also rooted in psychology and sociology, thereby forming a background to ground the findings of the study.

**Research findings:** The findings revealed there is a great shortage of local transmedia production, while the development of transmedia narratives is a complex creative exercise from a technical point of view. However, the more students read and watch humorous content through skits and comic illustrations, the more they learn how to interact in their peer groups. Skits and comic illustrations as a form of media remain influential.

**Conclusions and recommendations:** Both skits and comic illustrations rely on humor. The study therefore explained that when exposed to both, the health benefits are psychological and enhance mental health. Among other things, it suggested that the National Orientation Agency of Nigeria should adopt transmedia storytelling as a strategic tool to enhance their sensitization campaigns. Creators of skits and comic illustrations are also advised to consider native transmedia productions for wider reach and positive social change.

**Keywords:** illustration, education, health, transmedia, comedy skits, social change

## Introduction

Society in recent times has been marked by a wide variety of challenges; regrettably, the people who are on the receiving end are the very cause of most of the social problems common among youths. It is necessary to change attitudes and beliefs, which is why continuous sensitization is so important so that those concerned will keep learning to stay informed.

A key environment for creating such re-orientation and shaping lives is the institution of higher education, consisting of colleges and schools. Essentially, concentration is vital to influence knowledge; one means of achieving this is by making the learning environment and the atmosphere friendly, accommodating and safe. This is an area where humor as a tool in education and learning is desirable. This is the quality of being amusing through comedy: funny plays, light-hearted jokes, amusing dramas, etc. Maslow, after all, summarizes “humor and laughter as education in a palatable form” (Lowenstein & Bradshaw, 2004, p. 57). Strategically, the incorporation of humor into the dissemination of knowledge can be aided through cartoons or illustrations, comic books, models (2D / 3D animated series) and comedy skits; all of which are not only loaded with information, but also have the qualities of “transmedia”: telling stories through multiple forms. Skits, to clarify, are short theatrical episodes or literary works, which according to Bravolol (2022), are often humorous. However, while some concepts may not be easy to teach or learn through jokes, explaining abstract ideas through humor, on the other hand, will obviously make more sense for learning. Illustration is an effective teaching tool, as a visual aid for learning, while it helps visual learners to comprehend ideas better with visual cues, charts etc. (Smith, 2019). Green and Myers (2010) reported similar findings on visual aids in medical education, labeled as: “Graphic Pathographies.” They found that visual stories help physicians understand the patients’ experience of illness personally, by capturing their misunderstandings about diseases that can hinder compliance and diagnosis. The relevance of illustrations, whether comical or non-comical, is not restricted only to health and schools. Satirical illustrations also have applications in all walks of life, as they aim to correct social ills and thus teach good morals. From a pedagogical point of view, transmedia narratives (through skits or illustrations, etc.), which can currently be developed for the teaching-learning process, have evolved along with technological means (Amon, 2019). This refers to technologies such as the Web/Internet, screens and other media technologies. However, Fleming (2013) agreed that transmedia in learning has an impact on the development of media literacy among learners. Interestingly, this can also have a direct or indirect impact on social

change. Social change is believed to be “a process involving individuals, communities or societies that enables them to adopt and sustain positive behaviors” (Prostejov, 2019, p. 9); therefore, its goal is improving lives.

Essentially, this study it is beneficial not only for education, i.e. learning, but also for the media and health sector. On this note, with a view to promoting healthy academic life, the objectives of this study are to: (1) determine the extent of Rufus Giwa Polytechnic (RUGIPO) students’ exposure to skits programs and educational comic illustrations; (2) examine the health benefits of their exposure to comedy skits and comic cartoons; and (3) to investigate if skits and comic illustrations have an impact on students’ behaviors and lifestyles. Lastly, to examine the two media (or media) through similarities and differences so as to determine their components for transmedia adaptation. The site of the study is Rufus Giwa Polytechnic in Owo, a town in Ondo State in southwestern Nigeria that supports culture and education. Unfortunately, Rufus Giwa Polytechnic, Owo, a public school owned by the state government (RUGIPO, 2021), has been reported to be involved in cultism, internet fraud and union clashes (Johnson, 2021 & Abuja Reporters, 2019). These are social problems that can completely derail a student from learning, and certainly learning is the primary reason for schooling. Therefore, this study aims to look at comedy skits and comic illustrations (in light of the aforementioned problems) especially since their core attribute is humor. This will help draw logical conclusions about social change. This is particularly relevant because these two media (illustrations and skits) can also serve the purpose of transmedia narration. The question that prompted this study is what role they have played in healthy learning practices.

### **Theoretical Framework**

This study finds support in social learning theory, developmental media theory and a theory-based model called the Socio-Ecological Model. The social learning theory provides ample evidence that even if children and adults have not actually engaged in a behavior, they can learn

through imitation (Bandura, 1986). This theory, propounded by cognitive psychologist Albert Bandura in 1986, is also known as the Social Cognitive Theory. This theorist identifies 3 main processes involved in learning. These are direct experience, indirect or vicarious experience from observing others (modeling), and storing and processing complex information through cognitive operations (Bandura, 1986). In addition, for observational learning to take place, it requires attention, retention, reproduction and motivation (from the learner) (Wood & Bandura, 1989). From this, it follows that people reproduce the actual observed behavior, become more attentive when motivated and thus learn and put the acquired knowledge into practice. This theory is applicable to the present study, since creating skits oftentimes involves mimicking a character in a funny manner to achieve humor and convey a necessary message. Likewise, a character can be mimicked through illustrative caricature, amusingly or otherwise, simply to convey a meaningful message. The recipient, consciously or subconsciously, may also copy the funny acts, thereby receiving the message in a more flexible way, which facilitates understanding. As a result, imitation, especially comical imitation, can help to foster learning and relieve tension or invigorate and enliven a boring study/ class.

As for the development media theory, it is believed that the media is a key player in the development of a nation and society. The media encapsulate all platforms (TV, radio, film, print and web, etc.) that disseminate information through content: music, graphics, skits, interactive projects, cartoons and more. Shared information content makes society (including the education sector) more vibrant and relevant in all spheres. This theory is relevant to this study, especially since Nigeria is a developing country, thirsty for positive change and good morals amidst social decay (Afolabi, Falade & Siyanbola, 2022) while illiteracy, which is still evident in society, also needs urgent attention. The idea is that even if the media cannot bring a complete solution, they can serve as an instrument to aid tangible results. Therefore, solutions to social challenges can be obtained through one form of media or another, which is relevant to learning, studying, training and relaxation. Creative information, such as skits and comical illustrations, is an entertaining form of relaxation.

It calms the nervous system, which is also good for health and well-being: more reasons why media is a force to be reckoned with in terms of development, not only socially, but also in terms of health.

The Socio-Ecological Model formalized as a theory in the 1980s addressed the complex interplay between factors that influence human behavior, which are individual, relational, community and societal factors (Kilanowski, 2017). All of these factors can have both positive and negative effects; however, “social factors are sometimes the ‘enemies of change,’ but can also support change” (Prostejov, 2019, p. 11). The relevance of this theory to this study is that it emphasizes the effects of social factors, and lists the media as its examples: the media belong to the fourth layer, the highest level (see Figure 1). From this perspective, it can be deduced that the influence of the media with its content (comic illustrations, skits, etc.) on people is high, and being at the top, an individual is least able to influence it (Prostejov, 2019), or rather reverse is the case. The media in each of its forms is powerful, but the rate at which each platform has the ability to influence varies. The theory, with regard to this study, is also important in that it showcases many factors (see Figure 1) that influence people in terms of adaptability and behavioral change.

**Figure 1. The Socio-Ecological Model in hierarchical order reflecting drivers of change**



Source: Center for Disease Control and Prevention (2022) and Prostejov (2019)

---

## Methodology

This study is primarily a survey, using a structured questionnaire as well as descriptive statistics (frequency, percentage and mean). The components of skits and comic illustration were examined with the aid of relevant visuals while relying on in situ, library research with a descriptive research approach. According to Vijayamohan (2022), the descriptive research method examines the background, details and existing pattern of a phenomenon to fully understand it. At the same time, it involves describing the behavior of the subject without influencing it in any way. Primary data was obtained through a closed-ended questionnaire. Secondary data was obtained from journals, conference materials, textbooks, national newspapers, etc. for the qualitative aspect of the study. The total study population is 8,550 comprising solely the students of RUGIPO. The sample size comes from the Krejcie and Morgan standard table; while the total population exceeds 8,000, but not higher than 9,000. Thus, as calculated in the table, 368 respondents are needed (see Table 1). A judgmental technique also known as purposive sampling was adopted, and the students were selected randomly. Purposive sampling of the students was also essential because it has been noted that it is among the younger generations that many social vices occur (Johnson, 2021 & Abuja Reporters, 2019).

**Table 1. Krejcie and Morgan's Table**

<b>N</b>	<b>S</b>	<b>N</b>	<b>S</b>	<b>N</b>	<b>S</b>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note: **N** is population size, **S** is sample size.

Source: Krejcie & Morgan (1970)



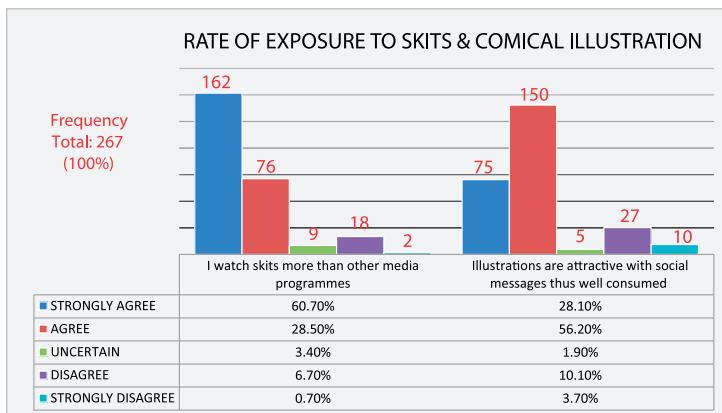
## Research Instrument

Face and content validation of the questionnaire was conducted by experts in health psychology, visual communication and media. The instrument was pilot tested using 40 respondents from another location, not included in the study. Cronbach alpha reliability estimation was used to determine the internal consistency of the items. The result yielded alpha reliability estimate of 0.80, showing high internal consistency of the items; thus the survey was shown to be valid and reliable. 368 copies of the questionnaire were distributed, 267 (about 73%) were duly retrieved.

## Results and Discussion

### *Objective 1: determination of RUGIPO students' rate of exposure to skits and educational comic illustrations*

**Figure 2. Rate of RUGIPO's students' exposure to skits and educational comic illustrations**



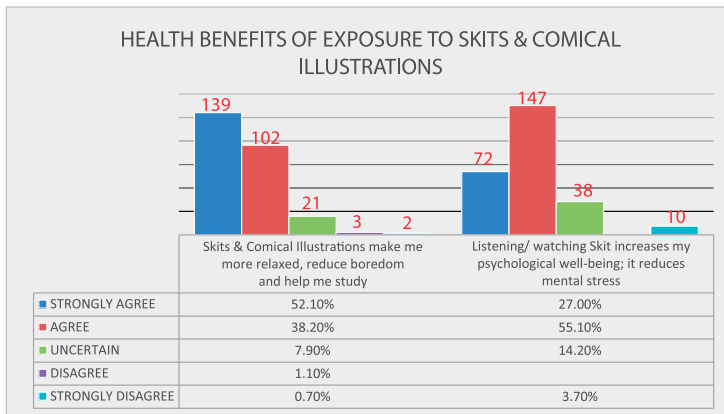
Source: researchers' field research, 2021

The results in Figure 2 reveal that RUGIPO students are highly exposed to humor through skits and comic illustrations. This is because humor remains a core element of comedy that is an enlivening force

(National Open University of Nigeria, 2006). According to Bricker 1980 and Duncan, 1985, this makes skits and comic illustrations attractive for viewers, while helping to promote and solidify valuable social norms (qtd. in Kim & Plester, 2019, p. 3; Polimeni, 2016). In addition, skits and comic illustrations are rich in social content, which can be either entertaining or educational, or both at the same time, making them more frequently consumed than other media programs. The reason for the high consumption is also that illustrations help improve people’s observational skills (Green and Myers, 2010). This is possible because illustrations create a sense of balance, and when addressing the right audience, they add personality to words for entertainment value (Smith, 2019). Not surprisingly, the media is at the highest level of the socio-ecological model (see Figure 1), and exerts great influence on people (Prostejov, 2019). Unfortunately, in a private interaction with the respondents, they lamented that despite their exposure to skits and comic illustrations, native transmedia productions are very scarce.

**Objective 2: the health benefits of exposure to comedy skits and cartoons.**

**Figure 3. Health benefits of exposure to skits and comic illustrations**



Source: researchers' field research, 2021

A total of 241 respondents (Figure 3) agreed that skits and comic illustrations reduce boredom, make them more relaxed, and help improve their academic performance. At the same time, a total of 219 students said that skits reduce mental stress and make them more mentally fit (Figure 3). Succinctly, “humor reduces negative emotions... reading or viewing something humorous has a positive and energizing effect. It is beneficial to people’s overall well-being” (Shatz, 2016). This position along with the results (Figure 3) are also in line with Paul Ojo’s study. The psychologist and health analyst at the MUMS Foundation in Nigeria, explained that humor strengthens our endocrine system, extending our life (Ojo, P. O., *Personal Communication*, February 1, 2023). He showed that the precise health benefit of being exposed to skits and comic illustrations is psychological, in terms of enhancing mental health. This impacts perception, behavior, and notably, cognition – the ability to absorb knowledge; when the brain is calmed, learning becomes easy. Developmental media theory assumes that the media are a key player in the development of society. It is obvious from the findings that skits and comic illustrations, as a form of media, contribute to the development of human health and well-being.

**Objective 3: the impact of skits and comic illustrations on the lifestyles and behaviors of RUGIPO students**

**Table 2. Impact of skits and comic illustrations on the lifestyles and behaviors of RUGIPO students**

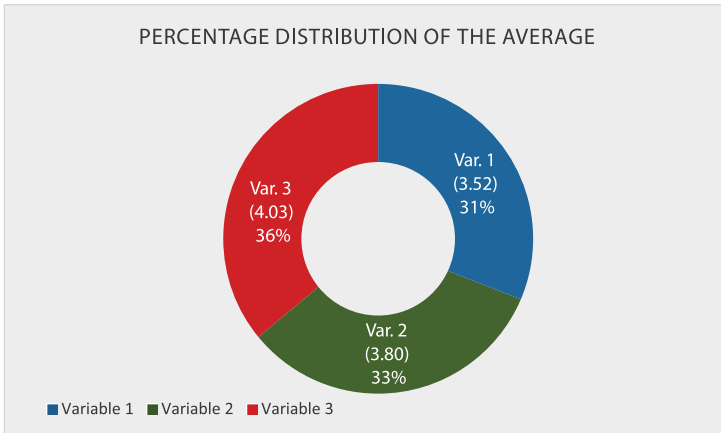
STATEMENT (Variable)	SA	A	U	D	SD	Total	Mean	Remark
Ideal lifestyles and acceptable moral standards are portrayed in skits and comic illustrations.	60 (22%)	106 (40%)	45 (17%)	26 (10%)	30 (11%)	267 100%	3.52	Valid
Regular exposure to humor through cartoons and skit programs helps to shape my view of social behavior.	54 (20%)	176 (66%)	–	6 (2%)	31 (12%)	267 100%	3.80	Valid
The more I watch skits and view illustrations, the more I learn how to interact with my peers.	64 (24%)	165 (62%)	28 (10%)	4 (2%)	6 (2%)	267 100%	4.03	Valid

SA=strongly agree, A=agree, U=not sure, D=disagree, SD=strongly disagree

Source: researchers’ field research, 2021

The results (Table 2) present the students' responses as a unified whole; the gist is simply that skits and comic illustrations serve more than just entertainment. They also serve as tools to promote good morals for social change, indigenous culture and strengthen Nigerian society. The respondents are highly influenced by watching and reading humorous content. Therefore, the more students watch skits and read or view comical illustrations, the more they learn how to interact with their peers; their views on social behavior become sharpened as good manners are exemplified in the humorous material. Additionally, in order to say that a respondent has a positive reaction towards the influence of skits and comic illustrations, he or she must at least score a mean value of 3.0 or higher. A variable with a mean below 3.0 is perceived negatively and therefore invalid. This is in accordance with the calculations of Mzomwe, Calkin & Respickius (2019) on the midpoint of a 5-point scale. Therefore, all variables in Figure 4 are valid since they have a mean above 3.0, which is consistent with the decision rule.

**Figure 4. Mean of variables and corresponding percentages in order of importance**



Source: researchers' field research, 2021

For the sake of clarity, while all the variables/results in Figure 4 are significant because they are valid, variable 3 remains the most important because of its highest percentage. This simply means that the more students

read and watch humorous content through skits and comical illustrations, the more they learn to interact with their peer groups. This can be ascribed to the fact that modeling is another way of acquiring knowledge that is quite appealing. The characters portrayed in either skits or cartoons are models that can be mimicked, consciously or sub-consciously. The observational learning style or modeling is a technique put forward by social learning theory and can be seen to have a positive effect. Justification for the validity of all the variables in Figure 4 can also be attributed to the developmental media theory and the Socio-Ecological Model (SEM). The media, from the point of view of SEM, is one of the other social factors that influence human behavior, in which the media's effect on people through communication activities is high; making it a significant player in the development of the nation and society at (Prostejov, 2019 & Oluwasola, 2020). This seem indisputable since Johns Hopkins CCP (n.d.) also stressed that the key to social and behavioral change is communication, which is crucial in order to improve lives and overcome social barriers. The media is synonymous with communication, and communication can be experienced through skits with comical illustrations. These points therefore explain their essence which is to communicate, entertain, and instill essential societal values via salient information.

***Objective 4: exploration of the two media for similarities and differences to determine their transmedia rendering components.***

#### **Skits and Comic Illustrations: Modes, Differences and Similarities**

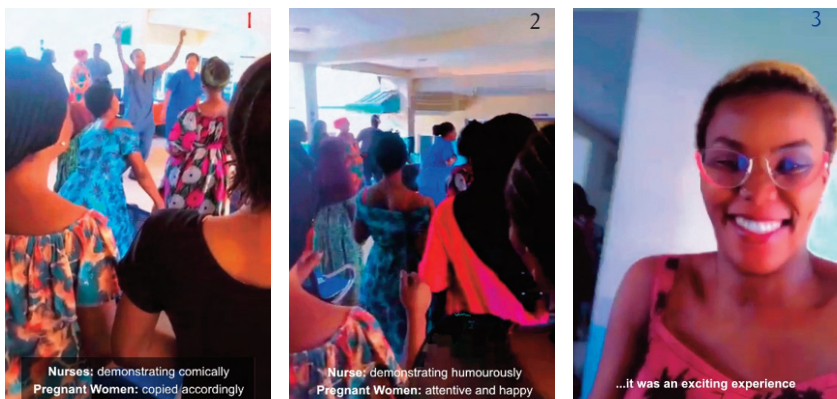
Respondents (RUGIPO students) took part in unstructured interviews for researchers to learn about the components of skits they are exposed to. They disclosed that many skits are accessed during live (social) events on campus. They are often humorous, with themes focused on many important aspects of life; therefore, they are educational and entertaining. In addition, noticeable features of skits include colorful costumes and the use of the Owo (Yoruba) dialect to create comical effects. They hinted that some of their lecturers also incorporate a humorous approach to make their lectures more engaging and lively. Some also revealed that they

sometimes go online to watch comedy skits by other Nigerian and international comedians. Skits are considered humorous sketches that come in different modes. They can be used in film, performed on stage in live productions, or incorporated into a teaching style.

Based on these facts, components of skit were further examined in comparison with another skit obtained from a Primary Health Center, in southwestern Nigeria.

In Figure 5 below, nurses in blue scrubs incorporated skits into the instructions, demonstrating different exercises for pregnant mothers. The mothers, at different stages of pregnancy, were exercising excitedly, and learning exercises for muscle fitness. It can be seen that the prenatal classes (Figure 5), showcasing the components of skits, are a clear reflection of the skits witnessed by students of RUGIPO. The pregnant mothers are happy with the humorous approach to learning (see Figure 5, frame 3). The scrubs of the nurses/midwives are the formal attire of medical professionals, while they instructed (the pregnant women), in a live setting (the clinic), exclusively in the Yoruba language. All of this perfectly corroborated the respondents' verbal account of the skit elements that ultimately made their learning experience, both in the classroom and at social gatherings, lively and educational.

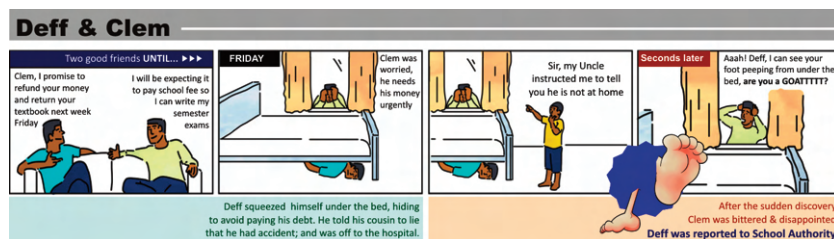
**Figure 5: Skits woven into ante-natal exercises for mothers  
 at a public maternity clinic, Nigeria**



Source: Authors' Archive. 2022

Comics are illustrations used in print media, the Internet, and television/film. Illustrations or cartoons come in either 2D (Figure 6) or 3D versions. 2D is a flat design, while 3D has length, width and depth (see the foot on the last frame in Figure 6) which create a more realistic effect. 3D work involves designing a model of an object/character with substantial details. Technically, this is a mathematical simulation of a real 3D object on a computer. Consequently, the model can be accessed from any point of view, as it can be illuminated, textured and given the ability to move and change (Brinkmann, 1999).

**Figure 6: Educational comic illustration that RUGIPO students are exposed to, addressing moral and social issues.**



Source: Tunbe-D's Comedy for RUGIPO Campus Magazine, 2023.

A creative comedy narrative or skit is characterized by humor. It must have a first act or a full line of text (comparable to a beginning), a middle (i.e., a development) and a “punchline” which is referred to as a resolution (National Open University of Nigeria, 2006). Shatz (2016) notes that timing is another element of a skit; apart from that, surprise is vital in the art of storytelling. The point is to narrate from what the audience already knows to what they do not expect; thus leading to a resolution they never thought of (National Open University of Nigeria, 2006). This is sure to create an exciting atmosphere, as reflected in Figure 5. Visually, skits and comic illustrations rely on words: textual elements, monologues or dialogue (Figures 5 and 6). Skits can be developed into film; while 2D / 3D characters can be created from such skits for other media. Concurrently, skits can be transformed into cartoons, and cartoons can also be developed into skits. This is underscored by the fact that “transmedia encompasses the entire

spectrum of media platforms, as well as live events and installations” (Ondine, 2013). Comic illustrations rely on color for visual appeal (Figure 6), and skits also rely on the same through costumes (Figure 5). In production to any compatible media format, both can be enhanced with computer-generated effects for more comical effect.

Whereas comic illustrations require a flat surface (e.g., TV or paper, see Figure 6) as a backdrop, skits take place on stage or live (Figure 5), except for rendering into other media formats, such as film. Also, music can be easily incorporated into skits, but is not applicable to illustrations intended for print except for transfer to an audiovisual format that supports voice and music components. Skits involve people as characters, while illustrations are more of creatively drawn models. These glaring contrasts give each medium the opportunity to have a visible impact on transmedia production (Jenkins, 2007). Thus, it can be concluded that while the theme of each transmedia production may be the same, technically the approach to rendering for media formats will always be different. In the same vein, media elements have their own strengths for great communication effects on their own, but when presented in multimedia form (i.e., through integration of different media elements), they are even more powerful. This is another reason in favor of transmedia production, especially since this is its emphasis. Transmedia storytelling supports and lives on multiple media, in which it is the process of extending original content to other platforms, while new elements are introduced into narrative production (Hoon Park, Jeehyun & Yongsuk, 2020). As a result, it creates a “world, a universe, where the story is constructed like a puzzle, each part of which is independent and can be consumed on its own” (Tellería & Prenger, 2019, p. 453). This provides an intriguing new flavor of content worthy of being consumed for both informational, educational and entertainment purposes. It also explains why while there is a common concept, transmedia is clearly different from multimedia and cross-media. The latter simply means a story that takes place exclusively in different media (Tellería & Prenger, 2019). All in all, the giveaway is straightforward: telling stories with the aid of comedy skits and comical illustrations can take the form of transmedia narrative, which offers a more engaging and interactive form of media consumption.



Interestingly, as posited by Geraghty, examples of interactive engagement include: “mobile apps, websites, costume games (dressing up as characters), wikis and videos, as well as other forms of user-generated contents” (qtd. in Leaning, 2017, p. 89); which in turn will help immerse audiences more fully and completely in the world of transmedia storytelling. Unfortunately, Leaning (2017) notes that such a transmedia environment, obviously linear and non-linear, can still be problematic and contradictory to media education. Even in the context of the pedagogical process, despite its gains (i.e., transmedia), Amon (2019) maintains that transmedia narrative is a rather difficult method. Additionally, while developing engaging linear content is not easy, interactive composition (of stories) designed for “transmedia” is even more complex (Pea, 1991).

## Conclusion

Transmedia is “storytelling on the cusp of new possibilities” (Philips, 2012, p. 17), in which a variety of media are used for a specific narrative, each with a significant impact on the narrative. Skits and comic illustrations are perfect examples of media that can be adopted in this regard. Both creators rely on humor as their core component while it has been observed that native transmedia production is very rare, and from a technical point of view, transmedia development is not easy. The duo are agents of transmedia production, as it supports the addition of new elements: text/sound, images, colors, etc. to enhance the storyline. Skits and comic illustrations are needed as a means of reorientation to denounce social vices, as well as to address the waning rich African culture; especially since research has proven that the duo is influential and thus effective in educating the public. Social ills are evident and rampant in Nigerian academia, so the study focused on RUGIPO. It can be concluded that the key reason why skits and comic illustrations stand out as a platform for social change is that information conveyed through humor is easily remembered and is always received with enthusiasm; thus, they help to clearly understand ideas. However, they are needed in Nigeria

for sensitization campaigns, especially at a time when humorous content is highly consumed. Concurrently, the primary health benefit of skits and comic illustrations is that they have a psychological impact and, as a result, promote mental health in the learning process. Addressing social defects in academia and society therefore requires the use of skits and comic illustrations through transmedia storytelling. This study therefore recommends that:

- Creators of skits and comic illustrations should consider native transmedia productions, as this is the wish of the audience, but is missing. Such content will appeal to the audience and also serve as a communication solution. It will also help reach a more targeted audience for social change.
- The technical aspects involved in adapting transmedia stories, given their linear and non-linear nature, therefore require the involvement of relevant media and visual design experts, including researchers with a keen understanding of the language of the development and production process.
- It is recommended that the National Orientation Agency (NOA) in Nigeria recognize the importance of transmedia narratives and adopt them as a strategic tool to enhance their sensitization efforts.
- Transmedia storytelling should be used to promote healthy learning through the development of visual aids; incorporating appropriate skits, illustrative stories and strategic media content as needed. Instructional designers are therefore advised to be creative and innovative.
- Finally, the Nigerian government is also committed to adequately funding education so that institutions can invest in transmedia learning/education. Such education will help promote mental well-being among students, and in return the positive change desired in the broader society.

**Funding:** This research received no external funding.

## References

- Abuja Reporters (2019, June 15). *Rufus Giwa Polytechnic student shot dead in cult wars*. <https://abujareporters.com.ng/rufus-giwa-polytechnic-student-shot-dead-in-cult-wars-see-gory-pix/>
- Afolabi, B. E. F., Falade, A. A. & Siyanbola, A. B. (2022). Globalisation or Globalisation: Visual communicators' role amidst societal decadence. *FUTA Journal of Visual Communication Design*, 1 (1), 42–56.
- Amon, B. T. (2019). Transmedia Narratives in Education: The Potentials of Multi-sensory Emotional Arousal in Teaching and Learning Contexts. In B. Peña-Acuña (Ed.). *Narrative Transmedia* (pp. 1–26). <http://dx.doi.org/10.5772/intechopen.88168>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bravolol (2022). *Skit*. Bravolol Dictionary (Android App) version 7.8.0
- Brinkmann, R. (1999). *The Art and Science of Digital Compositing*. San Francisco, CA: Morgan Kaufmann.
- Fleming, L. (2013). Expanding learning opportunities with transmedia practices: Inanimate Alice as an Exemplar. *Journal of Media Literacy Education*, 5 (2). <https://doi.org/10.23860/jmle-5-2-3>
- Green, M. J. & Myers, K. R. (2010). Graphic medicine: use of comics in medical education and patient care. *BMJ* 340:c863. pp. 574–577
- Hoon Park, J I, Jeehyun, L. & Yongsuk, L. (2020). Do webtoon-based TV dramas represent transmedia storytelling? Industrial factors leading to webtoon-based TV dramas In Dal Yong Jin (Ed.). *Transmedia Storytelling in East Asia, The Age of Digital Media* (pp. 111–129). NY: Routledge
- Jenkins, H. (2007, March 21). *Confessions of an ACA-Fan*. [http://henryjenkins.org/2007/03/transmedia\\_storytelling\\_101.html](http://henryjenkins.org/2007/03/transmedia_storytelling_101.html)
- Johns Hopkins CCP (n.d.). *Social and behavior change*. <https://ccp.jhu.edu/what-we-do/expertise/social-behavior-change>
- Johnson, D. (2021, February 10). *Student killed as SUG election in Ondo Polytechnic turns bloody*. <https://www.vanguardngr.com/2021/02/student-killed-as-sug-election-in-ondo-polytechnic-turns-bloody>
- Kilanowski, J. F. (2017). Breadth of the Socio-Ecological Model. *Journal of Agromedicine*, 22 (4), 295–297. <https://doi.org/10.1080/1059924X.2017.1358971>

- Kim, H. S. & Plester, B. A. (2019). Harmony and Distress: Humor, Culture, and Psychological Well-Being in South Korean Organizations. *Frontiers in Psychology* 9 (2019) <https://doi.org/10.3389/fpsyg.2018.02643>
- Leaning, M. (2017). The nature of digital media content. In M. Leaning (Ed.). *Media and Information Literacy: An Integrated Approach for the 21st Century (1st Ed)*. (pp. 81–99). UK: Chandos Publishing. <https://doi.org/10.1016/B978-0-08-100170-7.00005-6>
- Lowenstein, A. J. & Bradshaw, M. J. (2004). *Fuszard's Innovative Teaching Strategies in Nursing, 3rd Ed*. MA: Jones & Bartlett Learning.
- Mzomwe, Y. A., Calkin, S. M. & Respickius, O. C. (2019). Investigating Students' Attitude towards Learning Mathematics. *International Electronic Journal of Mathematics Education*, 14 (1), 207-231. <https://doi.org/10.29333/iejme/3997>
- National Open University of Nigeria (2006). *Writing for mass media II – MAC 118* (Course Guide). Lagos: NOUN.
- Oluwasola, O. (2020). The normative theories of the press in the digital age: a need for revision. *IMSU Journal of Communication Studies*, 4 (2), 27–36.
- Ondine, A. (2013, June 2). *Video: 8 Elements of Transmedia*. <https://www.provideoalition.com/video-8-elements-of-transmedia/amp>
- Pea, R. D. (1991). *Learning through multimedia*. Los Alamitos, CA: IEEE Inc.
- Philips, A. (2012). *A Creator's guide to transmedia storytelling*. NY: McGraw-Hill.
- Polimeni, J. O. (2016). Jokes optimise social norms, laughter synchronises social attitudes: an evolutionary hypothesis on the origins of humour. *European Journal of Humour Research*, 4 (2) pp. 70–81. <http://dx.doi.org/10.7592/EJHR2016.4.2.polimeni>
- Prostejov, P. S. (2019). *Practitioner's Guide: Social and Behaviour Change. Insights and Practice*. Bonn, Germany: GIZ GmbH.
- RUGIPO (2021, August 9). *Home*. <https://rugipo.edu.ng/cms>
- Shatz, I. (2016, July 5). *The humor effect: the benefits of humor and how to use it effectively*. <https://effectiviology.com/humor-effect>
- Smith, L. (2019, June 20). *The importance of illustrations in design*. <https://www.ocreations.com/importance-of-illustrations-in-design>
- Tellería, A. S. & Prenger, M. (2019). Transmedia production: Key steps in creating a storyworld. In M. Deuze & M. Prenger (Eds). *Making Media: Production, Practices, and Professions* (pp.453–464). Amsterdam: Amsterdam Univ. Press.

Vijayamohan, P. (2022, November 18). *Descriptive research 101: Definition, Methods and Examples*. <https://surveysparrow.com/blog/descriptive-research-101-the-definitive-guide>

Wood, R. & Bandura, A. (1989). Social Cognitive Theory of Organizational Management. *The Academy of Management Review*, 14 (3), 361–384.



## Miscellaneous Articles

---







**Krzysztof Gerc**

<https://orcid.org/0000-0003-1124-2315>

Jagiellonian University in Krakow, Poland

[krzysztof.gerc@uj.edu.pl](mailto:krzysztof.gerc@uj.edu.pl)

**Jean M. Novak**

San Jose State University (Professor Emeritus),

Autism Tree Project Foundation, California-USA

[genianovak13@yahoo.com](mailto:genianovak13@yahoo.com)

**Marta Furman**

<https://orcid.org/0009-0004-1069-0428>

Specialist Psychological and Pedagogical Counseling Center, Poland

[martaju@autograf.pl](mailto:martaju@autograf.pl)

## Functioning of the Family System With an Autistic Child: A Comparative Study Between Poland and California, USA (pp. 321–355)

Suggested citation: Gerc, K., Novak, J. M. & Furman, M. (2023). Functioning of the Family System With an Autistic Child: A Comparative Study Between Poland and California, USA. *Multidisciplinary Journal of School Education*, 12(2(24)), 321–355. <https://doi.org/10.35765/mjse.2023.1224.16>

### Abstract

**Objectives of the research:** The aims of this research are to conduct a comparison study between the level of communication and flexibility in families with autistic children in two different geographical locations and cultural contexts – California (USA) and Poland (Europe) – to address whether the level of these two dimensions of family functioning are related to the ego-resiliency of the parents, and additionally to discuss the practical implications that can be drawn from the results.

**Research methods:** Communication and flexibility profiles in family functioning were collected in Poland and California from September 2016 to February 2018. Data on the similarities and differences between parents

of children with autism spectrum disorder in Poland ( $n=111$ ) and California ( $n=105$ ) was collected using Olson's FACES-IV. The Ego-Resiliency Scale was also administered in methodologically standardized conditions and was empirically analyzed along with controlled demographic variables.

**A short description of the context of the issue:** Family functioning and ego-resiliency in families with children with autism are analyzed in this research. The richness of interactions and connections within the family system suggests that when explaining the relationships within the family system, the interpretation that is based on linear causality is abandoned and replaced by circular causality, which is the model of analysis utilized in this research project. The main goals of this research were to compare and contrast family functioning in two geographical locations and cultural contexts and to show statistically significant differences between these two groups, in order to better understand cultural variations and differences that may affect family functioning and ego-resiliency and to provide the different groups with adequate, necessary support services.

**Research findings:** The results revealed statistically significant differences in various dimensions of Family Communication and Flexibility between families of autistic children in California and Poland. With respect to both variables, higher scores were found in the California group. The flexibility results in both groups were defined as flexible. However, in regards to family communication, the result of the California group corresponded to higher standardized scores, whereas those of the group from Poland revealed moderate standardized scores.

**Conclusions and recommendations:** Statistically significant positive correlations were found in the variables of Flexibility and Family Communication between Poland and California. The results of this research are critical, not only from the perspective of scientific development (as similar studies have not been conducted), but also for therapeutic and preventive reasons. They suggest concentrating on preventive activities and aspects that are important for the well-being of the parent as a person, as well as the entire family system, especially the dimensions of communication in families with children with autism spectrum disorder and the ego-resiliency of the parents. However, further research is needed to specifically identify the differences

between the groups based on various demographic variables. Additionally, it is important to develop a practical model to support families with autistic children and to address family satisfaction in intervention strategies, as well as to consider the importance of support groups that may improve satisfaction and ego-resiliency within the family system.

**Keywords:** ASD, flexibility and communication in the family system, educational relationships, family-educational institutional relationships

## Introduction

Parenting is one of the most basic social roles in a person's life. However, functioning within the family system is changing due to technological advances and cultural changes. Research that refers to the concept of a systemic understanding of the family has been presented by Olson and Goral (2003) and Margasiński (2011). The family is viewed as a system and any changes within that system affects the whole family. The family system is also dependent on all the elements within it. Thus, when there is a change within an internal or external element, all the family members are forced to adapt to the change. This adaptation is required for optimal functioning in the family.

Ludwig von Bertalanffy (1984), the creator of the General Theory of Systems, added to the 20th-century theoretical construct that a major component of relationships is connecting a set of elements that comprise and affect the whole system. This model proposes that dynamic interactions exist between parts of the system, causing the elements examined in isolation to behave differently than in the whole system that is composed of them.

In the empirical sciences, psychology has accepted the concepts operationalized on the basis of the systems approach and cybernetics. Of particular importance was the change in the perspective of describing the causes of mental disabilities and disorders from linear to relational. The linear perspective was associated with the psychodynamic approach, which assumes that behavior is caused by a specific fact related to the past.

On the other hand, the relational perspective shifts the emphasis from content to process, searching for the cause of the mental disruption or disorder in current, established patterns of interaction instead of in a specific past event or predisposition for dysfunction. Bertalanffy (1984) did not analyze parts of a system separately, but focused on patterns of relationships within the system and interactions between systems. Systems are characterized by comprehensiveness, totality, holism, and form. This means that, as a result of the interaction of individual elements, a state emerges from the system that is more important than the sum of its parts.

A microsystem is a certain pattern of activities, roles, and relationships that a developing individual experiences in a specific environment with specific physical and material properties. For a child, the microsystem is primarily the environment of their family home, but it also includes their peer group and educational team.

A mesosystem is a set of interrelations between various microsystems in which the developing individual actively participates. For a child with autism spectrum disorder (ASD), this system is generally determined by the interactions between the family and the educational system or between the family and educational and rehabilitation institutions. The child's special educational needs may modify the first type of interaction and long-term cooperation with the educational and therapeutic team may transform the meaning and criteria of medical and rehabilitation interventions. A common dilemma for teachers is resolving the issue of priorities, determined by both educational goals verified by external examinations and by developmental and therapeutic goals.

A macrosystem is an extremely important level of the ecosystem, as it determines the possibilities of action and the quality of functioning at lower levels (e.g., it introduces criteria for rehabilitation and education and their assessment). It is rarely the subject of scientific research.

The upbringing and care for a child born with a disorder is determined within the context of the functioning of the family system. Parents generally experience some kind of mourning and grief following a diagnosis due to the child's lost abilities or limited development. In these circumstances, it can be expected that the functioning of family members,

understood as a whole system, changes. Not only are the roles of individual family members modified, but so are their functions and the expectations related to them, which in turn affects the emotional and cognitive bond between members of the whole family system. The people who constitute a source of care and security in the family, most often the parents or primary caregivers, maintain a balance or homeostasis within the family, optimizing the quality of life of the system and its members – assuming that they perform their functions properly. Cultural conditions and various resources, including psychological ones, are important considerations for parents to utilize in order to keep a balance within the family system.

In this study, ASD is understood as a neurological developmental disturbance (Minschew et al., 2005) that is constitutionally conditioned (Pellicano, 2008) and has biological factors that lead to developmental abnormalities, which may also play an important role (Kishida et al., 2019). Despite many years of research, it is assumed that ASD is an idiopathic neurobiological disorder, the etiological factors of which remain largely unknown. Due to the large diversity within the population of individuals on the autism spectrum, it is not possible to determine specific factors responsible for the degree of functioning or the intensity of symptoms in autistic individuals. Currently, the most popular basis for research on the science of autism is related to the neurodevelopmental hypothesis.

Currently, both the APA (2013) and the World Health Organization (WHO; 2018) report that autism occurs in approximately 1% of the world's population. A review of 71 studies measuring the prevalence of autism spectrum disorder in 34 countries from 2012 to 2022 found an average global ASD prevalence of 1% (Zeidan et al., 2022). A significant upward trend is also observed in a review of studies covering demographic data from 2000 to 2012, in which the rate was 0.62% (Elsabbagh et al., 2012). This observed increase is not indisputably synonymous with an actual increase in the number of individuals on the spectrum, as several cohort studies by Kadesjö Gillberg and Hagberg (1999) on all children born in 1985 and living in Karlstad, Sweden showed that ASD was found in approximately 1.21% of the population. Despite the small sample of 826 children,

the research results may constitute an example of the prevalence of ASD being comparable to current statistical data.

Researchers studying children born in Denmark from 1980 to 1991 have demonstrated a relationship between the increase in the prevalence of the disorder and changes in the diagnostic criteria. According to their results, 60% of the factors responsible for the higher prevalence of ASD in Denmark can be explained by the diagnostic system being updated from the ICD-8 to the ICD-10 and data from discharge papers of individuals using outpatient care being included (Hansen et al., 2015). Changes in diagnostic classifications and greater awareness of the occurrence and characteristics of ASD are among the most frequently mentioned determinants explaining the higher prevalence of ASD in the literature on the subject (Fombonne, 2020; Matson & Kozłowski, 2011).

Contemporary research on the functioning of a family system with autistic children indicates that in autistic individuals, anxiety is the most common co-occurring mental health problem, appearing five times more often than in the general population (Nimmo-Smith et al., 2020). Also, the symptoms of anxiety disorders are more common in those on the spectrum who also have socioemotional and cognitive difficulties (Keefer et al., 2018). A study by Boulter et al. (2014) conducted on children and adolescents with ASD showed that the study group was characterized by a significantly greater intensity of both anxiety and intolerance of uncertainty (IU) than the control group. However, when the influence of IU was taken into account, the difference in anxiety levels between the groups was no longer significant, suggesting that IU may mediate the link between autism and anxiety. Boulter et al. also proposed a causal mediational model in which IU almost entirely mediated the relationship between ASD diagnosis and the higher level of anxiety compared to the general population. The same conclusions were reported in a study by Maisel et al. (2016), which found that IU partially mediated the relationship between autism symptoms and anxiety, explaining 36% of the total effect and serving not only as a predictor of severe anxiety, but also as a mediator between these variables. Autism symptoms and alexithymia were discussed as prognostic factors for IU. The results of another study (Wigham et al., 2015) showed that

both hyper- and hyposensitivity were significantly associated with repetitive motor movements and insistence on identical behavior, with both of these relationships being mediated by anxiety and IU. A later study by Neil et al. (2016), conducted using a control group, replicated the results obtained by the previous Wigham et al. (2015) study, in which IU assumed the role of a predictor for increased sensory sensitivity. These characteristics show the importance of conducting comparative research on family systems in different cultures, because contextual factors may also be important in planning effective forms of therapy for individuals with ASD.

During adolescence, parental stress is generated by the increased burden of the child's difficult behavior, difficulties in providing appropriate education and care, growing fears about the future resulting from the child's constant dependence, problems maintaining the continuity of specialist care, and problems related to sexual maturation. Additionally, in young people with developmental disorders attending mainstream schools (especially high-functioning individuals), another factor that can burden the entire family system is violence from peers.

The challenge for the family involves choosing the child's educational model and establishing the rules and values within the family. During this time, parental tasks are focused on meeting the child's needs and accompanying them in their development. It is important to adapt to many changes and to prepare the child for life in an educational community.

The concept of ego-resiliency referred to in this article comes from the ego-resiliency theory created by Jeanne and Jack Block (1980), though they initially used the term "ego strength." Ego-resiliency refers to the ability of an individual to adapt to difficult situations and traumatic events. It is a permanent resource used by the individual, where a person faced with a difficult situation is able to use previously acquired knowledge and adapt their cognitive patterns to cope with the difficult situation. According to researchers (Siu et al., 2009; Kaczmarek & Aleszczyk, 2013), ego-resiliency has a very significant impact on the level of satisfaction during various periods of a person's life. Mental resilience is defined in the social sciences as a person's ability to adjust the scope of their self-control to the requirements of the situation. This personality feature

plays a fundamental role in the process of effectively coping with the difficulties of everyday life, including struggling with disabilities or abnormalities in a child's development. This understanding of ego-resiliency emphasizes the subjective nature of this concept.

The concept of mental resilience is also associated with another term, utilized by various subdisciplines of modern psychology. It is known as "flourishing," and its popularity in science is related to the development of positive psychology, among other things.

Resilience in the theoretical sense is a process, analyzed in the context of sudden crises/traumatic situations, with variable activation, triggered by resiliency, which activates related resources to cope with a difficult situation. Ogińska-Bulik and Juczyński (2008) also conceptualized resilience as a disposition that is important in the process of coping with everyday stress and traumatic events. The authors emphasize the subjective nature of this concept by using the term *resiliency*.

In the process approach, resilience is a transaction taking place over time between an individual's disposition and the conditions of the situation. A situation that is stressful for an individual means, in cognitive terms, that it is categorized in the process of a primary cognitive assessment as burdening or exceeding their resources and threatening their well-being (Heszen & Sęk, 2007). If the situation involves a coping process, which means effort and coping with the situation, then resiliency determines whether the individual will be able to bear this effort and whether coping with stress will be effective. This approach is closest to the real functioning of resilience. Reality is related to the fact that the individual's dispositions, which include resilience, are revealed when confronted with a specific difficult situation in the coping process. An adequate approach to this process requires measurement over time of both the individual's ownership and the situation, as well as the transactions between them.

Ego-resiliency is associated with a person's disposition and specific skills. These include the ability to positively re-evaluate reality in any temporal aspect, the capacity for gratitude – which is important in considering the past – the ability to enjoy life, and the ability to be optimistic, also in terms of anticipating future difficulties.



## **Purpose and methodology**

The most important aim of this research study was to compare and characterize the functioning profiles of families raising autistic children in California (USA) and in Poland in accordance with the Ego-Resiliency Scale of the parents, along with the demographic and cultural conditions in which they live. Due to the available norms for the population of healthy individuals with which the parents with ASD children were compared, the control group in this study was waived.

A questionnaire was distributed to the parents regarding demographic and cultural variables in addition to Olson's (2000) Flexibility and Cohesion Evaluation Scales-IV (FACES-IV) and the Ego-Resiliency Scale by Block and Kremen (1996).

### **Olson's (2000) Flexibility and Cohesion Evaluation Scales-IV (FACES-IV)**

FACES-IV is based on the theoretical assumptions created by Olson (2000) and is presented as the Circumplex Model of Marriage and Family Systems. It includes three key concepts for understanding family functioning: consistency, flexibility, and communication. The main assumption of the Circumplex Model indicates that balanced levels of consistency and flexibility are conducive to the beneficial functioning of the family. Unbalanced levels of consistency and flexibility (very low or very high) are associated with problematic family functioning. Olson's Circumplex Model is one of the few holistic theoretical concepts of the family to offer tools for measuring its constructs. The main variables that make up the Circumplex Model are consistency, flexibility, communication, and satisfaction in family life.

Olson (2000) also proposes in his model three levels of family cohesion: unbound, balanced coherence, and confusion. The cohesion indicators include mutual emotional closeness, the quality of psychological boundaries between family members, the existence of coalitions, the amount of time spent together, common interests and forms of rest, the size of a circle of mutual friends, and the degree of consultation with other family members regarding decision-making. *Coherence* is defined

as the emotional bond between family members (Olson & Goral, 2003). Family relationships with an extremely high level of coherence express *confusion* of the relationships or are *unbound* when there is non-commitment or relationships without bonds. Members of entangled systems are very emotionally dependent on each other, and the affective states of the individual are often shared by the whole system or, in unbound families, there is no bond. Tangled systems discourage children from spontaneously and autonomously learning about the world and dealing with the natural problems of life, which complicates children's development in all areas.

By analogy, and for consistency, Olson also gives three levels of family flexibility: rigid, balanced flexibility, and chaotic. Flexibility means the quality and degree of changes taking place in systems related to leadership and the roles/principles of mutual relationships and resulting from negotiations between family members. The imbalance of elasticity may manifest itself in the form of extremely high elasticity (defined as *chaotic* family relationships) or extremely low elasticity (classified as *rigid* family relationships).

Olson and Goral (2003) define family communication as the ability of a given partner or family system to communicate positively. Communication in the family is related to the act of familiarizing family members with information, plans, thoughts, and feelings, (i.e., a broad repertoire of phenomena represented by the functioning system). The ability to communicate positively provides a change in the coherence and flexibility of the family system. On the other hand, satisfaction with family life determines the extent to which family members feel happy and fulfilled. Coherence, flexibility, and their dimensions were presented by Olson using the Circumplex Model. However, communication and satisfaction with family life are not graphically reflected in this model.

FACES-IV is a questionnaire composed of 62 items which comprise eight scales. The main scales of the Circumplex Model include two Balanced Scales – Balanced Coherence and Balanced Flexibility – and four Unbalanced Scales: Disengaged, Enmeshed, Rigid, and Chaotic. The remaining scales are Family Communication and Family Satisfaction, which are called evaluation scales.

### **The Ego-Resiliency Scale by Block and Kremen (1996)**

According to the authors of this short, but aptly researched tool, people differ in the extent to which they consciously control their own emotional states and behavior. Block defines ego-resiliency as adaptive flexibility resulting from the ability to adjust the level of control to the situation (Letzring et al., 2005). The higher the ego-resiliency, the greater the ability to modulate self-control depending on the possibilities and needs of a particular situation. This can improve emotional regulation, including the regulation of positive emotions.

### **Research problem and hypotheses**

Based on the analysis of the literature on the subject and taking into account the theoretical assumptions discussed in the introduction, the following research questions were formulated:

1. What is the functioning profile of families of children with autism in California and in Poland? Are there statistically significant differences between the functioning of families with children with autism in California and in Poland?
2. Is there a statistically significant relationship between the functioning profile of families of children with autism and the ego-resiliency of the parents?
3. What practical implications can be drawn from this research project?

Using the research questions, the following hypotheses were formulated:

**Hypothesis 1:** The profile of family functioning in the dimensions of Flexibility and Family Communication among the parents of children with autism in California is more favorable than the results of the Polish group. There are statistically significant differences in these scales between the parents of children with ASD in Poland and in California.

**Hypothesis 2:** The ego-resiliency of the parents in both California and Poland positively correlates with the FACES scales of Flexibility and Family Communication and negatively correlates with the FACES scale of Disengaged.

### Justification for the hypotheses

The assumptions of systemic theories (Olson, 2000) indicate that changes affecting one family member affect the functioning of the entire family system. Lewandowska-Walter et al. (2014) examined children with disabilities in terms of the balance of the family system, which also included life satisfaction, well-being, and styles of coping with stress. They concluded that mothers from balanced families perceive the family system as more coherent and flexible than mothers from family systems identified as unsustainable. Mothers from unbalanced systems achieved significantly higher scores on the Unbound, Confusion, and Chaotic FACES scales and presented significantly lower satisfaction with family life than mothers from balanced family systems.

Many researchers (Dempsey & Keen, 2008; Dunst et al., 2014) indicate that parents experience fulfillment in parenting and the development of self-esteem when their child is developing typically. This has also been confirmed by research conducted on various groups of parents of children with disabilities (Gerc, 2009; Gerc & Kuźniar, 2015; Gerc & Jurek, 2015). However, the context of a child's disability modifies the quality of life of the parents, especially mothers, thereby introducing new conditions. The disorder and the therapy process has a functional impact on the child and their family. These hypotheses are also justified in numerous studies (Lemanek, 1994; Pisula, 2007; Wiegner & Donders, 2000).

Families of people with autism often share the experience of isolation from the rest of society. In 2009, at the University of San Diego (California), the Department of Physical Cultural Education, in cooperation with the Autism Tree Project Foundation (ATPF), launched an innovative program that involves university athletes working with children with

autism. The program was developed by the ATPF, which was founded in 2003 in San Diego. The aim of the ATPF is to raise awareness of autism, to help specific families of people with this disorder, and to promote early identification of autism in children. Additionally, the ATPF aims to present the achievements of those people with ASD who seem to have a favorable prognosis for the future. As a result of many services and materials, as well as the work of various organizations, children with ASD in California have the opportunity to participate more freely in cultural and sports events and to express their interests and potential. Validating their abilities rather than their limitations allows them to transcend their own barriers and thereby improve the overall quality of their lives, as well as the quality of life of those who are part of their ecosystem (Novak, 2017).

### **Characteristics of the study group**

For the purposes of this research study, people were randomly and purposefully selected for the study group. After obtaining the appropriate consent from the Research Ethics Committee, the researchers included 105 randomly selected families of children with ASD aged 4–17 years old and under the care of the ATPF and 111 parents of children with ASD in the same age group from southern Poland receiving support from regional public specialist clinics. Approximately 74% of the participants were mothers, with the remaining being fathers of autistic children. In terms of the educational level of the parents in the group from California, 47% of the respondents had an advanced degree and 33% had graduated from college. In terms of their economic resources, 58% earn an annual income of \$100,000 or more. In terms of ethnicity, the majority of the respondents (59%) were white and when it comes to marital status, 71% were married to their first spouse. In the group of respondents from Poland, approximately 60% described their financial status as average, while 8% estimated it as high. All respondents from Poland were white and 82% were married.

## Analysis of results

Percentiles for the study group were calculated and statistical analysis of the results was performed. The results were checked for a normal distribution (Kolmogorov–Smirnov and Shapiro–Wilk tests). After determining the characteristics of the distribution (for a normal distribution, a correlation study was carried out with Pearson’s  $r$  coefficient), the significance of differences between the independent groups in the selected variables was also checked ( $t$ -test). For results without a normal distribution, the Mann–Whitney U test was used to determine the significance of differences between the groups and Spearman’s rho test was used to measure correlations.

## Results

Tables 1 and 2 present the FACES-IV results in both groups, while Table 3 summarizes the profiles of family functioning, representing the converted results.

**Table 1. FACES-IV results of the group of parents with children with autism from California (n=105)**

<i>FACES-IV</i> Dimensions	<i>Mean</i>	<i>SD</i>	Percentile	Results
Cohesion	29.841	4.076	68	<b>Very Connected</b>
Flexibility	26.612	4.313	60	Flexible
Disengaged	13.771	4.234	18	<b>Very Low</b>
Enmeshed	15.267	4.022	24	<b>Very Low</b>
Rigid	19.895	4.457	34	Low
Chaotic	14.925	4.965	20	<b>Very Low</b>
Family Communication	38.733	7.003	61	<b>High</b>
<b>Family Satisfaction</b>	<b>34.906</b>	<b>7.785</b>	<b>35</b>	<b>Low</b>

**Table 2. FACES-IV results of the group of parents with children with autism from Poland (n = 111)**

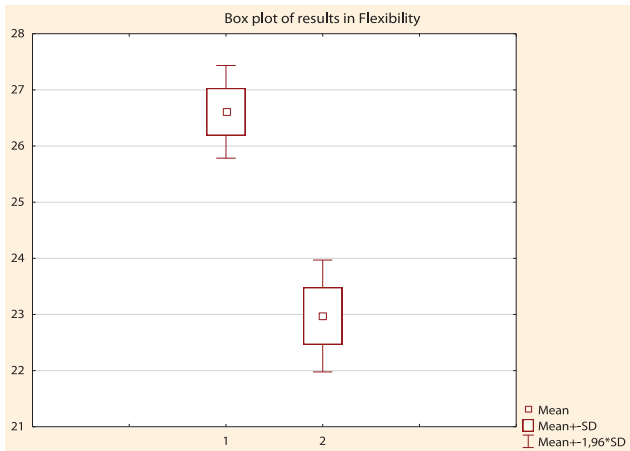
<i>FACES-IV</i> Dimensions	Mean	SD	Percentile	Results
Cohesion	25.901	5.619	58	Connected
Flexibility	22.973	5.357	50	Flexible
Disengaged	21.559	6.432	45	Moderate
Enmeshed	14.703	4.199	24	Very Low
Rigid	18.612	4.454	32	Low
Chaotic	18.595	5.526	34	Low
Family Communication	32.847	9.637	36	Moderate
<b>Family Satisfaction</b>	<b>33.532</b>	<b>8.567</b>	<b>30</b>	<b>Low</b>

**Table 3. Comparative analysis of the converted results (percentiles) of the group of parents with children with ASD in California (n=105) and in Poland (n=111)**

<i>FACES-IV</i> Dimensions	Characteristic Results California	Characteristic Results Poland	Percentile
Cohesion	Very Connected	Connected	68 vs. 58
Flexibility	Flexible	Flexible	60 vs. 50
Disengaged	Very Low	Moderate	18 vs. 45
Enmeshed	Very Low	Very Low	24
Rigid	Low	Low	34 vs. 32
Chaotic	Very Low	Low	20 vs. 34
Family Communication	High	Moderate	61 vs. 36
Family Satisfaction	Low	Low	35 vs. 30

In order to verify the first research hypothesis about the functioning profiles of families in the two study groups, where the results were distributed close to the normal distribution, Student's *t*-test was used; in the case of variables with a non-normal distribution, the Mann–Whitney U test was used. The results of the analysis are illustrated in Figures 1–4. For the dimension of Flexibility, the *t*-coefficient reached the level of a statistically significant difference between the groups ( $t=5.48$ ;  $p<0.0001$ ). Therefore, the existence of a statistically significant difference between the groups in terms of the variable Flexibility was confirmed.

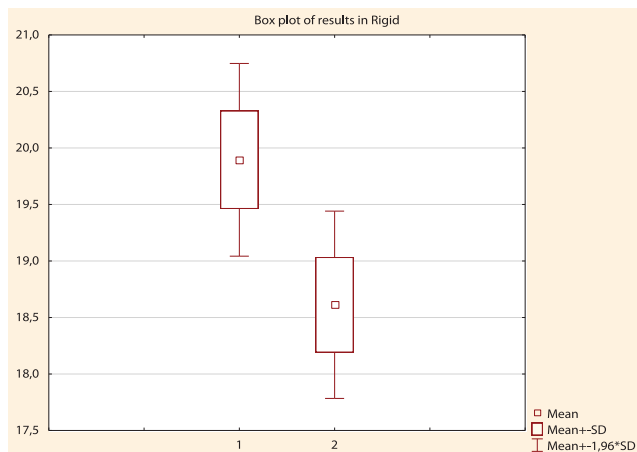
**Figure 1. Comparative analysis of the results for the variable Flexibility of parents of children with ASD in California (n=105) versus those in Poland (n=111)**



The statistical analysis for the dimension of Rigid revealed a statistically significant difference between the groups ( $t=2.11$ ;  $p=0.035$ ), thus confirming the existence of a statistically significant difference between the groups of parents for this variable.

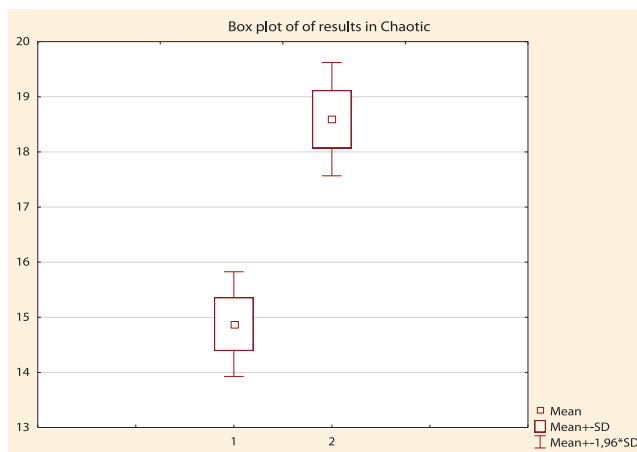


**Figure 2. Comparative analysis of the results for the variable Rigid of parents of children with ASD in California (n=105) versus those in Poland (n=111)**



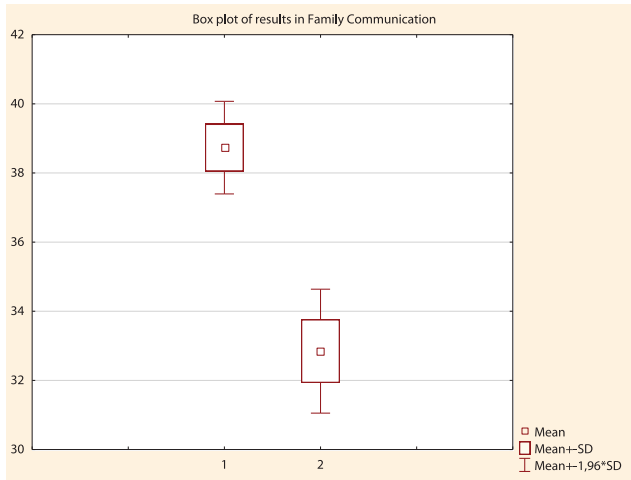
A statistically significant difference was also confirmed for the dimension of Chaotic, where the t coefficient reached the level of statistical significance for the difference between the groups ( $t=-5.19$ ;  $p<0.0001$ ).

**Figure 3. Comparative analysis of the results for the variable Chaotic for parents of children with ASD in California (n=105) versus those in Poland (n=111)**



The  $t$  coefficient also reached the level of statistical significance for the difference between the groups in the dimension of Family Communication ( $t=5.11$ ;  $p<0.0001$ ).

**Figure 4. Comparative analysis of the results for the variable Family Communication of parents of children with ASD in California (n=105) versus those in Poland (n=111)**



For the dimension of Disengaged, the Mann–Whitney U test coefficient (a non-parametric test) was used due to the lack of a normal distribution of this variable. The value did not reach the level of statistical significance. Therefore, no statistically significant difference between the groups of parents in terms of the variable Disengaged was confirmed.

By confirming the existence of statistically significant differences in the various dimensions of family functioning from the FACES scales of Flexibility, Rigid, Chaotic, and Family Communication between families with children with autism in California and in Poland, the first hypothesis was partially confirmed, as statistical differences were found in the results for the FACES dimensions of Flexibility and Family Communication. However, Hypothesis 1 was not confirmed in relation to the dimension Disengaged.

The results of this study regarding the ego-resiliency of parents of children with ASD in California ( $M = 43.13$ ;  $SD = 5.69$ ) in comparison to the

available norms for the American population are generally favorable and indicate high results among the respondents. Parents of children with ASD in the California study group were found to have good adaptation and ego-resiliency. It should be noted that the results of the study group from Poland in Ego-resiliency were slightly lower ( $M=35.77$ ;  $SD=4.24$ ).

In the next stage of the statistical analysis, after analyzing the distribution of results in the group of parents from California, the distribution of the variable Ego-resiliency and selected correlated variables related to the FACES-IV scales were confirmed to be normal. In the group of parents from Poland, the distribution of analogous variables in relation to the variables Family Communication and Disengaged be different from normal. The focus was on checking the relationship between the ego-resiliency of the parents of children with ASD and selected dimensions of family functioning (FACES-IV).

In accordance with the second hypothesis, the relationship between the ego-resiliency of the parents in both countries and the variables operationalized by the results of selected FACES subscales (Flexibility, Family Communication, and Disengaged) was verified.

Tables 4 and 5 present the results of the analyzed variables in the two study groups, taking into account the statistical indicators used (Pearson's  $r$  and Spearman's  $\rho$ ), according to the distribution of variables.

**Table 4. Correlation of Ego-resiliency ( $M=43.13$ ;  $SD= 5.69$ )  
of parents in California with selected variables  
operationalized by the FACES-IV scales**

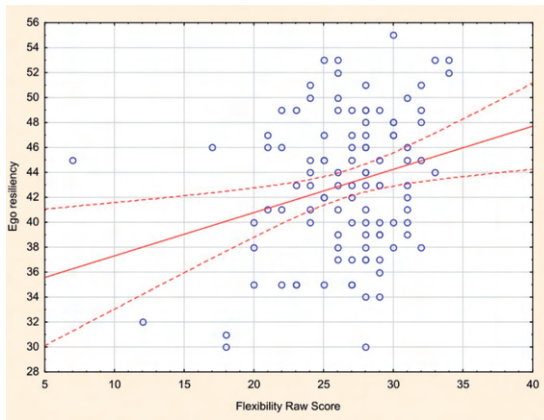
Variable	Value of Pearson's $r$	$p$ -value
Flexibility	0.274	0.005
Family Communication	0.259268	0.008
Disengaged	-1.46	0.14

As shown in Table 4, the parents of children with ASD in California demonstrated a positive relationship between the variables Ego-resiliency, Flexibility, and Family Communication. However, the existence

of a relationship between the ego-resiliency of the parents and the variable Disengaged was not confirmed.

The confirmed statistically significant correlations of Ego-resiliency and selected variables of family functioning in the group of Californian parents are illustrated in Figures 5 and 6.

**Figure 5. Scatterplot of Ego-resiliency in relation to the variable Flexibility among the parents from California**



**Figure 6. Scatterplot of Ego-resiliency in relation to the variable Family Communication among the parents from California**

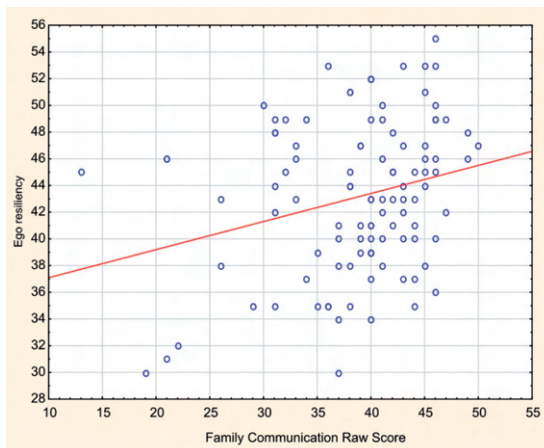


Table 5 presents data relating to the study of the relationships between the variables Ego-resiliency and Flexibility and the dimensions Family Communication and Disengaged in the Polish group.

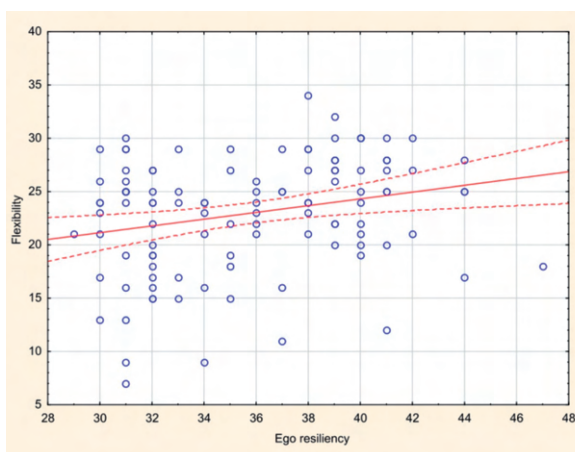
**Table 5. Correlation of Ego-resiliency (M=35.77; SD=4.24) of the parents in Poland with selected variables operationalized by the FACES-IV scales**

Variable	Coefficient Value Correlation	p-value
Flexibility	0.252 <sup>1</sup>	0.01
Family Communication	0.804 <sup>2</sup>	0.0001
Disengaged	-0.448 <sup>2</sup>	0.0001

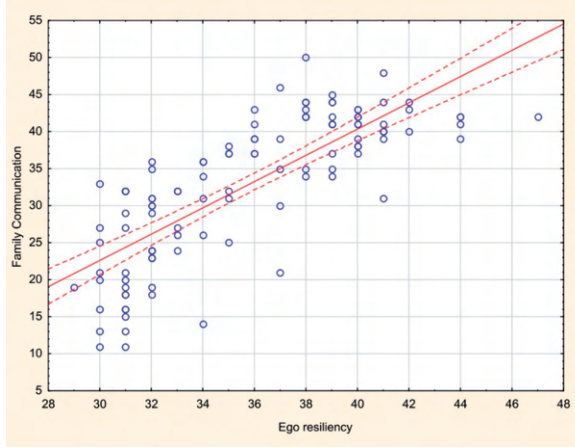
<sup>1</sup> Pearson's r coefficient, <sup>2</sup> Spearman's rho coefficient

As a result of the statistical analysis using Pearson's r, a correlation between Ego-resiliency and Flexibility was confirmed and the Spearman test confirmed the existence of a correlation between the variables Ego-resiliency, Family Communication, and Disengaged. The statistically significant correlations between Ego-resiliency and selected variables of family functioning among the Polish parents of children with ASD are illustrated in Figures 7–9.

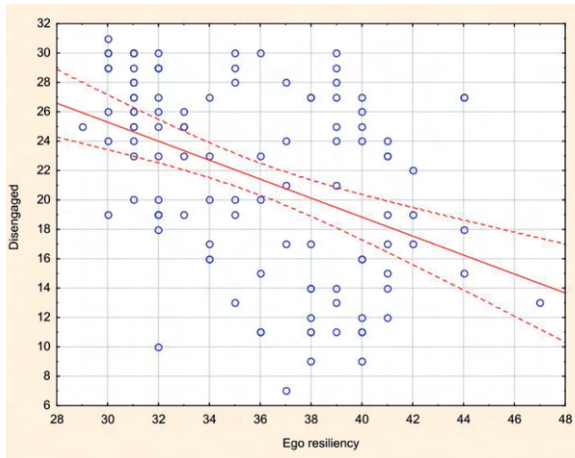
**Figure 7. Scatterplot of Ego-resiliency in relation to the variable Flexibility in the Polish group**



**Figure 8. Scatterplot of Ego-resiliency in relation to the variable Family Communication in the Polish group**



**Figure 9. Scatterplot of Ego-resiliency in relation to the variable Disengaged in the Polish group**



Therefore, the analysis partially confirmed the second hypothesis. Only in the California group was no correlation found between the variable Ego-resiliency and the dimension Disengaged, which characterizes the profile of family functioning.

## Discussion of results

David Olson's Circumplex Model (Olson & Goral, 2003) is helpful in understanding the connection between the relationships between family members and the behavior of individuals in the family system. The model of family functioning used in the research is based on systems thinking, pointing to the three main dimensions of family life: cohesion, flexibility, and communication. The first two are basic aspects of describing a family, while communication is a specific dimension. Cohesion is defined as the emotional bond between family members (Olson, 2011) and includes the amount of time spent together, common interests, the presence of common friends, and the degree to which other members are involved in decision-making. This dimension ranges from unrelatedness on one end, through balanced coherence, to entanglement on the other end (Margasiński, 2015). Flexibility is a dimension that encompasses the ability to adapt to various changes in the family. Flexibility includes scope of leadership, roles taken on by family members, and negotiation skills. Flexibility ranges from rigidity on one end, through balanced flexibility, to chaos on the other end. The third dimension of the model is communication. This area describes the family's ability to communicate effectively. It refers to sharing thoughts, feelings, plans, and information with other family members. Family communication occupies a continuum from poor to very effective. Most importantly, the effectiveness of communication can change family cohesion and flexibility.

This study confirmed the existence of statistically significant differences between selected dimensions of the functioning of families with children with autism in California and Poland on the following scales: Flexibility, Rigid, Chaotic, and Family Communication. The assessment of the family functioning was determined by the dimensions of Cohesion and Flexibility. Despite the differences between the groups of parents from California and Poland, very high or high cohesion and high flexibility were observed. Family relationships in both study groups indicated that the boundaries of the family system are flexible, which favors the changing requirements of the developing family members and creates conditions

for adaptation to external conditions. On the other hand, “rigid” boundaries would imply an impeded flow of information between subsystems and emotional exchange within the system. Additionally, “disengaged” usually coincides with emotional coldness, risking rejection of the child. “Cohesion,” presented in the study by the balanced cohesion subscale and the family cohesion index, facilitates close contact with an autistic child. Due to the fact that accepting a child seems to be adaptive and beneficial for the family system, the families in this study can be considered functional. For example, the majority of parents may perform parental tasks in a manner that is consistent with the cultural role assigned to them. On the other hand, it is worth noting that other researchers (Olson, 2011; Margasiński, 2015) indicate that the most effective families are characterized by moderate cohesion and flexibility with the highest quality of communication. In other words, too little or too much cohesion, as well as too little or too much flexibility, can cause dysfunctions in the family system.

The first hypothesis in this research assumed the existence of differences in the dimensions of Flexibility and Family Communication; this result was confirmed. However, in relation to the dimension Disengaged, it was not confirmed.

The statistical analysis revealed a statistically significant difference between the groups of parents in terms of the variable Rigid. It is worth noting that in both study groups, when converted into standardized units, the overall result was considered favorable. The Rigid dimension is also associated in research with specific personality traits of parents. The functioning of the family system depends on many factors, both social and psychological.

Roskam, Raes, and Mikolajczak (2017) conducted research on parental burnout and developed a scheme for balancing between risk and resources in parenting. They proved that certain factors, such as support, can potentially protect against parental burnout. However, a lack of support, according to the researchers, entails the risk of exhausting the parents’ strength.

In the dimension of Chaotic, the surveyed parents from California obtained a very low result and the Polish group a low result. In this case,



a statistically significant difference was found between the study groups. This also occurred for the dimension of Family Communication, which was found to be high in the California group of parents and moderate in the parents from Poland. As previously mentioned, a high level of communication is particularly beneficial for the effective functioning of the family system. This was not recorded in the group from Poland, which may indicate a certain risk factor for these family systems.

For the dimension of Disengaged, the coefficient in the Mann–Whitney U test did not suggest a statistically significant difference between the groups. Therefore, the existence of a statistically significant difference between the groups in terms of the variable Disengaged was not confirmed. Nonetheless, a difference was noted in the standardized results: very low in the Californian versus moderate in the Polish families.

The results for the ego-resiliency of parents of autistic children in California compared to the current norms for the American population were generally favorable and indicate positive, high results. Although the results of the Polish study group were slightly lower, they were not significantly different. The results for both groups therefore indicate relatively good psychological adaptation among the parents of autistic children from both groups. Ego-resiliency is a personality factor, so even the occurrence of a difficult situation such as a child's disability does not differentiate the intensity of these features in parents of autistic children between the groups.

The results partially confirmed the second hypothesis, regarding the relationship between the ego-resiliency of the parents in California and in Poland. A positive relationship within the results of the Flexibility and Family Communication scales and a negative correlation with the results of the Disengaged scale were expected. The statistical analysis found a positive correlation of ego-resiliency with the dimensions of Flexibility and Family Communication, which was confirmed in both groups of parents. However, in the California group, no correlation was found in relation to the variables of ego-resiliency of the parent or the dimension Disengaged, which characterizes the profile of family functioning. On the other hand, a negative correlation indicated in the second hypothesis was found in the Polish group.

The individual characteristics of parents influence the course of parenting (Olson & Goral, 2003; Pisula, 2007; Margasiński, 2011; Lewandowska-Walter et al., 2014; Dempsey & Keen, 2008; Dunst et al., 2014). Certain features of the family system may also constitute a protective factor. Mikolajczak (2020) showed that parents who strive to be perfect parents or those who use incorrect parenting practices are the most at risk for parental burnout. A study on Finnish families, for example, showed that the higher the level of socially imposed perfectionism, the higher the level of parental burnout (in families with both able-bodied and healthy children). An additional reinforcing factor is self-directed perfectionism (Sorkilla, 2020). Both groups of parents that were studied used a permanent system of professional institutional support and were aware of their personal parental tasks, as well as having access to proven and scientifically confirmed therapeutic methods. This indicates that the quality of support available in both environments may contribute to the relatively favorable results of family functioning in both study groups, and it was found to be more positive among the parents from California. It is also worth noting that Roskam et al. (2021) published the results of a study on parental burnout conducted in 42 countries. Poland was at the forefront of this study, according to which approximately 8% of Polish parents, mainly with normally developing children, experienced complete parental burnout. More severe burnout was observed in younger mothers in comparison to fathers, in nuclear as compared to extended families, and in single-parent families. The reasons for such a high level of parental burnout were related to various features of society and the low availability of personal social support. It can therefore be assumed that the cultural, economic, and political changes in Poland that have taken place over the last 30 years constitute a specific and important context that explains some of the differences confirmed in the FACES-IV results between parents of autistic children in California and Poland.

Social support is sometimes defined as an active interaction between the supporting person and the supported person, and research on the importance of social support indicates that people who have the support of family and friends and/or belong to an organization and are

under its care have better health and well-being. They are able to cope better with stressful situations (Roskam & Mikołajczak, 2017). When analyzing social support, it is important to divide support into structural and functional elements. The structural, quantitative approach assumes that it is beneficial for a person to be able to turn to a group of people. Features of support networks include availability, coherence, homogeneity, prosocial skills, and most importantly, altruism. In the structural approach, the research subject is rather sources of support. One of the classification systems suggests familial sources of support (spouse, children, parents, siblings, and distant relatives), friendly and social sources, and neighbors. Natural sources of support are more effective and beneficial due to their lack of stigma and availability. Other important factors in the effectiveness of help are the similarity of the situation and the problem of the supporter and the supported. This emphasizes the importance of a support group, such as the Autism Tree Project Foundation (ATPF), from which the surveyed parents from California were recruited. The qualitative approach emphasizes the interaction and process of exchanging certain goods. The main goal of such an interaction is to reduce stress and create a sense of security and hope. This support may exist between groups, between a group and an individual, or between a couple (dyad).

The creators of the parental burnout model, Mikołajczak and Roskam (2018), indicated that it is worth looking for situations that would help to maintain balance in the family system by increasing resources or reducing the importance of stressors. It emphasizes, among other things, the need for a high level of communication within the family.

A negative assessment of the family system occurs when parents are unable to perform their parenting role as well as they might have, due to chronic fatigue, parental stress, lack of resources, or lack of support. This aspect was not observed in this study among the groups of parents. The most common type of support experienced by parents of autistic children in this study was emotional support, which involves expressing care and thereby results in improved well-being, higher sense of hope, and higher self-esteem. The informational support they receive regularly involves exchanging information that helps them better understand

difficult situations and share their own experiences. Instrumental support includes behaviors that directly help parents of autistic children solve current problems and meet their specific needs.

There is an awareness of the existence of a division of support according to the criteria for assessing the availability and receipt of support. The issue revolves around perceived social support and received social support. The former is a subjective assessment of the availability of support. It is a matter of feeling loved and appreciated by other people, and therefore the belief that you can count on help from specific people. This aspect was not addressed in this research, but is planned to be included in subsequent studies, verifying whether and how knowledge and belief in the availability of one's support network are related to the functioning of one's family system. It is necessary to decide whether social support has a preventive effect (on the basis of a direct effect), regardless of the level of parental stress, or whether support is an intermediary variable between the situation and its consequences for human health and well-being.

Modern-day parents, including parents of autistic children, should have flexibility and openness when raising a child. It seems that there is no one right model to strive for that can be applied to every child or every situation, including a child with a disability. It is important to carefully adapt individual parenting approaches for the developing child in various social situations. Appelt (2020) proposes calling such an upbringing model developmental parenting, in which development occurs in both the child and the parent. It is often emphasized that the difficulty of parenting in the 21st century stems not only from the lack of standards for a new type of family, but also from the lack of model behaviors for "new" parenting. It involves loss and uncertainty. The expectation of 21st-century parenting is undoubtedly expert parenting. This also applies to parents of children with disabilities. It may be an opportunity, but also can be threatening. Modern parents are looking for answers to the questions and challenges that modern parenting poses to them. It is important that the support they receive is appropriate to their needs in order to ensure educational success. By achieving this type of success, the parent gains a sense of parental competence, which they are deprived of when their

child's behavior differs significantly from what is expected. Satisfaction depends on how the parent evaluates the child's behavior (Vukušić, 2018). This study indicates that cultural differences, although revealed in the characteristics of the family systems of parents of children with ASD in two geographically and economically distant countries, are not associated with negative aspects of the family profile.

### **Results/Conclusions:**

1. The results of the family functioning profiles in the study groups of parents of children with autism are generally positive, especially in the dimensions of Cohesion and Flexibility (Balanced Scales). Statistically significant differences were obtained between various dimensions of Family Communication and Flexibility of families with autistic children in California and Poland. With respect to both variables, higher scores were found in the California group. However, in terms of the Flexibility results, both groups were defined as flexible. With regard to Family Communication, the result of the California group corresponded to standardized high scores, whereas the scores of the Polish group were moderate.
2. The existence of statistically significant relationships (nonparametric testing) in the patterns of functioning in families with autistic children and the ego-resiliency of the parents were confirmed between Poland and California:
  - Cohesion – positive correlation
  - Flexibility – positive correlation
  - Disengaged – negative correlation
  - Chaotic – negative correlation
  - Family Communication – positive correlation

As a result of the above conclusions, it seems apparent that when working with an autistic child, specialists should not focus only on supporting and describing the child's functioning, as the direct subject of their

influence, but also on helping and addressing the needs of the parents/caregivers and the entire family system in which the child is being raised.

The focus of future research on families of autistic children, in terms of family systems, would be to analyze not only the characteristics of ego-resiliency of the parents, but also parental attitudes, parental resources or lack thereof, the personality traits of these parents, and their style of coping with stress. This additional type of analysis would take into account the mediating and moderating role of these variables, which may have a potential relationship with the overall functioning in the family. Also, by adding larger groups of families, the way that specific symptoms and characteristics of an autistic child are related to the severity of the disorder could be investigated.

### **Future implications:**

The following conclusions can be drawn as a result of these suggestions:

1. Analysis of demographic differences in California and Poland should be researched further (additional demographic variables comparison).
2. A practical model regarding the impact of necessary support for families with autistic children should be developed, taking into consideration multicultural differences.
3. Family satisfaction is critical in all cultures and should be addressed in intervention strategies if family members are not feeling happy and fulfilled with each other. Communication may not be enough to provide for family satisfaction, or an improved quality of life.
4. Support groups for families should be considered and a research study should be developed to check whether improved satisfaction decreases stress and, as a result, increases overall happiness within the family system.

**Funding:** This research received no external funding.

## References:

- American Psychiatric Association. (2013). Neurodevelopmental disorders. In *Diagnostic and statistical manual of mental disorders (5th ed.)*. [https://doi.org/10.1176/appi.books.9780890425787.x01\\_Neurodevelopmental\\_Disorders](https://doi.org/10.1176/appi.books.9780890425787.x01_Neurodevelopmental_Disorders)
- Appelt, K. (2020). Rodzicielstwo – wspólna droga rozwoju dziecka i rodzica [Parenting: A common path of development of the child and the parent]. In L. Bakiera (Ed.), *Rodzicielstwo ujęcie dyscyplinarne* [Parenting from a disciplinary perspective] (pp. 81–98). Wydawnictwo Naukowe UAM.
- Bertalanffy, L. (1984). *Ogólna teoria systemów. Podstawy, rozwój, zastosowania* [General systems theory: Basics, development, applications]. Warsaw: Państwowe Wydawnictwo Naukowe.
- Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *Minnesota symposium on child psychology* (Vol. 13, pp. 39–101). Hillsdale, NJ: Erlbaum.
- Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70, 349–361.
- Boulter, C., Freeston, M., South, M., & Rodgers, J. (2014). Intolerance of uncertainty as a framework for understanding anxiety in children and adolescents with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 44(6). <https://doi.org/10.1007/s10803-013-2001-x>
- Dempsey, I., & Keen, D. (2008). A review of processes and outcomes in family-centered services for children with a disability. *Topics in Early Childhood Special Education*, 28, 42–52. <https://doi.org/10.1177/0271121408316699>
- Dunst, C. J., Bruder, M. B., & Espe-Sherwindt, M. (2014). Family capacity-building in early childhood intervention: Do context and setting matter? *School Community Journal*, 24(1), 37–48.
- Elsabbagh, M., Divan, G., Koh, Y. J., Kim, Y. S., Kauchali, S., Marcín, C., Montiel-Nava, C., Patel, V., Paula, C. S., Wang, C., Yasamy, M. T., & Fombonne, E. (2012). Global prevalence of autism and other pervasive developmental disorders. *Autism Research*, 5(3). <https://doi.org/10.1002/aur.239>
- Fombonne, E. (2020). Epidemiological controversies in autism. *Swiss Archives of Neurology, Psychiatry and Psychotherapy*, 171(1). <https://doi.org/10.4414/sanp.2020.03084>

- Gerc, K. (2009). Studium porównawcze uwarunkowań postaw rodzicielskich w rodzinach dotkniętych niepełnosprawnością dziecka w świetle badań z lat 1997 i 2009 [A comparative study of the determinants of parental attitudes in families affected by a child's disability in light of research from 1997 and 2009]. In G. Makiełło-Jarża (Ed.), *W poszukiwaniu jakości życia współczesnej rodziny polskiej* [In search of the quality of life of a modern Polish family] (pp. 193–210). Krakow: Wyd. AFM.
- Gerc, K., & Jurek, M. (2015). Intrapsychic and sociodemographic correlates of the quality of life in mothers of children with motoric disability of neurologic etiology. In T. M. Ostrowski, I. Sikorska, & K. Gerc (Eds.), *Resilience and health in a fast-changing world* (pp. 181–203). Krakow: Jagiellonian University Press.
- Gerc, K., & Kuźniar, K. (2015). Subjective and family determinants of parental attitudes of parents of children with primary immunodeficiencies treated with immunoglobulin substitution. In A. Margasiński (Ed.), *Systemic family: Theory and research* (pp. 78–99). Warsaw: Psychological Test Laboratory of the Polish Psychological Association.
- Hansen, S. N., Schendel, D. E., & Parner, E. T. (2015). Explaining the increase in the prevalence of autism spectrum disorders: The proportion attributable to changes in reporting practices. *JAMA Pediatrics*, *169*(1). <https://doi.org/10.1001/jamapediatrics.2014.1893>
- Heszen, I., & Sęk, H. (2007). *Psychologia zdrowia* [Health psychology]. Warsaw: Wydawnictwo Naukowe PWN.
- Kaczmarek, Ł., & Aleszczyk, K. (2013). The mechanism of mental resilience: A two-step mediation model involving coping strategies and positive affect among musician artists. *Psychological Journal*, *19*, 67–72.
- Kadesjö, B., Gillberg, C., & Hagberg, B. (1999). Brief report: Autism and Asperger syndrome in seven-year-old children: A total population study. *Journal of Autism and Developmental Disorders*, *29*(4). <https://doi.org/10.1023/A:1022115520317>
- Keefer, A., Kreiser, N. L., Singh, V., Blakeley-Smith, A., Reaven, J., & Vasa, R. A. (2018). Exploring relationships between negative cognitions and anxiety symptoms in youth with autism spectrum disorder. *Behavior Therapy*, *49*(5). <https://doi.org/10.1016/j.beth.2017.12.002>
- Kishida, K., T., De Asis-Cruz, J., Treadwell-Deering, D., Liebenow, B., Beauchamp M. S., & Montague, P. R. (2019). Diminished single-stimulus response in vmPFC to



- favorite people in children diagnosed with autism spectrum disorder. *Biological Psychology*, 145, 174–184. DOI: 10.1016/j.biopsycho.2019.04.009
- Lemaneck, K. (1994). Research on pediatric chronic illness: New directions and recurrent confounds. *Journal of Pediatric Psychology*, 19, 143–148.
- Letzring, T., Block, J., & Funder, D. C. (2005). Ego-control and ego-resiliency: Generalization of self-report scales based on personality descriptions from acquaintances, clinicians, and the self. *Journal of Research in Personality*, 39, 395–422.
- Lewandowska-Walter, A., Kichler, K., & Trawicka, A. (2014). The balance of the family system and satisfaction with life and the well-being and styles of coping with stress of mothers of children with disabilities. *Psychological Forum*, 19(3), 336–354.
- Maisel, M. E., Stephenson, K. G., South, M., Rodgers, J., Freeston, M. H., & Gaigg, S. B. (2016). Modeling the cognitive mechanisms linking autism symptoms and anxiety in adults. *Journal of Abnormal Psychology*, 125(5). <https://doi.org/10.1037/abn0000168>
- Margasiński, A. (2009). *SOR. Skale Oceny Rodziny. Polska adaptacja FACES IV- Flexibility and Cohesion Evaluation Scales* [Family Assessment Scales (SOR): Polish adaptation of the FACES-IV Flexibility and Cohesion Evaluation scales]. Warsaw: Pracownia Testów Psychologicznych.
- Margasiński, A. (2011). *Model Kołowy i FACES jako narzędzie badania rodziny. Historia, rozwój i zastosowanie* [The Circumplex Model and FACES as a family research tool: History, development and application]. Częstochowa: Wydawnictwo Akademii Jana Długosza.
- Margasiński, A. (Ed.). (2015). *Systemic family: Theory and research*. Warsaw: Psychological Test Laboratory of the Polish Psychological Association.
- Matson, J. L., & Kozlowski, A. M. (2011). The increasing prevalence of autism spectrum disorders. *Research in Autism Spectrum Disorders*, 5(1). <https://doi.org/10.1016/j.rasd.2010.06.004>
- Mikolajczak, M., Gross, J. J., Stinglhamber, F., Lindahl Norberg, A., & Roskam, I. (2020). Is parental burnout distinct from job burnout and depressive symptoms? *Clinical Psychological Science*, 8(4), 673–689. <https://doi.org/10.1177/2167702620917447>

- Mikolajczak, M., & Roskam, I. (2018). A theoretical and clinical framework for parental burnout: The balance between risks and resources (BR2). *Frontiers in Psychology, 9*. <https://doi.org/10.3389/fpsyg.2018.00886>
- Minshew, N., Sweeney, J., Bauman, M., & Webb, S. (2005). Neurologic aspects of autism. In F. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (pp. 473–514). Hoboken, NJ: John Wiley & Sons.
- Neil, L., Olsson, N. C., & Pellicano, E. (2016). The relationship between intolerance of uncertainty, sensory sensitivities, and anxiety in autistic and typically developing children. *Journal of Autism and Developmental Disorders, 46*(6). <https://doi.org/10.1007/s10803-016-2721-9>
- Nimmo-Smith, V., Heuvelman, H., Dalman, C., Lundberg, M., Idring, S., Carpenter, P., Magnusson, C., & Rai, D. (2020). Anxiety disorders in adults with autism spectrum disorder: A population-based study. *Journal of Autism and Developmental Disorders, 50*(1). <https://doi.org/10.1007/s10803-019-04234-3>
- Novak, J. M. (2017). Sport dla osób z niepełnosprawnościami w Stanach Zjednoczonych. Perspektywa terapeutyczna [Sports for people with disabilities in the United States: A therapeutic perspective]. In I. Sikorska, K. Gerc, & L. Pawlowski (Eds.), *Sportowcy z niepełnosprawnościami [Athletes with disabilities]* (pp. 71–81). Krakow: Wydawnictwo AFM.
- Ogińska-Bulik, N., & Juczyński, Z. (2008). Skala pomiaru prężności (SPP-25) [Resilience Measurement Scale (SPP-25)]. *Nowiny Psychologiczne, 3*, 39–56.
- Olson, D. H. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy, 144*–167.
- Olson, D. H. (2011). FACES-IV and the Circumplex model: A validation study. *Journal of Marital & Family Therapy, 37*(1), 64–80.
- Olson, D. H., & Goral, D. M. (2003). Circumplex model of marital and family systems. In F. Walsh (Ed.), *Normal family process* (pp. 514–547). New York, NY: Guildford.
- Pellicano, E. (2018). Autism: Face processing clues to inheritance. *Current Biology, 18*, 748–750.
- Pisula, E. (2007). *Parents and siblings of children with developmental disorders*. Warsaw: University of Warsaw Publishing House.

- Roskam, I., Aguiar, J., Akgun, E., Arikan, G., Artavia, M., Avalosse, H., Aunola, K., Bader, M., Bahati, C., Barham, E. J., Besson, E., Beyers, W., Boujut, E., Brianda, M. E., Brytek-Matera, A., Carbonneau, N., César, F., Chen, B., Dorard, G., dos Santos Elias, L. C., Dunsmuir, S., Egorova, N., Favez, N., Fontaine, A., & Mikolajczak, M. (2021). Parental burnout around the globe: A 42-country study. *Affective science*, 2, 58–79. <https://doi.org/10.1007/s42761-020-00028-4>
- Roskam, I., Raes, M. E., & Mikolajczak, M. (2017). Exhausted parents: Development and preliminary validation of the parental burnout inventory. *Frontiers in Psychology*, 8(163). <https://doi.org/10.3389/fpsyg.2017.00163>
- Siu, O. L., Hui, H. C., Phillips, D. R., Lin, L., Wong, T., Shi, K. (2009). A study of resiliency among Chinese health care workers: Capacity to cope with workplace stress. *Journal of Research in Personality*, 43, 770–776.
- Sorkkila, M. (2020). Risk factors for parental burnout among Finnish parents: The role of socially prescribed perfectionism. *Journal of Child and Family Studies*, 29, 648–659. <https://doi.org/10.1007/s10826-019-01607-1>
- Vukušić, A. M. (2018). Self-Evaluation of parental competence: Differences between parents with pedagogical and non-pedagogical professions. *World Journal of Education*, 8(2), 1–9. <https://doi.org/10.5430/wje.v8n2p1>
- Wiegner, S., & Donders, J. (2000). Predictors of parental distress after congenital disabilities. *Journal of Developmental and Behavioral Pediatrics*, 21, 271–277.
- Wigham, S., Rodgers, J., South, M., McConachie, H., & Freeston, M. (2015). The interplay between sensory processing abnormalities, intolerance of uncertainty, anxiety and restricted and repetitive behaviours in autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 45(4). <https://doi.org/10.1007/s10803-014-2248-x>
- World Health Organization. (2018). Autism spectrum disorder. In *International statistical classification of diseases and related health problems* (11th ed.). <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/437815624>
- Zeidan, J., Fombonne, E., Scorage, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. *Autism Research*. <https://doi.org/10.1002/aur.2696>





**Monika Adamczyk**

<https://orcid.org/0000-0002-1331-6026>

The John Paul II Catholic University of Lublin, Poland

[monika.adamczyk@kul.pl](mailto:monika.adamczyk@kul.pl)

**Piotr Majewicz**

<https://orcid.org/0000-0002-7683-2466>

University of the National Education Commission, Krakow, Poland

[piotr.majewicz@up.krakow.pl](mailto:piotr.majewicz@up.krakow.pl)

**Jakub Wolny**

<https://orcid.org/0009-0007-3023-6531>

Humanitas University, Sosonowiec, Poland

[jakub.wolny@humanitas.edu.pl](mailto:jakub.wolny@humanitas.edu.pl)

## Supporting the Development of Competences Necessary for the Independent Living of People With Profound Disorders of Intellectual Development: An Empirical Study

(pp. 357–375)

Suggested citation: Adamczyk, M., Majewicz P. & Wolny, J. (2023). Supporting the Development of Competences Necessary for the Independent Living of People With Profound Disorders of Intellectual Development: An Empirical Study. *Multidisciplinary Journal of School Education*, 12(2(24), 357–375. <https://doi.org/10.35765/mjse.2023.1224.17>

### Abstract

**Objectives of the research:** The goal of the research was to identify the type and extent of activities that special education facilities engage in to teach and promote independence in people with profound disorders of intellectual development.

**Research methods:** Empirical material was collected using the author's original online questionnaire, which consisted of 30 questions measuring the extent to which students' needs for developing independent living skills are met. The survey was conducted among special education teachers (N=642) from seven European countries (Portugal, Spain, Belgium, Poland, Bulgaria, Romania, and Turkey).

**A short description of the context of the issue:** Independent living is widely seen as an immanent attribute of adulthood. Children and adolescents are prepared for independent living through the process of upbringing and socialization; people with disabilities are additionally prepared through rehabilitation. For people with a profound disorder of intellectual development, independent living is challenging but possible with the right support.

**Research findings:** The results indicate that in the course of developing independent living skills in people with profound disorders of intellectual development, efforts are mainly made to improve their self-management skills and democratic management methods in both team work and individual work.

**Conclusions and recommendations:** In the surveyed countries, there is a tendency to limit work for developing independent living skills to a single type of intervention. Rarely are two or three methods – not to mention four – simultaneously used to stimulate the development of independent living skills. It is therefore necessary to call for increased efforts to promote independent living among people with profound disorders of intellectual development and to focus this support on autonomy, self-determination, achieving quality of life goals, and, above all, the ability to make decisions – since this is what determines true independence in life.

**Keywords:** independent living, intellectual disability, quality of life, support, special education teachers

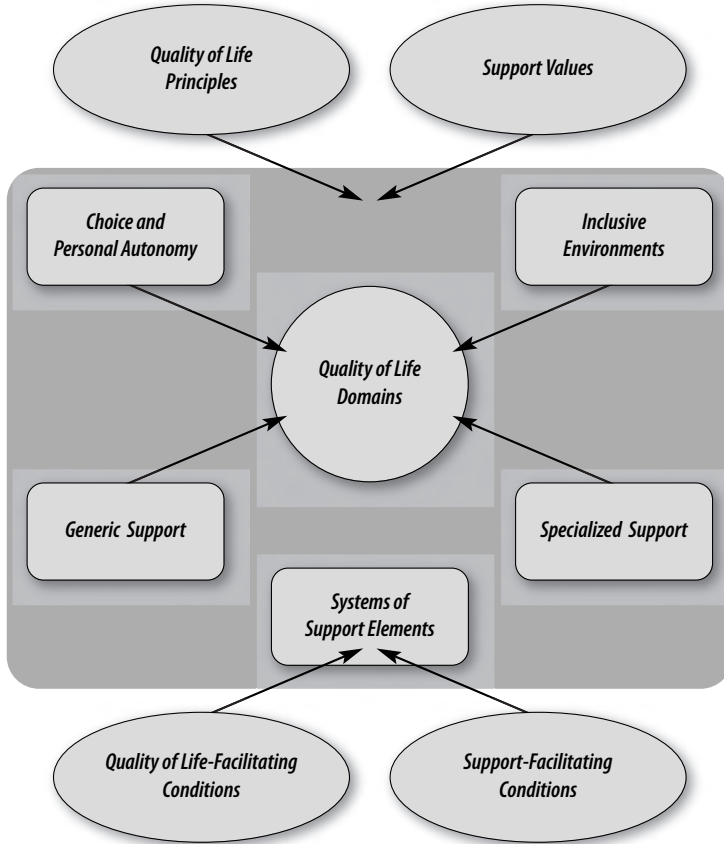
## Introduction

Independent living is widely perceived as an immanent feature of adulthood. Children and adolescents are prepared for independent living through education and socialization; people with disabilities are additionally prepared through rehabilitation. In the case of people with a profound disorder of intellectual development, achieving independence in life is more difficult, though no less important; it is possible thanks to appropriate support (Sandjojo et al., 2018, 2019). The term *profound*

*disorder of intellectual development* includes individuals with both moderate (6A00.1) and severe disorders of intellectual development (6A00.2). As can be seen from the description in the ICD-11 (WHO, 2022), many people with profound disorders of intellectual development require constant support in performing daily life tasks, thereby limiting their independence.

Independent living should be clearly distinguished from self-reliance (Fullana et al., 2020). Self-reliance is one of the elements promoting independence. On the other hand, an essential feature of independent living is the right to choose and to make decisions about one's affairs to the greatest extent possible. The issue is making choices to the best of one's ability and in accordance with one's own and others' safety and the rules of society. In other words, even if a person with a disability cannot do something on their own, they should be able to make choices about every aspect of their life, respecting these principles. The right to independent living and inclusion in a community is mentioned in Article 19 of the United Nations (2006) Convention on the Rights of Persons with Disabilities (CRPD): Living independently and being included in the community.

Thus, self-determination, inclusion, and the ability to make decisions are rights of all people, including people with disabilities (United Nations, 1948). They are important aspects of quality of life. In a hierarchical view of the basic dimensions of quality of life, both self-determination and social inclusion rank high (Schalock, 2000, p. 119). The contemporary paradigm for supporting quality of life in people with disorders of intellectual development integrates the key concepts of "quality of life" and "support" (Gómez et al., 2021). It is characterized by five essential properties: it has a precise theoretical background, it is ethical, flexible, adaptable, and it is evaluable. The model on which this paradigm is based is shown in Figure 1.

**Figure 1. Quality of Life Support Model (Gómez et al., 2021, p. 29)**

Supporting quality of life through planning and using appropriate action strategies fosters development and education and provides the conditions necessary to enhance individual functioning and well-being (Morisse et al., 2013). Through the essential elements of the model – namely, support and quality of life for people with disorders of intellectual development – it is possible to identify skills whose development can improve quality of life. These are democratic management, assertiveness, dealing with matters independently, and managing leisure time. All these skills fall into the areas of independent functioning of people with profound disabilities from the classic AAPEP (Mesibov et al., 1988), where the



main spheres related to independence are interpersonal behavior, adaptation to work, independent functioning, leisure skills, and communication and executive skills. Thus, it can be said that they are the main ways of increasing the level of independence among people with profound disorders of intellectual development (Sandjojo et al., 2019). Developing self-determination skills is equally important for people with intellectual disabilities (Kruk-Lasocka & Suchon, 2013, p. 15).

Previous research (Yildiz & Cavkaytar, 2020, p. 209) has shown that the main skills needed to build an independent life for people with an intellectual disability are personal care and hygiene skills, self-determination and interpersonal skills, employability, and safety compliance skills. Sex education is also needed. Studies that have utilized so-called “augmented reality” with smartphones and tablets (Bridges et al., 2020, pp. 5–9) indicate that video-based modeling increases the acquisition of skills necessary for daily living – such as ironing, making the bed, and setting an alarm clock – and ultimately contributes to improving the overall quality of life for people with intellectual disabilities. Characteristically, the level of independent living is largely determined by the ability to live on one’s own, with family and social support systems being of great importance. In turn, knowledge of safety rules and self-care are basic skills for people with intellectual disabilities. It is worth adding that such people usually prefer independent living, while their parents and educators prefer a more controlled environment under official supervision (Dimitriadou, 2020, p. 153).

There are still quite a few barriers in terms of enabling people with intellectual disabilities to live in natural settings that meet the requirements of social inclusion (Leach, 2016, p. 81). One way to reduce discrimination and increase real social inclusion is through *circles of support*. They support social inclusion and a “secure future” in the community for people with intellectual disabilities. The informal support that circles of support provide gives a voice and decision-making power to a person with a disability and their family. Support is shared and extended to the wider community. Participating in circles of support provides an opportunity to turn to others in different situations, which increases comfort and a sense of security in families and their adult children (Żyta, 2022,

p. 143). Even broader measures include comprehensive solutions for the social and professional activation of people with intellectual disabilities in the local community, actively involving local government; education, social welfare, and local employment services; business representatives serving as potential employers; and academic institutions in the region (Wolny, 2018, p. 675).

These issues closely relate to the adaptive behavior identified by the American Association on Intellectual and Developmental Disabilities as being fundamental to functioning.

Adaptive behavior is the collection of conceptual, social, and practical skills that have been learned and are performed by people in their everyday lives. Adaptive behavior is:

- (a) developmental and increases in complexity with age;
- (b) composed of conceptual, social, and practical skills;
- (c) related to the expectations of age and demands of particular contexts;
- (d) assessed on the basis of the individual's typical performance at home, school, work, and leisure, not their maximum performance; and
- (e) assessed in reference to the community setting that is typical for age peers. (Schalock et al., 2021, p. 2)

In general, adaptive behavior is defined as skills that are acquired and performed to meet everyday social demands. The number and complexity of adaptive behaviors needed to meet these demands increases with age. It can be concluded that higher levels of adaptive behavior are associated with more positive life outcomes and better quality of life (Tassé, 2021).

In summary, it can be pointed out that the core competences related to independent functioning are self-determination and interpersonal skills, skills necessary for daily life, and the ability to obtain and maintain employment (Wandry et al., 2013). It is also extremely important for people with intellectual disabilities to be able to live independently.

## Research methodology

In educational institutions, children and adolescents, including those with disabilities, are prepared for a democratic style of functioning, independence in dealing with various issues, assertiveness, and free time activities. This preparation is intended to help them find their place in the constantly changing world, in which they need to be ready to face challenges. However, what if we are dealing with people whose dysfunctions make it difficult to be independent from the very beginning? This question prompted the research questions: What is the level and type of support offered by special school systems in different European countries? Do the special school systems in various countries target the formation of independent and autonomous individuals, within the limits of their intellectual capacities? Do these systems more or less consciously shape obedient or assertive individuals?

The objective of the study was to characterize the work of the surveyed institutions aimed at teaching and supporting independence in people with profound disorders of intellectual development. In order to measure this, an original questionnaire was used, which included a set of questions for determining the satisfaction of students' needs in five key areas for learning independent living: partner relationships, including preparation for leading a sexual life; preparation for independent living; graduates' attempts to live independently; professional activity; and civic life. The study identified four essential ways to support the development of the necessary skills:

- 1) democratic management in group and individual work,
- 2) assertiveness,
- 3) dealing with issues independently, and
- 4) leisure time management.

A total of 642 teachers from seven countries took part in the survey, with the number of completed questionnaires varying from country to country depending on the response rate of the questionnaires. In all

countries, the project coordinators sent questionnaires to all the special schools available to them; however, the response rate varied greatly, as reflected in the data. The sampling was purposive. Because the respondents, teachers working in special education, represent only a small proportion of all professional teachers, it was crucial for the researchers to reach as many teachers as possible from very different sociopolitical backgrounds.

The respondents came from Bulgaria 31.2% (n=200), Portugal 20.6% (n=132), Turkey 15.3% (n=98), Poland 13.2% n=(85), Romania 8.1% (n=52), Belgium 7.9% (n=51), and Spain 3.7% (n=24). The gender distribution of the study population was 80.1% (n=514) women and 19.6% (n=126) men. More than half of the respondents held a master's degree 55.5% (n=356), 44.2% (n=284) had a bachelor's degree, and two respondents indicated that they had a doctorate. In terms of seniority, the largest group (37.7% [n=242]) were teachers who had worked for 0–10 years, followed by those working for 10–20 years (27.7% [178]) and those who had been in the profession for more than 20 years (34.6% [222]).

The research was conducted within the Erasmus+ project (KA226-9A6B05FC-PL) called "With a Little Help." The project started on March 1, 2021 and ended on February 28, 2023. It was implemented by seven organizations: Asturia vzw in Belgium, Embaixada da Juventude in Portugal, Asociació Educativa and Cultural Blue Beehive in Spain, ASOCIATIA EDULIFELONG in Romania, SISLI ILCE MILLI EGITIM MUDURLUGU in Turkey, Institute Perspectives in Bulgaria, and the Institute for Creative Integration in Poland.

In the statistical analysis of the collected material, the author created and used the Index of Methods Supporting Independence (IMWS), which was based on the question of how students' needs of developing competences for independent living are satisfied. In answering this question, the respondents were given a choice of four different categories of methods to support independence. Two points were awarded for each characteristic selected. Thus, depending on the number of characteristics chosen, each respondent received between 1 and 5 points. The MWS index is a synthetic indicator with values ranging from 1 to 5; the higher

the index value, the higher the level of support. The following scale was adopted: 1 point for no method applied, 2 points for one method applied, 3 points for two methods, 4 points for three methods, and 5 points for four methods. The study used a proprietary online questionnaire consisting of 30 questions, including open-ended questions, multiple-choice questions, and semi-open questions. The difficulty in developing the tool was preparing seven language versions of the tool so that the meaning of the questions remained the same despite linguistic differences.

### Research findings

According to the results, activities aimed at teaching independence to people with profound disorders of intellectual development are conducted in all countries. Only 7.8% of all respondents stated that such activities were not carried out in their institutions. However, strangely enough, methods for developing competences for independent living based on developing assertiveness (assertiveness training) were used least frequently. In contrast to other activities (democratic ways of managing group and individual work [47.7%], dealing with issues independently [52.6%], and managing leisure time [38.2%]), only 27.6% of all respondents indicated that assertiveness was taught. Is it true that out of all the methods applied, assertiveness (especially marking the individualism of each person) is used the least often? Is it a conscious, systemic activity, meaning that regardless of the country of origin of the surveyed teachers, a lack of interest in this method is visible?

For the purpose of this analysis, a hypothesis was put forward: that educational systems for people with profound disorders of intellectual development are geared toward shaping obedient rather than assertive individuals. To this end, the Index of Methods of Supporting Independence was created. The IMWS consists of four methods: democratic ways of managing group work and individual work, developing assertiveness, training in independent matters, and managing free time. Although there are many more methods to support and develop independence, it can be assumed

that the ones chosen for the purpose of this research are the most common (Mesibov et. al., 1988; Tassé et al., 2020; Giesbers et al., 2019; Leach, 2016; Fullana et al., 2020; Wandry et al., 2013; Dollar et al., 2021). The most important ones are the ability to determine one's own needs and the needs of others; to behave in a way that is not harmful to oneself and that respects the differences of others (the formation of assertiveness); the ability to cooperate and work individually (group and individual work); the ability to manage one's own affairs (independent handling of affairs); and, finally, the ability to plan one's leisure time. It should be recalled that the MWSI is a synthetic indicator ranging in value from 1 to 5 (the higher the index value, the higher the level of support).

The analysis of the data shows that independent living is not strongly promoted for people with profound disorders of intellectual development in the selected countries. A detailed breakdown of the data is presented in Table 1.

**Table 1. Methods of Supporting Independence Index (MWS)**

MWS Index		
	Frequency	Percent
No methods applied	50	7.8
1 method applied	331	51.6
2 methods applied	108	16.8
3 methods applied	93	14.5
4 methods applied	60	9.3
Total	642	100.0

According to the research, 51.6% (n=331) of all respondents use only one method to support the development of independence in people with a disability. Only one in ten (9.3%) applies all four methods, which indicates a low level of such support. The following data illustrate in detail which methods are utilized most frequently.

**Table 2. Catalogue of Methods Used to Develop Competences  
 for Independent Living**

Democratic methods of management in group work and individual work		
Country	Not present	Present
Poland	55.3%	44.7%
Spain	37.5%	62.5%
Portugal	40.2%	59.8%
Turkey	55.1%	44.9%
Belgium	78.4%	21.6%
Bulgaria	55.5%	44.5%
Romania	42.3%	57.7%
Assertiveness		
PL	54.1%	45.9%
ES	100.0%	0.0%
PT	68.2%	31.8%
TR	95.9%	4.1%
BE	94.1%	5.9%
BG	60.0%	40.0%
RO	82.7%	17.3%
Independently managing issues		
PL	7.1%	92.9%
ES	62.5%	37.5%
PT	22.7%	77.3%
TR	55.1%	44.9%
BE	58.8%	41.2%
BG	67.0%	33.0%
RO	67.3%	32.7%
Managing leisure time		
PL	31.8%	68.2%
ES	91.7%	8.3%
PT	74.2%	25.8%
TR	99.0%	1.0%
BE	70.6%	29.4%
BG	41.0%	59.0%
RO	67.3%	32.7%
Lack of satisfaction of self-reliance needs		
PL	90.6%	9.4%
ES	100.0%	0.0%
PT	93.2%	6.8%
TR	95.9%	4.1%
BE	94.1%	5.9%
BG	92.0%	8.0%
RO	80.8%	19.2%

Working on independent living skills connected with self-managing group and individual work or managing matters independently, without taking into account the ability to recognize one's own needs and to respect the needs of others (assertiveness), can lead to the danger of people with disabilities being completely subordinated and living in institutions that, while protecting them, indirectly isolate them from the community and limit their freedom through regulations and a hierarchical organization. The research confirms that learning to socialize is oriented toward submissiveness, passivity, and dependence.

### **Discussion and Concluding Remarks**

The results indicate that developing competences for independent living among people with profound disorders of intellectual development mainly involves activities which improve the skills of independently dealing with issues and developing democratic ways of managing group work and individual work. Activities for developing leisure time management skills are much less frequent, and the least attention is paid to developing assertiveness among people with profound disorders of intellectual development. Such an arrangement suggests that special educators focus on skills that facilitate independent functioning in everyday life, which is also relatively easy to observe and provides a kind of positive reinforcement for the participants (Yildiz & Cavkaytar, 2022). On the other hand, the social environment, especially those who are closest, is usually interested in the specific skills of a person with a disability and their independence as much as possible, reducing the need for their support. In turn, relatively advanced skills of democratically managing group and individual work seem to be justified by the requirements of the contemporary job market and societal expectations of functioning on democratic principles. It also prepares people with an intellectual disability for their role as citizens and for building partnerships and democratic relationships in local communities, in which social capital provides the basis for sustainable networks of social commitment of trust and reciprocity (Adamczyk, 2021, p. 91).



However, preparing people with intellectual disability for organizing and spending their leisure time arouses much less interest among educators. The reason for this may be that this skill is regarded as natural and not requiring special intervention, although special educators are aware of its importance in the rehabilitation process, as mentioned in the classic works on rehabilitation (Leland et al., 1967; Mesibov et al., 1988). Moreover, leisure time concerns time spent out of school, which may also explain the relatively limited interest of educators in preparing children and adolescents for it. What is worrying, however, is the low importance attached to skills of assertiveness; one might even say that there is a clear deficit in this area. This may be rooted in the way people with profound disorders of intellectual development are perceived as requiring the support of the social environment in many activities, and this in turn may result in an expectation of submissiveness rather than assertiveness in social relationships (McConkey, 2019). There is also a strong negative association of assertive practices with cooperative and loyalty-promoting practices of institutional collectivism. Thus, belonging to a group does not necessarily promote assertive behavior, as learned patterns of behavior of this type transferred to one's own environment may be shocking and perceived as aggressive or aggression-provoking. Moreover, politeness should be considered the opposite of assertiveness in terms of cultural interpersonal communication. Expectations of people with a profound disorder of intellectual development are more likely to approach the extreme of "politeness" than assertiveness, because they often require social support. This perhaps explains the relatively weak interest in developing these skills among such people. The greater support for the development of assertiveness in some countries, including Poland, Bulgaria, and to some extent Portugal, may be due to the fashion for assertiveness imported directly from individualistic cultures, where the "independent self" is manifested in low-context, direct communication and is expressed in an assertive style (Boski, 2009, pp. 144–237). On the other hand, a low level of assertiveness can pose a threat to one's rights and even physical safety.

In light of the MWSI values presented herein, the least favorable thing about the surveyed countries is that the activities for developing

independent living skills are usually limited to one type of intervention. Most frequently, this is a single type of training, either in self-management or in developing democratic ways of managing group and individual work. Rarely are two or three methods used to stimulate the development of independent living, and all four are only occasionally implemented. It is therefore necessary to call for more activities for developing independent living skills in people with profound disorders of intellectual development, not only in terms of increasing the training of a particular skill, but also with respect to broadening the spectrum of interventions in other areas. Referring to the paradigm of quality of life of people with an intellectual disability (Gómez et al., 2021), it is necessary to focus on autonomy, self-determination, support as a tool for achieving quality of life goals, and above all the ability to make choices, because this is what constitutes real independence in life. However, it is worth formulating recommendations for rehabilitation practice in order to better develop the somewhat neglected skills related to leisure activities and assertive behavior. In the case of the former, people with profound disorders of intellectual development should be prepared to initiate leisure time activities and be motivated to participate in activities organized by others. To this end, it is worth using interactive games, simple movement games, or art, music, and dance. All these activities should be conducive to performing an enjoyable and socially accepted activity (Mesibov et al., 1988, pp. 17–18). Assertiveness skills, on the other hand, can be developed in the course of social skills training or in a more targeted form in psycho-educational classes (Majewicz, 2017, p. 118). For people with intellectual disabilities, developing the ability to ask for help and to refuse to comply with, for example, blatantly inappropriate requests is very important. The development of assertive behavior contributes to a greater ability to defend one's rights and to stay safe.

---

## Limitations of the Research

An unquestionable limitation of the research presented herein is the highly variable number of educators from the different countries taking part in the project. While in Bulgaria there were 200 participants, in Spain there were only 24. Although the total number of participants in the research is significant, with 642 educators from seven countries, this wide variation limits our ability to generalize the results. Furthermore, the remote rather than face-to-face form of data collection also entails limitations (Durga Prasad Nayak & Narayan, 2019). With any online research, there is a danger of surveys being completed only by certain people, e.g. those interested in the topic, including fringe groups who are either very positive or very negative, or those who prefer to be contacted via multimedia. Thus, the representativeness of the results obtained through this methodology may be somewhat questionable.

**Funding:** The research was conducted as part of an international Erasmus plus project (2020-1-PL01-KA226-SCH-095510) entitled 'With a little help'.

## References

- Adamczyk, M. (2021). Social capital as a constitutive element of public security. *Studia i Analizy Nauk o Polityce*, 2, 91–104. <https://doi.org/10.31743/sanp.12697>
- Boski, P. (2009). *Kulturowe ramy zachowań społecznych. Podręcznik psychologii międzykulturowej* [The cultural framework of social behavior: A handbook of cross-cultural psychology]. PWN.
- Bridges, S. A., Robinson, O. P., Stewart, E. W., Kwon, D., & Mutua, K. (2020). Augmented reality: Teaching daily living skills to adults with intellectual disabilities. *Journal of Special Education Technology*, 35(1), 3–14. DOI: 10.1177/0162643419836411
- Dimitriadou, I. (2020). Independent living of individuals with intellectual disability: A combined study of the opinions of parents, educational staff, and individuals with intellectual disability in Greece. *International Journal of Developmental Disabilities*, 66(2), 153–159. DOI: 10.1080/20473869.2018.1541560
- Dollar, C. A., Fredrick, L. D., Alberto, P. A., & Luke, J. K. (2012). Using simultaneous prompting to teach independent living and leisure skills to adults with severe intellectual disabilities. *Research in developmental disabilities*, Jan-Feb, 33(1), 189–95. DOI: 10.1016/j.ridd.2011.09.001
- Durga Prasad Nayak, M. S., & Narayan, K. A. (2019). Strengths and weaknesses of online surveys. *IOSR Journal of Humanities and Social Sciences*, 24(5), Ser. 5 (May 2019), 31–38. DOI: 10.9790/0837-2405053138
- Fullana, J., Pallisera, M., Vilà, M., Valls, M. J., & Díaz-Garolera, G. (2020). Intellectual disability and independent living: Professionals' views via a Delphi Study. *Journal of Intellectual Disabilities*, 24(4), 433–447. <http://dx.doi.org/10.1177/1744629518824895>
- Giesbers, S. A. H., Hendriks, L., Jahoda, A., Hastings, R. P., & Embregts, P. J. (2019). Living with support: Experiences of people with mild intellectual disability. *Journal of Applied Research in Intellectual Disabilities*, 32(2), 446–456. <http://dx.doi.org/10.1111/jar.12542>
- Gómez, L. E., Schalock, R. L., Verdugo, M. A. (2021). A new paradigm in the field of intellectual and developmental disabilities: Characteristics and evaluation. *Psicothema*, 33(1), 28–35. DOI: 10.7334/psicothema2020.385
- Kruk-Lasocka, J., & Suchon, A. (2013). Aktywizacja społeczno-zawodowa osób z głęboką niepełnosprawnością intelektualną – peryferie czy centrum rozważań

- nad ideą samostanowienia [Socio-vocational activation of people with profound intellectual disabilities: Periphery or center of reflections on the idea of self-determination]. In J. Kruk-Lasocka, M. Flanczewska-Wolny, D. Dziuba, & J. Wolny (Eds.), *W drodze do samostanowienia osób z głębszą niepełnosprawnością intelektualną* [On the way to self-determination of people with profound intellectual disabilities] (pp. 15–22). Wydawnictwo Stapis.
- Leach, D. (2016). Housing and independent living for individuals with intellectual and developmental disabilities. *Journal of the American Academy of Special Education Professionals*, 81–99.
- Leland, H., Shellhaas, M., Nihira, K., & Foster, R. (1967). Adaptive behaviour: A new dimension in the classification of the mentally retarded. *Mental Retardation Abstracts*, 4(3), 359–387.
- Majewicz, P. (2017). Psychoeducation in the process of rehabilitation of people with disability and chronic illness. *Lublin Pedagogical Yearbook*, 36(2), 117–130. DOI: 10.17951/lrp.2017.36.2.117
- McConkey, R. (2019). Citizenship and people with intellectual disabilities: An international imperative?. In B. Watermeyer, J. McKenzie, & L. Swartz (Eds.), *The Palgrave Handbook of Disability and Citizenship in the Global South*. Palgrave Macmillan. [https://doi.org/10.1007/978-3-319-74675-3\\_22](https://doi.org/10.1007/978-3-319-74675-3_22)
- Mesibov, G. B., Schopler, E., Schaffer, B., & Landrus, R. (1988). *Adolescent and adult psychoeducational profile (AAPEP): Individualized assessment and treatment for autistic and developmentally disabled children*. Pro-Ed.
- Morisse, F., Vandemaële, E., Claes, C., Claes, L., & Vandevælde, S. (2013). Quality of life in persons with intellectual disabilities and mental health problems: An explorative study. *The Scientific World Journal*. DOI: 10.1155/2013/491918
- Sandjojo, J., Gebhardt, W. A., Zedlitz, A. M., Hoekman, J., den Haan, J. A., & Evers, A. W. (2019). Promoting independence of people with intellectual disabilities: A focus group study perspectives from people with intellectual disabilities, legal representatives, and support staff. *Journal of Policy and Practice in Intellectual Disabilities*, 16, 37–52. <https://doi.org/10.1111/jppi.12265>
- Sandjojo, J., Zedlitz, A., Gebhardt, W. A., Hoekman, J., den Haan, J. A., & Evers, A. (2019). Effects of a self-management training for people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, 32(2), 390–400. <https://doi.org/10.1111/jar.12536>

- Sandjojo, J., Zedlitz, A. M., Gebhardt, W. A., Hoekman, J., Dusseldorp, E., den Haan, J. A., & Evers, A. W. M. (2018). Training staff to promote self-management in people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, 31, 840–850. <https://doi.org/10.1111/jar.12440>
- Schalock, R. L. (2000). Three decades of quality of life. *Focus on autism and other developmental disabilities*, 15(2), 116–127. DOI:10.1177/108835760001500207
- Schalock, R. L., Luckasson, R., & Tassé, M. J. (2021). Twenty questions and answers regarding the 12th edition of the AAIDD manual: Intellectual disability – definition, diagnosis, classification, and systems of supports. American Association on Intellectual and Developmental Disabilities.
- Tassé, M. J. (2021). Adaptive behavior and functional life skills across the lifespan: Conceptual and measurement issues. In R. Lang & P. Sturmey (Eds.), *Adaptive Behavior Strategies for Individuals with Intellectual and Developmental Disabilities* [Autism and Child Psychopathology Series]. Springer. [https://doi.org/10.1007/978-3-030-66441-1\\_1](https://doi.org/10.1007/978-3-030-66441-1_1)
- Tassé, M. J., Wagner, J. B., & Kim, M. (2020). Using technology and remote support services to promote independent living of adults with intellectual disability and related developmental disabilities. *Journal of Applied Research in Intellectual Disabilities*, 33(3), 640–647. DOI: 10.1111/jar.12709
- United Nations. (1948). Universal declaration of human rights (UDHR). Retrieved May 1, 2022 from <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- United Nations. (2006). Convention on the rights of persons with disabilities (CRPD), Art. 19 – Independent living and being a part of the community. Retrieved May 1, 2022 from <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>
- Wandry, D., Wehmeyer, M. L., & Glor-Scheib, S. (2013). Life centered education: The teacher's guide. Council for Exceptional Children.
- WHO. (2022). International Classification of Diseases 11th Revision (ICD-11). Retrieved May 1, 2022 from <https://icd.who.int/en>
- Wolny, J. (2018). Lokalny model aktywizacji społecznej i zawodowej Osób z niepełnosprawnością intelektualną [Local model of social and professional activation of persons with intellectual disabilities]. *Zeszyty Naukowe Politechniki*

---

*Śląskiej, Seria: Organizacja i Zarządzanie Zeszyty Naukowe Politechniki Śląskiej,*  
132, 675–687. DOI 10.29119/1641-3466.2018.132.48

- Yıldız, G., Cavkaytar, A. (2020). Independent living needs of young adults with intellectual disabilities. *Turkish Online Journal of Qualitative Inquiry*, 11(2), April 2020, 193–217. DOI: 10.17569/tojq.671287
- Yildiz, G., Cavkaytar, A. (2022). Effectiveness of pre-employment independent life education program designed for young adults with intellectual disability. *International Journal of Developmental Disabilities*. DOI: 10.1080/20473869.2022.2036920
- Żyta, A. (2022). Parents of adults with intellectual disabilities towards circles of support as a model of community service to support social inclusion: A focus group research report. *Lublin Pedagogical Yearbook*, 41(3), 129–146. <http://dx.doi.org/10.17951/lrp.2022.41.3.129-146>







**Ewelina Sobocha**

<https://orcid.org/0000-0003-1184-5167>

Wyższa Szkoła Biznesu – National Louis University w Nowym Sączu, Poland

[esobocha@wsb-nlu.edu.pl](mailto:esobocha@wsb-nlu.edu.pl)

**Małgorzata Pietrzak**

<https://orcid.org/0000-0002-7892-6503>

Jagiellonian University, Krakow, Poland

[malgorzata.pietrzak@uj.edu.pl](mailto:malgorzata.pietrzak@uj.edu.pl)

## Contemporary Educational Space for University Students and Young People With Intellectual Disabilities: Integration Through Social Interaction

(pp. 377–394)

Suggested citation: Sobocha, E. & Pietrzak, M. (2023). Contemporary Educational Space for University Students and Young People With Intellectual Disabilities: Integration Through Social Interaction. *Multidisciplinary Journal of School Education* 12(2(24), 377–394. <https://doi.org/10.35765/mjse.2023.1224.18>

### Abstract

**Objectives of the research:** The study focused on the influence that public spaces (scientific and cultural institutions, public institutions, and recreational spaces) have on the cognitive abilities of young people and their ability to stimulate interpersonal relationships. The main objective was to show the significance and educational potential of public spaces as a natural environment for the joint activities of university students and students with intellectual disabilities and the extent to which they support the process of integration through social interaction.

**Research methods:** This observation was based on the joint educational activities of university students from the Institute of Geography and Spatial Management of the Jagiellonian University and pupils with intellectual disabilities from Special School and Education Center No. 3 in Krakow; it was conducted between 2016 and 2022.

**A short description of the context of the issue:** The article refers to the concept of educational space and addresses the need to transform the existing

places of education, including those frequented by people with disabilities, in order to meet the requirements of the changing times and the challenges of the digital world. A shift in the attitudes of the young people involved was observed in relation to the space in which classes were conducted.

**Research findings:** Using unconventional ideas and teaching resources and modifying traditional educational methods and practical activities in public spaces are effective ways to break down barriers and overcome various difficulties and limitations, both for university students and those with intellectual disabilities. From the perspective of people with intellectual disabilities, meetings in public spaces enrich them with a valuable social experience, familiarize them with new situations, and teach them how to cope with unusual or unpredictable events.

**Conclusions and recommendations:** As a result of the research, it was found that a contemporary educational space should be distinguished by the following: natural and cultural diversity, communication and media accessibility, and the presence of small urban architectural elements conducive to establishing contacts and enabling a variety of circumstantial relationships.

**Keywords:** educational space, inclusion, intellectual disability, social interaction

## Introduction

Modern education takes place in schools that have been structured according to the curricula and teaching methods of the previous century. The space for education should be transformed, bearing in mind functionality, the requirements of modern times, and the challenges of the digital world. Researchers have found that space contributes to categorization, which in turn has an impact on students' self-esteem and identity, which is of particular importance for people with disabilities (Gabel et al., 2013). The assumption presented in this article is that in order to facilitate greater use of the competences of young people,

regardless of their cognitive level of functioning, the educational space must be extended to public social/cultural places such as museums, cafés, and parks.

In the Public Space Charter (2009) adopted by the 3rd Congress of the Polish Town Planning Authority in 2009, a public space is defined as “a jointly used common good, deliberately shaped by people, in accordance with social principles and values, and serving to meet the needs of local and supra-local communities” (p. 2). Public places or meeting places can therefore be identified with inclusiveness, understood as a space dedicated for and occupied by various types of users (Langstraat & Van Melik, 2013). Inclusiveness is the possibility of including various social groups and individuals, as well as the possibility of making social contacts between different communities, including those related to different lifestyles and cultural circles (Mantey, 2019). Sennett (2009) argues that public places should provoke people to notice social inequalities, react to new stimuli, and have the opportunity to encounter dissimilarity in a positive way. Sennett (2009) describes this understanding of inclusiveness as vivacity.

The concept of educational space in the pedagogical literature has been defined many times (Tuan, 1987; Juszczak, 2004; Surina, 2010; Morbitzer, 2010). In connection with technological development and cultural changes, especially those concerning younger pupils, Morbitzer (2015) proposed a modernized understanding of educational space as “a multi-dimensional social space in which an educational process, including teaching and educating, is carried out” (p. 413). As the author notes, thanks to the Internet and technology, contemporary education has gained a new space – mainly an information and communication one – that reaches far beyond the traditional school walls.

In 2006, the educational space was defined by the OECD as

a physical space that supports multiple and diverse teaching and learning curricula and pedagogies, including modern technologies; one that demonstrates the optimal and cost-effective use of buildings; one that works in harmony with the natural environment; one that encourages

---

social participation, providing healthy, comfortable, safe and stimulating conditions for its occupants. (Kuuskorpi & González, 2011, pp. 1–2)

The need to “come out” from the exclusionary space of a special school can be clearly seen and felt by young people with disabilities, as they persevere in their attempts to eliminate communication barriers in order to participate in social life. The active participation of people with intellectual disabilities improves the functioning of a social community. This is confirmed by Chodkowska (2009), who says that “differences in individual characteristics and life experiences enrich the social life of a group and are helpful in preparing for functioning in society” (p. 13).

While discussing the educational space, it is important to take under consideration Inclusion Europe’s position paper (2011) on inclusive education, which emphasizes developing interpersonal skills and creating social relationships that are crucial in everyday life and future work. Importantly, the WHO recommendations indicated in the report emphasize that many studies focus on the implementation of integration practices (Heras et al., 2021) and do not analyze their effectiveness (World Report on Disability, 2011). This article presents practical activities for various educational spaces aimed at integrating university students and young people with intellectual disabilities. The results of the proposed and conducted activities are described in the summary of this article.

Random interactions between students and individuals with intellectual disabilities are not sufficient to make them fully aware of the limitations that people with intellectual disabilities face in everyday life. Only by entering the space of a special school, being together, and learning together in public situations can they perceive the surroundings through their eyes, feelings, and struggles with everyday challenges. Therefore, people with normal functioning should be included in the space of people with disabilities. Otherwise, they will always think from the perspective of a guardian, guide, or creator of conditions instead of that of an occupant, neighbor, or colleague. It is here where the attitude of partnership, cooperation, and mutual learning from each other can be developed.

## Social integration and educational space

The language of intellectual disability contains many spatial terms. Students with intellectual disabilities are “placed” in special schools or integration classes, where they can be “independent,” “segregated,” “excluded,” or “included” (Gabel et al., 2013). In Poland, the terms for educational activities concerning non-disabled people and individuals with disabilities evolved into “partial integration,” “full integration,” and “inclusion.” Nowadays, the term *full integration* has been replaced with that of inclusive education to emphasize the importance of a holistic approach to education that focuses on the individual abilities of each student. The terminological considerations do not refer to the educational space of young people, assuming that this process takes place in a school environment.

**Figure 1. The evolution of inclusion: partial integration, full integration, and inclusion**



Young people of all ages with mild intellectual disabilities are educated in generally accessible educational institutions along with their non-disabled peers. Schools are required to remove all barriers which may prevent them from fully participating in educational activities. The aim is to introduce young people with disabilities to regular classrooms, but the integration process requires students to adapt to the existing, static education system, while the inclusion process requires the existing education system to be flexible in adapting to each individual student. In the opinion of the researchers, this form of education can bring about positive results, but it can also become a source of exclusion due to personal beliefs and values, legal regulations, functioning stereotypes, inappropriate relations, or limitations in architectural adaptation (Brzezińska et al., 2010; Chrzanowska, 2014; Mudło-Głagolska & Lewandowska, 2018;

Skalbania & Babiarez, 2018; Heras & Verdugo, 2021). As noted by Wlazło (2019), “inclusion is often understood as a form of deeper integration, which means that integration itself loses its basic sense of a voluntary and spontaneous interpersonal relationship based on the equality of rights and life (developmental) opportunities” (p. 46). On the other hand, young people with moderate and severe intellectual disabilities are educated in special schools with limited opportunities for contact with their peers in the process of education. The challenge for people with intellectual disabilities lies in coping with the requirements of the environment, adapting to a variety of living conditions and situations, adhering to the norms in a given social group, establishing and maintaining relationships, and satisfying their own needs in a socially acceptable way (Sęk, 1998; Zasepa, 2016). Educational practice proves that going beyond the school walls and experiencing real-life situations in public spaces is of great importance to the students’ development (Marmola, 2016; Pietrzak & Sobocha, 2017, 2019, 2022; Sobocha & Pietrzak, 2017; Olechowska, 2020; Rahmawati et al., 2020).

By consciously organizing educational activities in public spaces for both young people with intellectual disabilities and university students, we can encourage simultaneous cooperation and individual development. Gajdzica (2016) defines it as a borderland space, but from the perspective of participation, not divisions, alienation, and isolation. For the proper development of individuals with intellectual disabilities, it is important to provide a multitude of stimuli that will allow them, from an early age, to actively learn and get used to and deal with the environment. According to Speck (2015), a poverty of stimuli leads to a lack of motivation to learn, and as a consequence, we observe a diminishing interest in the outside world and little need for independent discoveries. This vanishing of positive experiences of the environment, relationships, and contacts results in very poor or no developmental progress (Speck, 2015).

It is also worth paying attention to the advantages of using information and communication technologies (ICT) when working with intellectually disabled people. This is confirmed by the report on the “Digital School” program, conducted in 399 schools by the Educational Research Institute (Białek, 2013). The report states that ICT motivated people to work during

lessons, had a positive effect on maintaining concentration, stimulated curiosity, helped in understanding reality, and enabled individualized selection of speech therapy and therapeutic/corrective/compensatory programs.

The idea of holding joint educational activities with non-disabled people – university students – and their peers – young people with intellectual disabilities – was based on a query of the literature and common practical solutions. It was hypothesized that the social interactions between these groups of young people in a public space would positively impact effective social relationships and contribute to individual development.

The activities presented in the article are the result of collaboration between Special School and Education Center No. 3 in Krakow and the Institute of Geography and Spatial Management of the Jagiellonian University. From November 2016 to January 2022, the authors conducted meetings, workshops, and classes for university students and young people from a special school. The participants were young, high-functioning people with moderate and severe intellectual disabilities. The activities were conducted within and outside the school environment, facilitating the development of social skills and competences related to functioning in society (e.g., going to a museum, park, café, or art exhibition, or visiting the campus and institutes of the Jagiellonian University or the Nature Education Centre). These mutual meetings allowed the researchers to learn about the attitudes and behavior of young people in their natural surroundings and in public spaces, as well as to adapt the tasks to the functional capabilities of people with intellectual disabilities.

### **Expanding the educational space at the next stages of integration between university students and young people with intellectual disabilities**

The aims of the educational activities presented below were getting to know each other, making acquaintances and cooperating at school, and then taking action in the public space. During the meetings, the important factors were the manner in which feelings were expressed, positive attitudes,

practical activities, and the involvement of both university students and young people with intellectual disabilities. It was important to use social training and act through experience. During the meetings, changes in the attitudes of the participants were observed depending on the space in which the classes were organized. The focus was on the influence that the space had on the activity, commitment, creativity, and interactions of the participants. It was important to analyze the emotions accompanying being in different places as well as the effects it had on cognitive abilities, strengthening new skills, and stimulating interpersonal relationships.

The aim of the school stage of the exercise was to develop interpersonal communication skills, improve self-control and self-presentation abilities, awaken an awareness of one's goals and characteristics, understand community norms, and adjust appropriate behavior to various social behaviors. At this stage, it was important to conduct friendly conversations, use alternative communication, and develop initiative in joint action and partnership, allowing the university students to become guides helping the young people with intellectual disabilities.

The educational activities in the social and public space took the form of regular meetings for achieving main goal of strengthening social competences. The choice to meet in public spaces was determined by the wealth of various social situations there, allowing the pupils with intellectual disabilities to independently experience, experiment, and explore them. Such places included cultural, educational, and scientific institutions, leisure, sports, recreation, and health centers, food and beverage outlets, public administration, transport facilities, etc. While visiting a place, attention was always paid to the features of a given space, the facility itself, and people working there. The universal skills practiced during each meeting were the ability to conduct oneself in public places (controlling emotions, conducting and ending conversations, asking questions, and convincing others), getting used to new situations, overcoming fears related to unknown people and places, following the rules of good manners (e.g., appropriate clothing and tone of voice, listening skills, ways of addressing others, and conducting conversations). As a rule, practice was required to cope with unfamiliar places, in such skills as asking for help and information



or navigating new terrain, which included locating public locations such as reception desks, cash desks, concierges, cloakrooms, administration offices, elevators, stairs, or toilets.

The motivation behind the activities in the third stage was for the pupils to become aware of their own self-worth and abilities, to enforce responsibility, and to develop the ability to draw on a diversity of individual resources. At this stage, the principle of “trust and authenticity” was applied (Pietrzak & Sobocha, 2019). It focused on strengthening, supplementing, and reinforcing the skills acquired. It should be emphasized that the goals were dedicated to all participants of the meetings. An important educational and communication space was the media space: the exchange of multimedia “letters” (during the COVID-19 pandemic). Video letters were recorded to present oneself and one’s interests, favorite pastimes and places, and questions aimed at sustaining relationships (Fig. 2). The young people participating in the classes had access to the main homepage of the institutions and places they visited and they willingly used them. The university and the special school websites were of key importance for learning purposes. These young people eagerly used ICT. The programs are intuitive for them, while the richness of colors and sounds stimulate activity. They enjoy the screen’s response to touch, as it gives them the opportunity to immediately learn the consequences of their actions (Sobocha & Pietrzak, 2017).

**Figure 2. Young people from Special Education Center No. 3 in Krakow watching a video recorded by university students from the Institute of Geography and Spatial Management of the Jagiellonian University (April 2022)**



The work described above created conditions and provoked students with intellectual disabilities to make contact with various people outside their home and school environment. It encouraged in them an attitude of openness to new acquaintances, assertiveness, and the ability to present their own image and inspired them to provide feedback and respond to the needs of others. In general, all the activities were designed to motivate students with intellectual disabilities to search for ways of spending free time, and most importantly, coping with everyday life activities. This strengthened the awareness of one's place and role in the social structure, including one's strengths and weaknesses. The participation of the university students played an important role in shaping social competences during the series of meetings in public spaces. Their task was to react, prompt, lead, accompany, and cheer. The importance of their role was also manifested in sharing their experience, providing inspiration, and giving support to their peers during the trips, meetings, and outdoor events. The aim of the shared activities was also to develop the ability to instruct and explain without compromising the autonomy of young people with intellectual disabilities.

### **Social interactions of young people in the public space**

Young people spend many years in a familiar, isolated, controlled, safe, and predictable space created by school/university conditions. Despite a diversity of educational projects using various methods and techniques, after some time, creativity may be limited by the very existence of this permanent/unchanged space, shared by well-known and therefore predictable people. One way to diversify the educational process may be to expand the educational space and enrich it with social interactions (inclusiveness).

The educational spaces included the MICET Interactive Museum/Theatre Education Center at the National Sary Theatre in Krakow (Fig. 3), the Institute of Geography and Spatial Management of the Jagiellonian University, the Institute of Geological Science of the Jagiellonian University, the campus of the 600th Anniversary of the Jagiellonian University Revival,

the Nature Education Center of the Jagiellonian University, Police Station IV in Krakow, the 8th Transport Aviation Base in Balice, Kika Café Cinema in Krakow, Bielańsko-Tyniecki Landscape Park, Uroczyisko Skałki Twardowskiego in Krakow, and parks, playgrounds, squares, and local shops in the Krakow-Podgórze district.

**Figure 3. Joint activities of university students and young people with intellectual disabilities at the Interactive Museum/Theatre Education Center at the National Stary Theatre in Krakow (June 2017)**



These places were selected because of their educational value. At the same time, they provided an excellent area for the university students to arrange an educational space. The main goal of these meetings and group activities was to create a friendly circle of support and acceptance in the community. Mutual observation, based on openness and understanding, learning from each other, getting to know each other on an intuitive level, and gaining confidence and the conviction of a potential partnership were of great importance. When visiting a place, attention was always paid to the features of a given space, the facility itself, and people working there. The universal skills practiced during each meeting included the ability to behave properly in public places (controlling emotions, conducting and ending conversations, asking questions, and convincing others), getting used to new situations, overcoming fears related to unknown people and places, and observing the rules of socially acceptable behavior. As a rule, practice was required to deal with the unfamiliarity of new places, for example, using information desks or navigating unknown areas.

The work described above created conditions and provoked students with intellectual disabilities to make contact with both university students and people working in the places they visited. It allowed them to acquire new information, learn to use new devices, make methodical observations of nature, independently search for information, and practice asking questions. The personal characteristics and emotional and social functioning of both groups also played a very important role in the activities. Within the group of young people with intellectual disabilities were those with good mechanical memory and dominant concrete-image or sensory-motor thinking abilities. Despite their emotional lability, a need for social contact and an attachment to people, objects, and places were observed (Pietrzak & Sobocha, 2022). For university students, who were not professionals and did not possess specialist knowledge, it was the openness and spontaneity of direct meetings that created the opportunity to observe behavior and uncover personality. These interactions provided them with experience on how to react, inspire, play, and work together.

As a result of the activities and observations, it was found that a modern educational space should be distinguished by the following features:

- natural and cultural diversity
- access to communications and media
- presence of small urban architectural elements conducive to networking
- variety of circumstantial relationships

These observations are in line with the results of the Project for Public Spaces (2005), which identified four key features of an excellent space:

- It is accessible and well-connected to other important places in the area.
- It is comfortable and presents a good image.
- People are drawn to participate in the activities there.
- It is a social space where people like to gather and revisit.

## **The results of integration and educational meetings in social space**

The first meetings were not easy. The people with intellectual disabilities found the need to deal with the new situations a real challenge, while the university students were concerned with proper behavior and conduct in the presence of their intellectually disabled peers. Initially, the people with intellectual disabilities found it difficult to adapt to the rules of the situation. They needed time to understand and be comfortable with the social situations; therefore, they required pedagogical support in making appropriate responses. The most common behaviors observed in the young people with intellectual disabilities were mood swings, hyperactivity, extreme fatigue, excitement, and an inclination to act.

As for the university students, the statements below provide evidence of their uncertainty: “at the beginning I was afraid that it wouldn’t be possible to get along,” “I feared the meeting,” “I wasn’t convinced to participate in such classes,” “we felt some distance at first,” “we were afraid of unpredictable behavior,” and “the lack of contact, as well as the experience of working in such a place.” From their point of view, the regular meetings resulted in permanent changes in their perception of disability. Other interesting statements were as follows: “the more times we met, the more I noticed that they were exceptional, open,” “it was nice, the students are cool,” “after the meetings I decided that I could work with such young people,” and “there’s nothing to be afraid of.”

For the students with intellectual disabilities, the effects of the classes in public educational spaces included the development of openness, directness, and courage in meeting with the students, as expressed in the following statements: “they like listening when we talk about ourselves,” “we get to know new people,” “we can talk about various topics,” “they listen when we talk about ourselves or ask us questions,” “we sometimes have the same interests,” “we spend time together in an interesting way,” “shared activities make us want more (we want to work more),” and “we get to know new and interesting places.”

The use of unconventional ideas and teaching aids, as well as modifications to traditional methods of education and practical activities in public spaces, have become effective ways to overcome barriers and cope with various difficulties and limitations, both by university students and people with intellectual disabilities. From the perspective of the latter group, the meetings in public spaces enriched them with social experiences, familiarized them with new situations, and taught them how to feel comfortable in the face of unusual or unexpected events. The variety of stimuli helped them recognize their emotions, while the multitude of events developed cognitive and social competences, strengthened their ability to build interpersonal relationships, and contributed to their individual development. There was a visible increase in the sense of self-esteem and the ability to act within the peer group. Thanks to these meetings, the potential future teachers, employees of organizations, project initiators, or entrepreneurs (university students) can realize the potential of people with disabilities, learn to stay calm, and intuitively choose the right solution when in direct contact with them, even before starting to work.

We propose a new understanding of the educational space as an inclusive, sensory and spatially diverse, media-friendly, dynamic, socially shared experience in which the educational process is implemented through interactions between young people with and without disabilities.

**Funding:** This research received no external funding.

## References

- Białek, A. (2013). *Wykorzystanie TIK w nauczaniu i uczeniu się uczniów ze SPE na przykładzie rządowego programu rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych „Cyfrowa szkoła”* [The use of ICT in the teaching and learning of students with SEN on the example of the “Digital School” government program for developing students’ and teachers’ competences in information and communication technologies]. Instytut Badań Edukacyjnych. Warsaw. <http://eduentuzjasci.pl/images/stories/publikacje/ibe-raport-TIK-w-edukacji-wlaczajacej.pdf>
- Brzezińska, A. I., Kaczan, R., & Smoczyńska, K. (2010). *Diagnoza potrzeb i modele pomocy dla osób z ograniczeniami sprawności* [Diagnosis of needs and models of assistance for people with disabilities]. Wydawnictwo Naukowe Scholar.
- Chodkowska, M. (2009). *Razem damy sobie radę. W drodze do zintegrowanego społeczeństwa* [We'll get through this together: On the way to an integrated society]. Wydawnictwo Szkolne i Pedagogiczne.
- Chrzanowska, I. (2014). Nauczanie inkluzyjne w doświadczeniach polskich – podstawy prawne i społeczne uwarunkowania [Inclusive teaching in the Polish experience: Legal basis and social conditions]. *Poznań: Studia Edukacyjne*, 30, 109–118.
- Gabel, S., Cohen, C., Kotel, K., & Pearson, H. (2013). Intellectual disability and space: Critical narratives of exclusion. *Intellectual and developmental disabilities*, 51(1), 74–80. [https://www.researchgate.net/publication/235381801\\_Intellectual\\_Disability\\_and\\_Space\\_Critical\\_Narratives\\_of\\_Exclusion](https://www.researchgate.net/publication/235381801_Intellectual_Disability_and_Space_Critical_Narratives_of_Exclusion)
- Gajdzica, Z. (2016). Pogranicza, peryferia i centra włączania ucznia z niepełnosprawnością w klasie ogólnodostępnej [Borderlands, peripheries, and centers of inclusion of students with disabilities in the mainstream classroom]. In Z. Gajdzica & M. Bełza (Eds.), *Inkluzja edukacyjna : idee, teorie, koncepcje, modele edukacji włączającej a wybrane aspekty praktyki edukacyjnej* [Educational inclusion: Ideas, theories, concepts, models of inclusive education, and selected aspects of educational practice] (pp. 89–98). Wydawnictwo Uniwersytetu Śląskiego. [https://rebus.us.edu.pl/bitstream/20.500.12128/6060/1/Gajdzica\\_Pogranicza\\_peryferia\\_i\\_centra\\_wlaczania\\_ucznia.pdf](https://rebus.us.edu.pl/bitstream/20.500.12128/6060/1/Gajdzica_Pogranicza_peryferia_i_centra_wlaczania_ucznia.pdf)
- Hall, E. (2010). Spaces of social inclusion and belonging for people with intellectual disability. *Journal of intellectual disability research*, 54, Suppl. 1, 48–57. <https://doi.org/10.1111/j.1365-2788.2009.01237.x>

- Heras, I., Amor, A. M., Verdugo, M. A., & Calvo, M. I. (2021). Operationalisation of quality of life for students with intellectual and developmental disabilities to improve their inclusion. *Research in Developmental Disabilities*, Vol. 119. <https://www.sciencedirect.com/science/article/pii/S0891422221002420>
- Inclusion Europe. (2011). Why we care about education. [https://www.inclusion-europe.eu/wp-content/uploads/2021/10/Education\\_PositionPaper\\_2021\\_EN.pdf](https://www.inclusion-europe.eu/wp-content/uploads/2021/10/Education_PositionPaper_2021_EN.pdf)
- Juszczak, S. (2004). Dydaktyka informatyki i technologii informacyjnej jako element przestrzeni edukacyjnej [Didactics of computer science and information technology as an element of the educational space]. *Dydaktyka Informatyki*, Vol. 1, 85–103. [https://bazhum.muzhp.pl/media/files/Dydaktyka\\_Informatyki/Dydaktyka\\_Informatyki-r2004-t1/Dydaktyka\\_Informatyki-r2004-t1-s85-103/Dydaktyka\\_Informatyki-r2004-t1-s85-103.pdf](https://bazhum.muzhp.pl/media/files/Dydaktyka_Informatyki/Dydaktyka_Informatyki-r2004-t1/Dydaktyka_Informatyki-r2004-t1-s85-103/Dydaktyka_Informatyki-r2004-t1-s85-103.pdf)
- Kuuskorpi, M., & González, N. C. (2011). *The future of the physical learning environment: School facilities that support the user*. OECD. <https://www.oecd-ilibrary.org/docserver/5kg0lkz2d9f2-en.pdf?expires=1650366345&id=id&accname=guest&checksum=BE50BC9F8B76FD2074044016C9DDA9D8>
- Langstraat, F., & Melik, R. (2013). Challenging the “end of public space”: A comparative analysis of publicness in British and Dutch urban spaces. *Journal of Urban Design*. [https://www.researchgate.net/publication/263555286\\_Challenging\\_the\\_'End\\_of\\_Public\\_Space'\\_A\\_Comparative\\_Analysis\\_of\\_Publicness\\_in\\_British\\_and\\_Dutch\\_Urban\\_Spaces](https://www.researchgate.net/publication/263555286_Challenging_the_'End_of_Public_Space'_A_Comparative_Analysis_of_Publicness_in_British_and_Dutch_Urban_Spaces)
- Mantey, D. (2019). *Wzorzec miejskiej przestrzeni publicznej w konfrontacji z podmiejską rzeczywistością* [A model of urban public space in confrontation with suburban reality]. Wydawnictwa Uniwersytetu Warszawskiego.
- Marmola, M. (2016). Relacje dzieci niepełnosprawnych z rówieśnikami w klasach integracyjnych [Relationships of disabled children with peers in integrated classes]. *Kultura – Przemiany – Edukacja*, Vol. IV, 229–240. <http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-f7030d0b-c262-4ec7-9383-9bddac87cf62>
- Morbitzer, J. (2010). Współczesna przestrzeń edukacyjna [Modern educational space]. In J. Grzesiak (Ed.), *Ewaluacja i innowacje w edukacji. Kompetencje i odpowiedzialność nauczyciela* [Evaluation and innovation in education: The teacher's competences and responsibility] (pp. 113–124). Wyd. Uniwersytet



- im. A. Mickiewicza w Poznaniu, Wydział Pedagogiczno-Artystyczny w Kaliszu, Państwowa Wyższa Szkoła Zawodowa w Koninie.
- Morbitzer, J. (2015). O nowej przestrzeni edukacyjnej w hybrydowym świecie [On a new educational space in a hybrid world]. *Labor et Educatio*, No. 3, 411–430. [https://rep.up.krakow.pl/xmlui/bitstream/handle/11716/1465/Labor\\_et\\_Educatio\\_nr3-2015\\_morbitzer.pdf?sequence=1&isAllowed=y](https://rep.up.krakow.pl/xmlui/bitstream/handle/11716/1465/Labor_et_Educatio_nr3-2015_morbitzer.pdf?sequence=1&isAllowed=y)
- Mudło-Głagolska, K., & Lewandowska, M. (2018). Edukacja inkluzyjna w Polsce [Inclusive education in Poland]. *Przegląd Pedagogiczny*, No. 2, 202–214. <https://przegladpedagogiczny.ukw.edu.pl/archive/article/94/1/article.pdf>
- Olechowska, A. (2020). *Specjalne potrzeby edukacyjne*. Wydawnictwo Naukowe PWN SA.
- Pietrzak, M., & Sobocha, E. (2017). The use of media for educating the intellectually disabled: For and against. *Annales Universitatis Paedagogicae Cracoviensis. Studia ad Didacticam Biologiae Pertinentia*, 7, 26–40. <http://bioannales.up.krakow.pl/wp-content/uploads/2015/04/Folia-240-ostateczna.pdf>
- Pietrzak, M., & Sobocha, E. (2019). Kompetencje społeczne a możliwości aktywizacji zawodowej osób z niepełnosprawnością intelektualną na otwartym rynku pracy [Social competences and opportunities for professional activation of people with intellectual disabilities on the open labor market]. *Przedsiębiorczość–Edukacja*, 15(2), 95–105.
- Pietrzak, M., & Sobocha, E. (2022). *Inkluzja symetryczna młodzieży z niepełnosprawnością intelektualną oraz młodzieży studiującej. Rozwiązania praktyczne* [Symmetrical inclusion of young people with intellectual disabilities and students: Practical solutions]. Wydawnictwo Naukowe Uniwersytetu Pedagogicznego.
- Project for Public Spaces. (2005). <https://www.pps.org/>
- Public Space Charter. (2009). Karta Przestrzeni Publicznej przyjętej przez III Kongres Urbanistyki Polskiej w 2009 r. [Public Space Charter adopted by the 3rd Polish Urban Planning Congress in 2009]. <http://www.tup.org.pl/download/KartaPrzestrzeniPublicznej.pdf>
- Rahmawati, D., & Kusuma, N. R. (2020). Disability in child-friendly integrated public space (RPTRA) [AIP Conference Proceedings Vol. 2230, 040029]. <https://doi.org/10.1063/5.0007458>
- Sęk, H. (1998). *Społeczna psychologia kliniczna* [Social clinical psychology]. Państwowe Wydawnictwo Naukowe.

- Sennet, R. (2009). *Upadek człowieka publicznego* [The fall of public man]. Państwowe Wydawnictwo Naukowe.
- Skałbani, B., & Babiarsz, M. Z. (2018). Edukacja włączająca jako przestrzeń dla rozwoju czy ryzyko wykluczenia i marginalizacji ucznia? [Inclusive education as a space for development or the risk of student exclusion and marginalization?]. *Student niepełnosprawny: Szkice i Rozprawy*, 18(11), 17–27. <https://core.ac.uk/download/pdf/160238428.pdf>
- Sobocha, E., & Pietrzak, M. (2017). Praktyczne zastosowanie kompetencji cyfrowych przez osoby z niepełnosprawnością intelektualną [Practical use of digital competences by people with intellectual disabilities]. In A. B. Kwiatkowska & M. M. Sysło (Eds.), *Informatyka w edukacji : wokół nowej podstawy informatyki* [Computer science in education: On the new foundation of computer science] (pp. 298–308). Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika. <http://iwe.mat.umk.pl/iwe2017/materials/art2017/37.pdf>
- Speck, O. (2015). *Osoby z niepełnosprawnością intelektualną. Podręcznik dla celów wychowawczych i edukacyjnych* [People with intellectual disabilities: A manual for educational and educational purposes]. Wydawnictwo Harmonia.
- Surina, I. (2010). Rozważania o przestrzeni edukacyjnej – od teorii do praktyki edukacyjnej [Considerations about educational space – from theory to educational practice]. In I. Surina (Ed.), *Przestrzeń edukacyjna wobec wyzwań i oczekiwań społecznych* (pp. 13–25). Oficyna Wydawnicza Impuls.
- Tuan, Y.-F. (1987). *Przestrzeń i miejsce* [Space and place]. Państwowy Instytut Wydawniczy.
- Wlazło, M. (2019). Integracja jako cel inkluzji . Pedagogiczne korzenie i aspekty spójności społecznej [Integration as the goal of inclusion: Pedagogical roots and aspects of social cohesion]. *Kultura i Edukacja*, 1(123), 45–57. <https://czasopisma.marszalek.com.pl/images/pliki/kie/123/kie12303.pdf>
- World Report on Disability 2011. (2011). Geneva: WHO. [https://www.who.int/disabilities/world\\_report/2011/report.pdf?ua=1](https://www.who.int/disabilities/world_report/2011/report.pdf?ua=1)
- Zasępa, E. (2016). *Osoba z niepełnosprawnością intelektualną, Procesy poznawcze* [The person with intellectual disability: Cognitive processes]. Oficyna Wydawnicza Impuls.



**Martyna Szczotka**

<https://orcid.org/0000-0003-0302-2961>

Ignatianum University in Cracow, Poland

[martyna.szczotka@ignatianum.edu.pl](mailto:martyna.szczotka@ignatianum.edu.pl)

**Katarzyna Szewczuk**

<https://orcid.org/0000-0003-1914-6600>

Ignatianum University in Cracow, Poland

[katarzyna.szewczuk@ignatianum.edu.pl](mailto:katarzyna.szewczuk@ignatianum.edu.pl)

## Outdoor Education in the Perception of Polish Preschool Teachers: A Focus Group Study

(pp. 395–418)

Suggested citation: Szczotka, M. & Szewczuk, K. (2023). Outdoor Education in the Perception of Polish Preschool Teachers: A Focus Group Study. *Multidisciplinary Journal of School Education* 12(2(24), 395–418. <https://doi.org/10.35765/mjse.2023.1224.19>

### Abstract

**Objectives of the research:** The aim of this study was to gather information about preschool teachers' expectations and attitudes toward outdoor education in the context of shaping and improving the quality of education. The study sought to collect material that would address the following research questions: What does outdoor education mean to preschool teachers? How do preschool teachers implement outdoor activities? What are the challenges of outdoor education according to the surveyed teachers?

**Research methods:** The main research method used was a focus interview.

**A brief description of the context of the issue:** Human beings are connected to nature, we are part of it, and we live and function thanks to it. From early childhood, the natural environment is the closest and most natural for humans, and thanks to our cognitive needs and childlike perceptiveness, we immerse ourselves in the world of nature spontaneously and with great interest. Preschool teachers should see meeting children's need for curiosity and discovery of new knowledge as a challenge, and prioritize

activities in this area. Furthermore, the natural environment, due to its resources, can be perceived as a workshop that teaches knowledge about the world, allows for developing children's vocabulary and shaping new concepts. It also teaches humility, patience and understanding. The environment naturally enhances the activity of children who feel comfortable in nature.

**Research findings:** The importance of outdoor education in children's development has been discussed for years. Unfortunately, as the results of the survey suggest, this does not convince teachers to move part of the educational process outdoors. Teachers list certain limitations and shortcomings as factors that prevent the implementation of this approach in Polish preschool institutions.

**Conclusions and recommendations:** The teachers participating in the focus groups recognize that the implementation of outdoor education activities in kindergartens is necessary, if not indispensable. They see outdoor education primarily as an opportunity for experience-based learning and connecting with nature. The teachers are sufficiently motivated to offer outdoor activities so that children can play and learn simultaneously. However, many see significant obstacles in the education system when planning outdoor learning experiences for their students. To make outdoor education more sustainable and integrated into preschool practices, it would be necessary to remove these barriers and provide support at all levels of the education system and society.

**Keywords:** preschool education, outdoor education, preschool teachers

## Introduction

Outdoor education is a popular field of pedagogy in countries such as Germany, Norway, the United Kingdom and the United States. In Poland, this pedagogical approach has not been clearly defined, and similarly, foreign authors seems to struggle when defining the concept. Outdoor education is used in the training of preschool and early school teachers

in Western Europe. The adventure education movement is equally widespread. Researchers disagree on the roots of both movements and the differences between them. For the purpose of this article, we will not dwell on semantic and linguistic problems, although these terms have been translated into Polish with little consistency. The Polish literature uses such terms as “adventure education,” “adventure pedagogy,” “outdoor education,” “adventure tourism,” “pedagogy of experiences,” “field activities,” and “education outside the classroom” (Leśny, 2014, p. 41). Adventure pedagogy and the pedagogy of experiences are rapidly developing in the West. In practice, outdoor education usually refers to a structured process of learning through independent experience and experimentation, most often through informal education. Commonly used forms include outdoor team games, hikes and expeditions, climbing, adventure parks, water sports, archery, raft building and survival expeditions (Leśny, 2014, p. 41). Outdoor nature classes require being active and relying on previous experiences, as they constitute a foundation for acquiring knowledge and skills. The natural environment determines active and creative attitudes. A creative attitude engaging individual abilities and strengths is expressed through action. Such an attitude rarely arises spontaneously. Children and teenagers need the inspiration of educators to develop the right attitude (Gawlina, 2001). Teachers usually appear as companions, mentors, coaches and less frequently as providers of knowledge (Sendecka, 2017, p. 6).

In recent times, modern didactics has introduced a new trend focusing on designing multifaceted teaching and learning activities, which involves discovering and experiencing phenomena. Learning outdoors through experiencing reality allows for a unique understanding of the laws that govern nature, which helps develop lifelong sustainable attitudes and skills. In the natural environment, one can learn responsibility, boost confidence in one’s abilities, and experience success. Engagement in pro-environmental tasks gives a sense of fulfillment and motivates further actions.

## Outdoor education and teacher competencies

According to Małgorzata Jagodzińska and Anna Strumińska-Doktór (2019, p. 55), education students are not prepared to do activities outdoors. As young teachers, they rarely organize field trips, and if they do, they treat them as recreation and a break from learning. Teachers' awareness of new trends in pedagogy, including outdoor education, is increasing. However, their competences related to conducting outdoor classes has not changed accordingly. Research shows that such classes are organized only a few times a year. Preschool and physical education teachers are the ones who most often organize outdoor activities outside the classroom (Strumińska-Doktór & Doktór, 2016, p. 43).

It is believed that the training of young teachers is insufficient to effectively educate children. A teacher who lacks key competences in this area will struggle to develop them in children and adolescents. Competences included in the European Framework for Natural Sciences include the ability and willingness to explain the natural world using existing knowledge and methods (including observation and experimentation), to formulate questions and draw evidence-based conclusions. Competences in natural science, technology and engineering include an understanding of changes caused by human activity and an understanding one's responsibility as a citizen (Council Recommendation of 22 May 2018). It is important to be able to observe nature outdoors, conduct research, use project-based methods and create an environment that will be conducive to learning. Teachers should develop in themselves the competences they want to foster in their students, as well as those that enable group activation, encourage critical thinking, curiosity about the world and exploration of nature. Regularly organized field activities are becoming an important developmental factor and an irreplaceable space for social interaction and building group relationships, by providing a sense of contentment from interaction with nature. In order for field activities to fulfill their purpose, they should be organized regardless of the weather so that students can release pent-up energy and become more sensitive to the beauty of nature. Children quickly develop resilience

to adverse conditions, and bad weather can stimulate their curiosity about the world and the joy that comes with being in a natural environment. A future teacher must personally enjoy nature and take pleasure in being in natural settings. If they are genuine in their efforts, they will ensure that their students also enjoy interacting with nature.

During their studies, teachers learn alternative teaching methods that offer a chance to conduct classes with children in a different way than the usual routine. But how can a teacher encourage critical thinking in their students and show them professional pedagogical autonomy if they themselves rely on fixed patterns? As Dorota Klus-Stańska writes, “the teacher knows that they should change and do something new, but they do not really know why or how” (2002, p. 223). Outdoor education requires teachers to have different competencies than those required in traditional lessons. Outdoor education, which originates from the philosophy and teaching of John Dewey, requires a teacher who loves nature and considers meadows, parks, country roads and forests to be a large playground. Such a teacher has the courage to step out of their comfort zone and follow the following principles:

- Individuals learn on their own, they are not taught (constructivism).
- Learning in a group is easier, more enjoyable and more effective.
- Participants are given choices during activities (games, challenges, and tasks). There is no compulsion (the principle of challenge by choice).
- Much of the content is learned through real-life experiences (the principle of learning by doing).
- The Kolb Cycle model, learning style theory and transfer of knowledge from experience (games) to “real life” are used in the learning process through collaborative summaries.
- The teacher is a companion, not a “loudspeaker” from which knowledge is transmitted. The process takes place in a safe atmosphere (emotional, physical and social security).
- Simple evaluation is avoided in favor of constructive feedback or formative assessment (Roszak, 2018, p. 137).

Both practicing teachers and student teachers should view the extensive incorporation of outdoor education into their work with children as an opportunity for personal and professional development. The youngest students will benefit the most from such activities. Reflective teachers and student teachers who develop their competences are able, in the current conditions of accelerated scientific and technological development, to take risks and implement outdoor education without fear of not “covering” the curriculum.

### ***Materials and methods***

The study was conducted using a qualitative approach. Focus groups consisting of preschool teachers were organized to obtain answers to the following questions:

1. What does outdoor education mean to preschool teachers?
2. How do preschool teachers implement outdoor education?
3. According to the participating teachers, what challenges can outdoor education generate?

### ***Approach***

The focus group method is suitable for gathering information (including opinions) from respondents on the topic of interest to the researcher. It also allows observation of interactions between participants and focuses on respondents’ experiences directly related to the issue under study: in this case, this was outdoor education. The data collected during the survey underwent thematic analysis, allowing themes and sub-themes to be generated from the data. The reporting of this study follows the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007).

### ***Participants***

The study included a random sample of preschool teachers from institutions located in southern Poland who expressed interest in the research project. The research group varied in terms of teaching experience



(ranging from 4 months to 35 years) and place of work (public and private kindergartens, including Montessori schools). This sampling strategy was chosen deliberately so as to collect extensive material from teachers representing different backgrounds and different levels of work experience.

### ***Study Sites***

The survey was conducted in two cities in southern Poland. Prior to that, a pilot study was carried out to test the interview questionnaire. The main study took place in Krakow and Jaworzno, where three focus groups were conducted. Two sessions were held at a kindergarten in Jaworzno, and one was held at a university in Krakow. These specific institutions were selected in order to ensure easy access to the study sites from the homes of the preschool teachers participating in the study.

### ***Ethics***

The study was conducted with the approval of the Research Ethics Committee of the Ignatianum Academy in Krakow. Additionally, all participants gave written consent to participate in the study before the focus group interviews were conducted. Participants were reminded of their right to withdraw from the study at any time. All personal data, such as names, years of teaching experience and school affiliation were anonymized.

### ***Discussion Guide***

The structured questionnaire for the focus groups was developed by an international team participating in the “Kids Lab for Sustainability” research project under the Erasmus+ Action 2 program. The team consisted of representatives from five academic centers from Poland, Italy, Ireland and Spain. The research group responsible for developing the interview guide had previous experience in conducting focus groups, including involvement in a previous project (Kitchen Lab for Kids) that also used this method of data collection. The questionnaire was constructed according to Krueger and Casey’s recommendations (2010) and included opening,

transition, key (main), and closing questions. The order of the questions was interchangeable, but all questions were asked in each focus group. After the pilot study, there was no need to make major changes to the interview questionnaire, and the data collected during this session were not included in the analysis.

### ***Data Collection***

The study was carried out in March and April 2022. The focus group interviews were conducted by two researchers with higher education and prior experience in conducting interviews and running focus groups with adult participants. The lead researcher (group moderator) in charge of conducting the interviews had a background in psychology, which made it possible to appropriately modulate communication and interaction between group members. A second researcher (assistant moderator) provided organizational and technical support, including audio recording, video playback, and field notes on key topics.

The focus groups varied in size (5–7 participants) and were homogeneous in terms of gender (only female preschool teachers took part). This structure of the focus groups facilitated effective communication between participants, increased comfort and ultimately encouraged teachers to share their views with others.

All focus groups followed a structured thematic guide, which allowed for in-depth exploration of topics related to outdoor education and provided an opportunity to analyze and compare respondents' statements.

### ***Data Analysis***

All statements made during the focus group interviews were digitally recorded and then transcribed. Each transcript was open-coded by two independent researchers, and their coding responses were compared. Open coding involved summarizing the participants' views by assigning relevant words or phrases to quotes. In cases of discrepancies or inconsistencies in the coding process, a third researcher was consulted for evaluation. Furthermore, all codes were compared with written field notes taken on the day of each focus group session. Subsequently, two

researchers worked on categorizing codes and assigning them to themes and subthemes.

**Table 1. General information about the interviews and study participants**

Number of groups	3				
Number of participants	18				
Gender	Female preschool teachers				
Age (years)	21 – 30	31 – 40	41 – 50	51 years and older	
	7	2	5	4	
Work experience	1 and below	2 – 10	11 – 20	21 – 30	31 years and older
	5	4	4	3	2
Place of work	Public kindergarten		Private kindergarten		
	9		9		

## Results

Defining the concept of outdoor education is not a simple task, even for those who are not new to the idea. This is because outdoor education has undergone various transformations over the years, incorporating innovative trends and solutions into its principles. However, it can be generally assumed that outdoor education is a way of learning in and for the environment (Sabet, 2018). Do preschool teachers understand it in a similar way? To find out, focus group participants were asked to write down up to 5 associations with the concept of outdoor education. Not all participants took the opportunity to provide a complete set of ideas. Initially, the study participants' nonverbal behavior showed some uncertainty, fear and embarrassment. Also, some respondents asked if they could give fewer answers. Once the moderator assured the participants that the number of associations was not key, the groups began to write down their ideas.

### **Associations of Preschool Teachers with Outdoor Education**

Preschool teachers participating in the study provided a total of 72 associations with outdoor education. These associations were categorized, which made it possible to identify the main thematic areas. The surveyed preschool teachers associate outdoor education with:

- Development of children’s knowledge and skills (28%) – the opportunity to teach about ecology, about the forest, science (exploration and cultivation of respect for nature), and to foster the overall cognitive development of the child. According to the teachers surveyed, skills that can be developed through outdoor education include independence, creativity, self-expression and the opportunity for enjoyable play, which is a natural activity for children.
- Method of work (19%) – nature as an area for conducting experiments and observations – if they are related to nature, of course.
- Physical activity and engaging forms of working with children (18%) – opportunities for walks, excursions and sports activities (including outdoor games). Implementing outdoor education also provides physical activity outdoors.
- Nature (16%) – outdoor education provides interaction with nature, space and plants; an opportunity to engage the senses.
- Health (12%) – the beneficial effects of interacting with nature on our health and well-being. According to the teachers surveyed, outdoor education is simply enjoyable and relaxing, which is much needed in today’s technicized world.
- Emotions (7%) – joy as the main emotion experienced in the natural environment, along with enthusiasm.

### **Methods of Implementing Outdoor Education According to Preschool Teachers**

Renata Michalak and Teresa Parczewska (2019) indicate that there is no room in the Polish curriculum for outdoor education. Therefore, we decided to ask the participating teachers about how outdoor education is implemented in their institutions. Analysis of the transcripts allowed

us to distinguish three thematic categories: conducting outdoor activities in the immediate vicinity of the preschool facility, parental education, and maintaining a balance between outdoor and indoor activities in the educational institution.

*Category 1: Conducting outdoor activities in the immediate vicinity of the kindergarten*

Preschool teachers implement outdoor education primarily in areas surrounding the preschool or close to it. These methods were most often mentioned by teachers, often along with specific practical examples from their professional lives.

“For example, we planted peas ourselves, and we also have a garden in our backyard. Each group has its own garden and we get to work whenever we get the chance. The children plant vegetables, take care of them and can get dirty in the process.” (Teacher 1)

“I once buried dinosaur toys in the sandbox and gave the children thick paintbrushes. The children were instructed to find the hidden toys themselves. And [the children] remembered much more from these activities: the shapes, the names of the dinosaurs.” (Teacher 4)

The teachers also said that they conduct outdoor education using primarily activating teaching methods, such as:

“In our preschool, we organize scavenger hunts, for example. We draw a map [for the children], which can be a bit challenging for them to read, but they try to follow its instructions.” (Teacher 1)

“In our preschool, we have a makeshift kitchen where various experiments take place involving mixing ingredients and pouring and so on.” (Teacher 2)

Teachers also pointed out that outdoor education offers opportunities for relaxation and recreation, and is an excellent learning opportunity.

“In our garden we have mats where children can lie down and relax while listening to stories and books.” (Teacher 7)

“Sometimes it’s just educational activities conducted outdoors because it’s more enjoyable, and sometimes it’s activities that require more space, such as discussing the universe and the solar system, where we

show the children the approximate distances between the planets and the sun.” (Teacher 6)

Only a few focus group participants mentioned implementing outdoor education in areas further away from the kindergarten. Teachers suggest organizing trips (excursions, as well as visiting interesting places or participating in workshops.

“The Geosphere Park has an ecology trail, so when we go there, we learn about plants. We also do ecology workshops during classes. There are also green towns that we go to.” (Teacher 5)

### *Category 2: Parent Education*

Parents are key partners of teachers in the learning and teaching of children. They can either help or hinder kindergarten staff in planning and implementing outdoor learning activities. Teachers are aware of the importance of parents’ attitude towards outdoor activities. They understand that introducing new ideas into the teaching process may spark some controversy among the children’s parents / caregivers as evidenced by these statements:

“Make parents aware that getting dirty is not a bad thing for children, that it brings them joy.” (Teacher 9).

“First of all, you have to start by educating the parents so that they are not afraid of it.” (Teacher 10).

### *Category 3: Maintaining a Balance Between Outdoor and Indoor Activities in the Educational Facility*

During the focus group discussions, there were indications of a “golden mean” in the implementation of outdoor education. Teachers are aware that outdoor activities are essential for children’s development and that they must take place. They emphasize their beneficial effects on children’s physical and emotional development, sensory integration and learning about nature. However, they also stress the vital importance of activities held in an educational institution. They believe that outdoor and indoor activities should be balanced (with a slight emphasis on the former) to provide children with opportunities to explore different environments.

“Children spending time outdoors, playing in water, mud and rolling in the grass – these are fantastic things that bring great joy to children. However, I believe it’s important to maintain moderation and harmony, to mainly prepare children for social life that doesn’t rely solely on the woods and the outdoors. There should be a certain balance between outdoor and indoor activities. Of course, these proportions can be adjusted.” (Teacher 11).

“Let them [children] draw with sticks in the dirt, but also provide them with paints, a table and chairs so they can experience both. We need to strike a balance between different forms of activity, between culture and nature.” (Teacher 12).

### **Difficulties (Challenges) of outdoor education according to focus group participants**

The need to integrate outdoor education with learning opportunities is widely discussed worldwide. Experiences gained through nature activities are remembered for life, and outdoor learning becomes enjoyable, creative and full of adventure, even though it can be demanding. It was this element of difficulty that was primarily emphasized by focus group participants. Polish preschool teachers perceive outdoor education mainly through the challenges it can bring, rather than as opportunities to be overcome. In their statements, the participants pointed to social groups – teachers, parents and children – as well as preschool infrastructure as barriers to implementing outdoor activities

#### *Category 1: Teachers*

The training of teachers and their continuous professional development make it possible to provide quality outdoor education. In their statements, teachers emphasized the lack of the necessary knowledge required for implementing outdoor activities, the shortage of practical materials as well as a dismissive attitude of some teachers towards teaching based on connecting with the natural environment.

“It would be generally helpful to have basic education for teachers on nature. As a child, I had the experience of learning about the structure of the amoeba, which is of no use to me to all, while I struggled to

distinguish the basic trees growing near my home. I believe it's essential to learn about the natural environment that is closest to us." (Teacher 11). "Tools and ideas tailored to different age groups. These are always materials that can inspire or sometimes serve as ready-made solutions if we don't have any better ideas, so I think the practical aspect will certainly be helpful." (Teacher 2).

"I also have experience working in a private institution where the value of going outdoors wasn't really appreciated; it was seen more as a chore." (Teacher 2).

### *Category 2: Parents*

Parents, as partners of teachers in their children's education, can either support outdoor activities or effectively block them. Ambivalent attitudes toward outdoor learning were also mentioned by focus group participants. They observed that parents' opinions on the issue varied and said that one group of parents would like their children to spend as much time outdoors as possible:

"We often talk to parents. Because parents follow the Scandinavian approach and ask if they can bring their children [to kindergarten] dressed in raincoats and wellingtons." (Teacher 14).

On the other hand, other parents are strongly opposed to such classes. Unfortunately, statements like the one below prevail:

"I think parents limit their children a lot so that they don't get dirty or touch anything, because then they have to wash their hands." (Teacher 15).

"The issue is that if it's just a walk, it's fine, parents don't mind, but where there's a need to play and get dirty, there's no consent." (Teacher 16).

These opposing views of parents on outdoor education, which are sometimes difficult to reconcile, were aptly summarized by one focus group participant:

"In my opinion, sometimes it is difficult to fight with parents. Because one parent may insist that the child will catch a cold, and another parent will say that children don't spend enough time outdoors. But they should spend more time outside whether in the rain or in the sun. And then there is a major conflict, and we are caught in the middle." (Teacher 15).



### *Category 3: Children*

Outdoor education has many benefits, as it supports the holistic development of children. It serves as a bridge in building relationships between people and the natural environment, fostering creativity and imagination, as evidenced by the following statement:

“We made a pirate ship using only the resources that the children could find in the garden. It’s great that the children can relate to what they usually have in the classroom. So, if we don’t have building blocks to build a ship, we will use sticks or stones. If we don’t have wool or tissue paper, we can use moss.” (Teacher 15).

However, many teachers are afraid to conduct outdoor activities as they are unable to ensure children’s safety and potential dangers that are difficult to foresee. This fear-based attitude was evident in the following statements:

“Sometimes I’m afraid that when we go outside and have a sensory garden with small stones, I’m afraid that one of the children might put a stone in their mouth.” ... “This fear that something bad will happen because the child is interacting with nature can make it a little difficult for us to connect with nature.” (Teacher 17).

“A significant obstacle, depending on the season, is children’s allergies. There’s a boy in my older group with a really long list of allergies, which he obviously has no control over, but it’s also impossible to do outdoor activities with him.” (Teacher 16).

### *Category 4: Preschool Infrastructure*

The area surrounding a preschool usually serves as the main base for teachers for implementing outdoor education. The space provides a sense of security for both the staff and children, as everyone is familiar with it. The location of the facility (access to green areas, presence of smog), the building itself: the layout and arrangement of rooms (e.g. a large cloak-room) and financial resources also play a significant role in this context.

“More and more kindergartens are located in apartment buildings, with limited access to opportunities for interacting with nature. Our kindergarten is located in an apartment building and we have access

to a tiny garden, which does not belong exclusively to us, but is available to all residents of this neighborhood. ... Older children can go to the park, but it is located on a busy street.” (Teacher 13).

“I think we also often face the problem of air pollution.” (Teacher 2).

“In Finland, Denmark and Sweden, kindergartens are huge, with hangers for overalls and racks for rubber boots. In our case, we have a tiny cloakroom, and if all the children have wet jackets, I don’t know where we could dry them.” (Teacher 11).

“I would also like to mention the economic aspect. We saw in a video that these children were prepared, had appropriate clothing, and were able to manipulate things in the water. They were well equipped. This is what we lack. We don’t have the right resources.” (Teacher 4).

## Discussion

This focus study describes focus group interviews conducted to better understand kindergarten teachers’ attitudes toward outdoor education. In this area, the study focused on three issues: teachers’ associations with outdoor education, implementation methods and the difficulties (challenges).

In the Polish scientific literature, there are publications (Michalak & Parczewska, 2019) that indicate a total absence or only marginal presence of outdoor educational activities. This study corroborates this to some extent. Focus group participants make efforts to take children outside and conduct nature-connection activities, but such lessons are not regular or frequent. Similar situations can be observed in other parts of the Western world, such as Scotland, Canada and Australia (Perlman et al., 2020). Nevertheless, teachers acknowledge that children need to spend time outdoors, which is admittedly important for the development of preschoolers’ knowledge and skills. They also point out the benefits of better communication and improved relationships with children, although they also note that children need time to adjust to the outdoor environment as a learning space (Bølling et al., 2019).

Interview participants also noted the positive impact of outdoor education on children's health and well-being. This viewpoint is supported by numerous studies that highlight the advantages of outdoor education for both children and teachers (Deschamps et al., 2022; Mann et al., 2022). Some teachers have mentioned increased job satisfaction, motivation, enjoyment, positive work atmosphere and well-being after conducting outdoor education (Fägerstam, 2014; Marchant et al., 2019).

Definitional approaches to outdoor education indicate three areas of its implementation: education in, about and for the outdoor environment (Donaldson & Donaldson, 2013). The teachers surveyed see outdoor education more as a way of learning in and about the environment (e.g., through experiments, physical activity, and observation) than as a way of learning for the environment (e.g., ecology and respect for nature). Focus group participants mentioned the educational potential (as a teaching method) and health benefits (sports) of nature more often than the need to protect nature and develop respect for nature's resources.

The respondents stressed the importance of areas located near and around the kindergarten, which are most frequently explored during outdoor activities. This is a natural attitude, as it provides a sense of security for both teachers who are taking their "first steps" in organizing outdoor activities and the children who participate in them. However, it should be remembered that the next steps should be aimed at exploring more remote areas, experiencing the natural world and culture not only locally, but also in a broader context, and organizing trips and camps. This approach to outdoor education is strongly recommended in the literature. On the other hand, a strong emphasis is placed on the importance of interaction with nature in the local environment, as it provides children with practical and concrete experiences. It is easier for a child to understand and observe the problems occurring where he or she lives than global issues such as the Amazon rainforest (Sabet, 2018). Implementing outdoor education also involves the use of various strategies and methods (Gilbertson et al., 2022). Elements of these (such as experiments, observations, games and sports) can be found in the statements of focus group participants, although they were not very diverse.

Statements obtained from surveyed teachers included opinions regarding parents' negative attitudes toward outdoor education. They are usually motivated by concerns about children's health, appropriate weather conditions and suitable clothing (including the possibility of getting dirty). The issue of optimal preparation for outdoor education, which involves providing children with appropriate weatherproof clothing, was also acknowledged by Parsons and Traunter (2019). The authors of a study conducted in the United Kingdom note the importance of collaboration between teachers and parents in developing strategies that promote active learning opportunities for children outdoors.

The discussion also raised the issue of children's safety as a potential barrier to outdoor education. Teachers' fear of not being able to fully protect the child outdoors has also been reported in other studies (Ernst, 2014; Kernan & Devine, 2010). The implementation of outdoor activities should always be preceded by a critical analysis of the benefits and drawbacks of this educational option. One must consider the risk associated with outdoor play and the concern for children's safety. Furthermore, the literature points to the need for an initial adjustment period after the introduction of outdoor learning, where disciplining and supervising children is significantly less likely once they have adapted to the new learning environment (Fägerstam, 2014).

The participating teachers were aware of their own shortcomings that contribute to their reluctance to implement outdoor activities. Their statements revealed the need for more in-depth knowledge on outdoor learning topics (training, workshops) as well as the availability of materials (tools), ideas or good practices that would serve as inspiration for developing their own outdoor education methods. The question of training teachers and building their confidence is extensively discussed in the literature (Lochman, 2003; Marchant et al., 2019). Special attention is given to training that takes place not only indoors, but primarily in nature (King's College London. Beyond Barriers to Learning Outside the Classroom in Natural Environments. Earth Learn Idea [Internet]. 2010; December 9, <https://publications.naturalengland.org.uk>).

However, for such training to have the intended effect, it should be conducted on a long-term and regular basis, and the classes should be held

on the kindergarten premises, in areas adjacent to the facilities, as well as during field trips. Unfortunately, given the current workload of teachers due to various preschool duties, such lessons seems impractical.

Blatt and Patrick (2014) found that aspiring teachers who have positive experiences with outdoor activities often show more enthusiasm for organizing outdoor teaching in their future careers. Therefore, they suggest that teacher education programs introduce teacher trainees to outdoor learning environments during their studies through various projects, field trips and research tasks, thus enabling them to gain the necessary competencies in this area.

The implementation of outdoor activities requires adequate preparation, especially in terms of financial support. The surveyed teachers were aware of this, as they listed several difficulties related to the general infrastructure of kindergartens that hinder outdoor education. Polish facilities face more challenges than kindergartens in Scandinavian countries (e.g. Finland, Sweden), where the idea of outdoor education is deeply rooted and educational institutions are better equipped to facilitate connecting with nature. Polish preschool teachers lack basic amenities, such as cloakroom space, proper weatherproof clothing for children and green spaces, especially in urban areas. However, financial issues related to organizing outdoor education are not unique to Polish kindergartens and schools. Similar challenges have been observed in studies conducted by other authors, for example, in South Wales (Marchant et al., 2019).

This study demonstrates that, on the one hand, preschool teachers are aware of the benefits of outdoor education for the holistic development of the child. On the other hand, they strongly focus on the limitations and shortcomings that hinder its implementation in Poland. In the future, it would be desirable to conduct a larger-scale study that would compare progress in implementing outdoor education models with the current situation. Such studies could also serve as a source of best practice examples.

## Conclusion

The teachers participating in the focus groups recognize that the implementation of outdoor educational activities in kindergartens is needed, if not indispensable. They see outdoor education primarily as an opportunity for experience-based learning and connecting with nature. Teachers are motivated enough to offer children outdoor activities so that they can play and learn at the same time. However, many see significant obstacles in the education system when planning outdoor learning experiences for their students. To make outdoor education more sustainable and integrated into preschool practices, it would be necessary to remove these barriers and provide support at all levels of the education system and society. This can be achieved by:

1. Adequately preparing teachers for outdoor teaching by offering them professional development opportunities and access to a community of experts who promote the value of outdoor education. Professional development allows teachers to expand their knowledge of how to organize and plan outdoor activities. Meanwhile, a community of practitioners offers opportunities for sharing experiences, providing support in challenging situations and celebrating successes. Experienced teachers can act as mentors, by sharing their knowledge and skills with others who are new to outdoor education.
2. The surveyed teachers said that children are not properly prepared for outdoor education, especially in terms of clothing. They mentioned that parents are often concerned that their children will get dirty. In order to mitigate these concerns, we propose to establish a rental service for outdoor clothing (e.g., rubber boots, raincoats). Additionally, appropriate materials for outdoor activities can be purchased with funds allocated for outdoor learning. Such measures would alleviate the financial burden on families and thus ensure equal access to outdoor education for all children. Another closely related inconvenience is the lack of adequate financial support, including

infrastructure, materials and tools for outdoor activities. Government institutions should provide the necessary resources for at least partial organization of outdoor activities outside the premises of schools and kindergartens.

3. Many adults have no experience with outdoor learning, as evidenced by the statements of the teachers participating in the focus groups. They observed a generally negative attitude among parents towards activities outside the traditional classroom setting. It is important for teachers and students to share their outdoor learning experiences, especially when they are successful. Promoting outdoor learning changes perceptions and expands opportunities for learning outside the confines of the building. Educating the public and integrating outdoor learning into preschool practices are essential in this regard.

**Funding:** This research received no external funding.

---

## References

- Blatt, E., & Patrick P. (2014). An Exploration of Pre-Service Teachers' Experiences in Outdoor 'Places' and Intentions for Teaching in the Outdoors. *International Journal of Science Education*, 36(13), 2243-2264. <https://doi.org/10.1080/09500693.2014.918294>
- Bølling, M., Pfister, G. U., Mygind, E., & Nielsen, G. (2019). Education Outside the Classroom and Pupils' Social Relations? A One-Year Quasi-Experiment. *International Journal of Educational Research*, 94, 29–41. <https://doi.org/10.1016/j.ijer.2019.02.014>
- Council Recommendation of 22 May 2018 on key competences for lifelong learning ( 2018/C 189/01), [https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32018H0604\(01\)&from=en](https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32018H0604(01)&from=en) (access: 20.05.2023)
- Deschamps, A., Scrutton, R., & Ayotte-Beaudet J-P. (2022). School-based Outdoor Education and Teacher Subjective Well-being: An Exploratory Study. *Frontiers in Education*, 7, 961054. <https://doi.org/10.3389/educ.2022.961054>
- Donaldson, G. W., & Donaldson L. E. (2013). Outdoor Education a Definition. *Journal of Health, Physical Education, Recreation*, 29 (5), 17-63. <https://doi.org/10.1080/00221473.1958.10630353>
- Ernst, J. (2014). Early Childhood Educators' Use of Natural Outdoor Settings as Learning Environments: An Exploratory Study of Beliefs, Practices, and Barriers. *Environmental Education Research*, 20(6), 735–52. <https://doi.org/10.1080/13504622.2013.833596>
- Fägerstam, E. (2014). High School Teachers' Experience of the Educational Potential of Outdoor Teaching and Learning. *Journal of Adventure Education and Outdoor Learning*, 14(1), 56-81. <https://doi.org/10.1080/14729679.2013.769887>
- Gawlina, Z. (2001). Kształtowanie postawy czynnej ważnym celem wychowania [Shaping an active attitude is an important goal of education]. In Z. Gawlina (Ed.), *Kształtowanie postaw czynnych i więzi środowiskowych [Shaping active attitudes and environmental ties]* (pp. 9-23). Wydawnictwo Uniwersytetu Jagiellońskiego.
- Gilbertson, K., Bates, T., McLaughlin, T., & Ewert, A. (2022). *Outdoor Education: Methods and Strategies*. Human Kinetics.
- Jagodzińska, M & Strumińska-Doktór, A. (2019). Outdoor education wzmocnieniem realizacji zrównoważonego rozwoju [Outdoor education strengthens



- the implementation of sustainable development]. *Studia Ecologiae et Bioethicae*, 17(4), 55-67. <https://doi.org/10.21697/seb.2019.17.4.06>
- Kernan, M., & Devine D. (2010). Being Confined within? Constructions of the Good Childhood and Outdoor Play in Early Childhood Education and Care Settings in Ireland. *Children & Society*, 24(5), 375-385. <https://doi.org/10.1111/j.1099-0860.2009.00249.x>
- King's College London. (2010, December). Beyond Barriers to Learning Outside the Classroom in Natural Environments. <https://publications.naturalengland.org.uk/publication/4524600415223808>
- Klus-Stańska, D. (2002). *Konstruowanie wiedzy w szkole [Constructing knowledge in school]*. Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego.
- Leśny, A. (2014). Pedagogika przyrody – konteksty teoretyczne [Pedagogy of nature – theoretical contexts]. In A. Bąk, A. Leśny & E. Palamer-Kabacińska (Eds.), *Przygoda w edukacji – edukacja w przygodzie [Adventure in education – education in adventure]* (pp. 41-50). Fundacja Pracowania Nauki i Przygody.
- Lochman, J.E. (2003). Commentary: School Contextual Influences on the Dissemination of Interventions. *School Psychology Review*, 32(2), 174-177. <https://doi.org/10.1080/02796015.2003.12086190>
- Mann, J., Gray, T., Truong, S., Brymer, E., Passy, R., Ho, S., Sahlberg, P., Ward, K., Bentsen, P., Curry, C., & Cowper, R. (2022). Getting Out of the Classroom and Into Nature: A Systematic Review of Nature-Specific Outdoor Learning on School Children's Learning and Development. *Froniers in Public Health*, 10, 877058. <https://doi.org/10.3389/fpubh.2022.877058>
- Marchant, E., Todd, C., Cooksey, R., Dredge, S., Jones, H., Reynolds D., Stratton G., Dwyer R., Lyons R., Brophy S. (2019). Curriculum-based Outdoor Learning for Children Aged 9-11. A Qualitative Analysis of Pupils' and Teachers' Views. *PLoS ONE*, 14(5), e0212242. <https://doi.org/10.1371/journal.pone.0212242>
- Michalak, R., & Parczewska, T. (2019). *(Nie)obecność outdoor education w kształceniu szkolnym [The (non)presence of outdoor education in school education]*. Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.
- Parsons, K. J., & Traunter, J. (2020). Muddy Knees and Muddy Needs: Parents' Perceptions of Outdoor Learning. *Children's Geographies*, 18(6), 699-711. <https://doi.org/10.1080/14733285.2019.1694637>

- Perlman, M., Bergeron, C., & Howe N. (2020, 10 maja). Scotland's Outdoor Play Initiative has some Lesson for the Rest of the World. <https://theconversation.com/scotlands-outdoor-play-initiative-has-some-lessons-for-the-rest-of-the-world-132429>
- Rozsak, B. (2018). Edukacja outdoor w praktykach studenckich a rzeczywistość [Outdoor education in student internships and reality]. In E. Musiał & J. Malinowska (Eds.), *Praktyki pedagogiczne przestrzeni i miejsc ewaluacji kompetencji przyszłych nauczycieli wczesnej edukacji. Koncepcje-przemiany-rozwiązania [Pedagogical practice as a space and place for evaluating the competences of future teachers of early childhood education. Concepts-transformations-solutions]* (pp. 130-139). Instytut Pedagogiki Uniwersytetu Wrocławskiego.
- Sabet, M. (2018). Current Trends and Tensions in Outdoor Education. *BU Journal of Graduate Studies in Education*, 10 (1), 12-16.
- Sendecka, Z. (2017). *Style uczenia się a koncepcja outdoor education w kształceniu przedszkolnym [Learning styles and the concept of outdoor education in preschool education]*. Ośrodek Rozwoju Edukacji.
- Strumińska-Doktor, A. & Doktor, D (2016). Atrakcyjność obszarów zielonych w dzielnicy Wola dla potrzeb wypoczynku nauczycieli i uczniów [Attractiveness of green areas in the Wola district for the needs of teachers and students' recreation]. *Studia Ecologiae et Bioethicae*, 14(3), 25-45.
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated Criteria for Reporting Qualitative Research (COREQ): a 32-item Checklist for Interviews and Focus Groups. *International Journal for Quality in Health Care*, 19 (6), 349–357. <https://doi.org/10.1093/intqhc/mzm042>
- Wholey, J.S., Hatry, H. P. & Newcomer K. E. (2010). *Focus group interviewing. Handbook of practical program evaluation*. Jossey-Bass.



**Ewa Piwowarska**

<https://orcid.org/0000-0003-4332-3232>

Jan Dlugosz University in Częstochowa, Poland

[e.piwowarska@ujd.edu.pl](mailto:e.piwowarska@ujd.edu.pl)

**Jolanta Karbowniczek**

<https://orcid.org/0000-0003-4746-3814>

Ignatianum University in Cracow, Poland

[jolanta.karbowniczek@ignatianum.edu.pl](mailto:jolanta.karbowniczek@ignatianum.edu.pl)

**Urszula Ordon**

<https://orcid.org/0000-0003-1176-6725>

Jan Dlugosz University in Częstochowa, Poland

[u.ordon@ujd.edu.pl](mailto:u.ordon@ujd.edu.pl)

## Early Childhood Education Teachers' Encounters With Art Presented in Museums and Galleries: Selected Aspects

(pp. 419–436)

Suggested citation: Piwowarska, E., Karbowniczek, J. & Ordon, U. (2023). Early Childhood Education Teachers' Encounters With Art Presented in Museums and Galleries: Selected Aspects. *Multidisciplinary Journal of School Education* 12(2(24)), 419–436. <https://doi.org/10.35765/mjse.2023.1224.20>

### Abstract

**Research objectives, issues or problems:** The aim of the research was to ascertain the opinions and efforts of early childhood education teachers in organising children's encounters with art in museums/galleries. The research question was "what activities do teachers undertake to familiarise students with the art distributed by institutions that provide visual objects of artistic value?"

**Research methods:** The study used a diagnostic survey method with a questionnaire aimed at teachers teaching years 1–3 in primary school.

**A short description of the context of the presented issue:** Museums, galleries and other such institutions are organisational forms of cultural

activity and can be an important element of the classes prepared by teachers to create opportunities for pupils to learn about, experience and value works of art. Children's contact with works of art in institutions providing objects of artistic value not only awakens their interests, but also encourages them to act creatively, develops their perceptiveness, practices their ability to conduct thorough analyses, express reasoned opinions and pose questions and develops their sensitivity and aesthetic taste.

**Research findings:** The results show that although the majority of teachers perceive a very important role of venues promoting art in the process of enriching knowledge and forming attitudes of active consumers among early school-aged children, a large proportion of them still do not sufficiently notice the value and impact of these venues in shaping children's intellectual interests and personality.

**Conclusions and/or recommendations:** In summary, the teacher, carrying out the tasks set out in the curricula and supported by the institutions and the state (e.g. teacher training, free entry for children, online offers sent to schools and temporary exhibitions aimed at young viewers), can additionally implement and/or complement activities to make museum exhibitions attractive and effective for pupils.

**Keywords:** encounters with art, museums, galleries, teacher, early childhood education

### **The importance of children's encounters with the arts**

The search for effective ways to teach a person concerns the knowledge acquired and the skills, abilities and attitudes formed. As Irena Wojnar (1984, pp. 9–19) emphasises in her book, *Teoria wychowania estetycznego* [The Theory of Aesthetic Upbringing], besides intellectual upbringing, an important part of the educational process is the aspect of activating spiritual forces and moral attitudes and stimulating the individual's imagination and sensitivity. Writing about humanistic education, she emphasises its important links with cultural values, among which the most important is the concept of education through art, the theoretical foundations

of which were formed by Herbert Read. The emergence of this term did not contribute to the abandonment of the earlier term – *aesthetic upbringing* – but it did make it possible to present the duality of this concept: in a narrower sense, understood as upbringing for art, and in a broader sense, described as upbringing through art. Polish scholars also contributed to the dissemination of this concept, including Stefan Szuman, Bogdan Suchodolski, Irena Wojnar, Maria and Tadeusz Gołaszewski.

The concepts of education for and through art are realised by contemporary museums – non-profit organisations – and their objectives include “collecting and permanently protecting the goods of the natural and cultural heritage of mankind ..., disseminating the fundamental values of Polish and world history, science and culture, developing cognitive and aesthetic sensitivity and enabling the use of the collections” (Act of 21 November 1996 on museums, Art. 1). Museums fulfil many purposes, including educational activities and making collections available for these purposes (Act of 21 November 1996 on museums, Art. 2). The multifunctionality of these social institutions includes the functions of popularising and educating (Turos, 1999, pp. 43). In a broad sense, museum education – by initiating processes and activities that support the development of the individual in many spheres of life (knowledge, skills and self-realisation) – becomes part of cultural education (Sani, 2013). Among the new ones with a special dimension is the entertainment function. Museum pedagogy and museum education, as Renata Pater (2016, 2013, pp. 56) rightly states, are gradually changing the image of the museum in public perception. In their programmes of educational activities and museum exhibitions, museum educators take into account the latest psycho-pedagogical, pedagogical and sociological knowledge, referring to learning theories, cognitive processes and the concept of multiple intelligences.

It is also worth noting that developments in catering for museum audiences since the 1960s (much later in Poland) have been moving away from a passive form of receiving content, towards activating audiences through diverse “attempts to educate them ‘to’, ‘in’ and ‘through’ the museum” (Skutnik, 2019, pp. 258). Art galleries are also organisational forms

of cultural activity (Act of 25 October 1991 on the organisation and performance of cultural activities) and, like museums, can be an important part of teachers' work, providing opportunities for pupils to explore, experience and value works of art.

As venues for encounters with art, museums, galleries and other such institutions are nowadays also open to the needs of children and look for effective educational solutions to support children's cognitive experiences. They create inspiring spaces of varying quality, size and diversity with high educational potential for those involved in the embodiment of culture.

The experience of the museum, the possibility of interaction and the enrichment from an awareness of history, culture and traditions gained through the museum education programme promotes the multi-intelligent development of children. Researchers emphasise above all the cultural, educational and social significance of the museum and the constructive way of learning during museum visits. Particularly valuable are the various museum situations through which attitudes, interests and experiences are formed. There are also international interviews with children about what they think of museums, how they develop a sense of belonging to a region or country and pride in its traditions, culture and achievements and how they evaluate museum visits and contact with museum professionals.

Today, quantitative and qualitative research is being conducted on museum pedagogy in England (Tzibazi, 2018, 2022), museum education of preschool and younger school-aged children and its impact on their cognitive development in China (Tan et al., 2021), the impact on scientific and social skills in the Netherlands and Australia (Andre et al., 2017) and forging the child as a subject by experiencing, engaging and acting in the museum space in Norway (Yates et al., 2022). It should be noted that learning from culture and the educational programmes of museums and galleries have been written about and researched by the English researcher Eilean Hooper-Greenhill (2007, pp. 252).

In Poland, research on the museum perceived as an educational space has been conducted by Tadeusz Gołaszewski (1967, pp. 96), Bogdan

Grzegorzewski (1978, pp. 98) and Lucjan Turowski (1999, pp. 216). Today, Jolanta Skutnik (2008, pp. 197) writes about the museum as a place of education, additionally created in children's drawings. An analysis of methods of presenting and teaching about art in the context of exhibition practices has been published by the art historian Marcin Szeląg (2014, pp. 92). Also, research on museum education aimed at diverse audiences, including children, has been conducted by Renata Pater (2016, pp. 228) and presented in a book with practical implications of her own ongoing research project. These are just some of the names of those working on the issue of education by and for art in museums and galleries.

An important place in the process of humanistic education is held by children's museums (the first children's museum, Brooklyn Children's Museum, was founded in the late 19th century), because when organising exhibitions, they implement "programmes that stimulate informal learning and experience for children. The ... children's museum is dominated by interactive exhibitions, designed in such a way that the youngest viewers do not remain passive. ... The space is built with interactive play, learning and discovery in mind" (Martyka, 2012, pp. 132). It is action, creation, design and early positive experiences that become the basis for children's effective learning and attitude formation as active viewers of art.

As early as the beginning of the 20th century, in Wanda Ciot-Mazowiecka's (1907) methodological study for teachers of folk schools, one of the tips relating to the teaching of drawing spoke of pupils visiting exhibitions where "the teacher will try with the right questions to stimulate the pupils to realise what the artist wanted to depict in his work" (pp. 14). To reinforce and consolidate the impression, she suggested viewing only a few works of art at a time. In addition, she suggested holding an exhibition at the end of the school year, as it influences the development of a country's education and is one of the links "binding the school with the broad circles of the general public" (Ciot-Mazowiecka, 1907, pp. 14). This suggestion would also prepare children for encounters with art in institutions.

The natural ability to experience beauty is present from an early age. Exposing children to works of art in institutions for objects of artistic value

not only awakens their interest, but also encourages artistic activity, develops perceptiveness, practices the ability to express reasoned opinions, pose questions and conduct thorough analyses (describing objects and distinguishing their characteristic features) and develops sensitivity and aesthetic taste (Piwowska, 2012, pp. 203–204). Therefore, it is important that teachers take care to organise conditions of cognition that arouse children's interest in art, which is a source of knowledge relating to both ancient and contemporary human cultural heritage (Piwowska, 2019, pp. 117).

Museums and galleries are among the many places where there is a direct encounter between the viewer and works of art, in this case visual art with artistic values. Teachers, or those mediating in this process and referred to by Stefan Szuman (1975) as "aesthetic educators", provide "someone who is not yet able to do so, or who is not very able to do so, with effective assistance in discovering, learning and feeling the aesthetic features and values of artistic works. ... The naive viewer perceives a work of art in extra-aesthetic terms. He is still aesthetically 'blind' to artistic works" (p. 119).

The teacher plays a crucial role in linking educational activities with the work of museums and art galleries. Their attitude and ability to plan, make knowledge accessible, select exhibitions and influence their reception can aid in raising children in the future to be viewers of museum exhibitions (Pavlon, 2022). At this point, it can be asked which activities today's teachers take to this end and what their attitude is towards organising excursions with the younger children to make accessible collections with artistic values.

### **Research methodology**

The subject of the empirical research was the activities undertaken by teachers to organise children's encounters with art in galleries/museums, while the research question was which activities are undertaken by early childhood education teachers to familiarise pupils with art disseminated



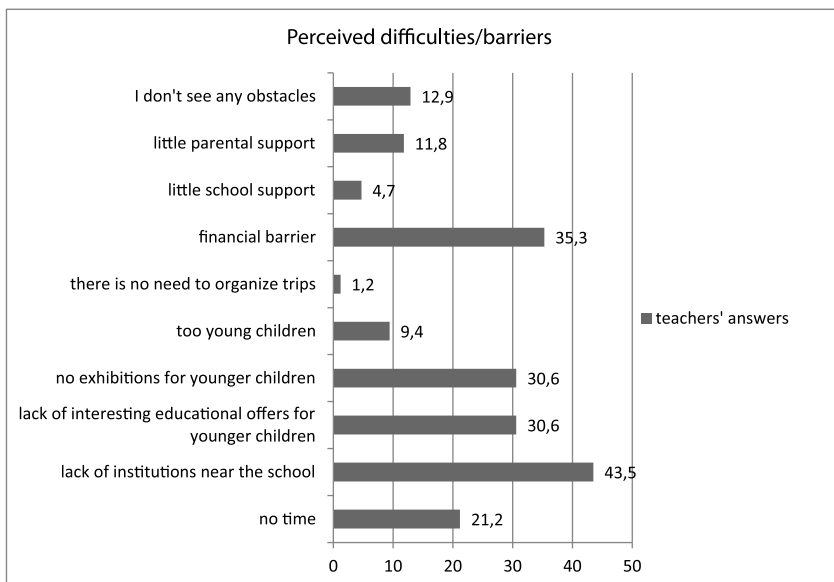
by the relevant institutions. Because the research was conducted from April to the end of September 2022, when museums and galleries had only just begun to operate without the limits and restrictions stipulated for cultural institutions since 28 February of that year, the survey questions were related to the pre-pandemic period, the period in which the pandemic restrictions were loosened (they had been introduced on 1 February 2021) and the few months during which restrictions were lifted. It was important for the survey to investigate both the organisational side of exhibition outings and the role they can play in early childhood education. Therefore, the questions in the survey addressed the difficulties perceived by teachers with regard to organising pre-pandemic trips to exhibitions in art galleries/museums (the period without restrictions was very short), as well as preparing children for visits, taking advantage of events at museums, following cultural events organised by these institutions, tailoring visits to the needs of younger audiences and the role these venues play in the process of teaching and forming the attitude of an active audience among early school-aged children. Closed questions (see Figures 3 and 6) and semi-open questions (see Figures 1, 2, 4 and 5) (15 questions) were answered by 85 early childhood education teachers from schools in larger towns (more than 20,000 inhabitants [24.7% of the study group]), smaller towns (less than 20,000 inhabitants [41.2%]) and rural areas (34.1%) in the Silesian Voivodeship (mainly Częstochowa, Katowice and their surroundings) located within a short distance (with access to public transport) from museums and galleries. Although most of the questions were semi-open-ended, in only a few cases did the respondents formulate their answers themselves (see Figures 1, 2, 4 and 5).

The aim of the questionnaire (100 questionnaires were sent out to primary schools targeting early childhood education teachers and 85 were returned) was to ascertain the opinions and efforts of early childhood education teachers in organising children's encounters with art in museums/galleries. It became important to establish the perceived organisational difficulties of teachers in this area and the activities involved in preparing for visits to exhibitions.

## Analysis of research results

When asked in the questionnaire about perceived difficulties organising pre-pandemic and post-pandemic trips with pupils to institutions promoting the arts, the teachers were given the opportunity to choose an answer from eight suggestions and to add their own responses. As can be seen from the data in Figure 1, they occasionally saw no need for trips to art galleries or museums, and in a few cases the lack of support from the school was an obstacle. A few respondents referred to the age of the pupils and the lack of support from parents; in isolated cases, the respondents did not see any obstacles. Thus, it can be concluded that the vast majority consider such outings to be justified, and that they mainly see the distance they have to travel with pupils to see an exhibition as a significant obstacle.

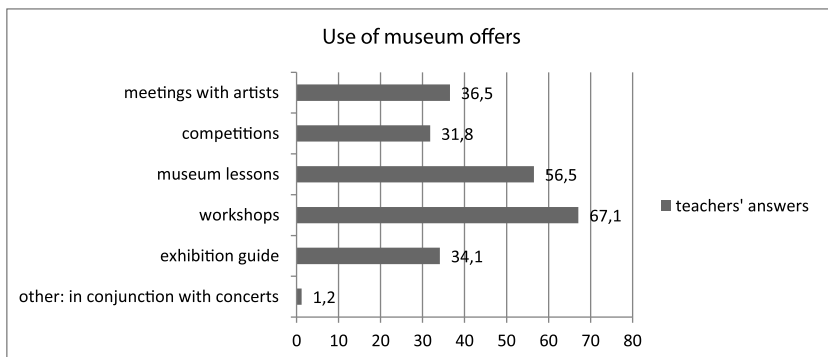
**Figure 1. Teachers' perceptions of difficulties/barriers when organising outings to exhibitions at art galleries/museums**



In addition, the data relating to teachers' perceived difficulties when organising trips for children to exhibitions before the pandemic (Figure 1) indicated that fewer than half of the respondents noted the lack of such institutions in the vicinity of the school. For about one in three respondents, the obstacles were funding and the scarcity of interesting exhibitions in museums or galleries for young children. One in five teachers perceived a lack of time for such excursions (most likely due to overloaded curricula). A small number of respondents did not perceive any obstacles or difficulties organising trips for pupils to exhibitions.

Unsurprisingly, for about half of the teachers mobility (due to distance) became the main obstacle to organising pupils' visits to exhibitions in art galleries/museums. However, the difficulties associated with the distance between the school and venues promoting the visual arts should not hamper the organisation of students' first contact with the cultural institutions – even if only once a year.

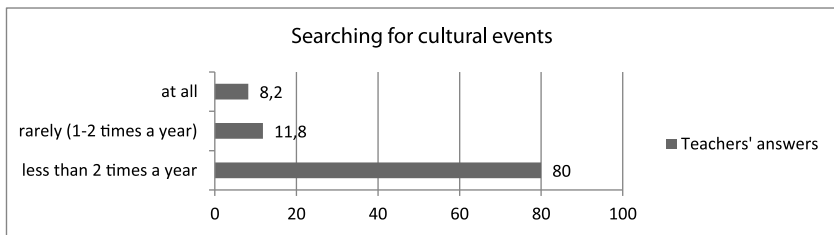
**Figure 2. Museum events selected by teachers when taking students to art galleries/museums**



The answers to the next question about early childhood education teachers' practical use of museum/gallery events (Figure 2) show that most of the respondents' students participate in museum workshops and activities offered by institutions that promote the arts. Approximately one in three respondents take advantage of possibilities such as meeting with artists and exhibition guides or competitions on art and art knowledge

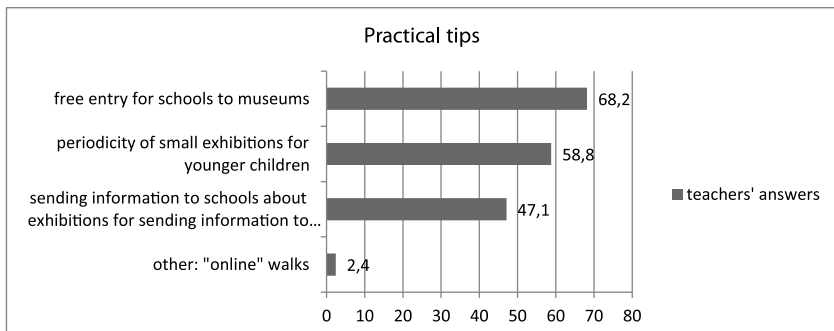
organised by galleries or museums. One teacher suggested that exhibitions for pupils in years 1–3 should be accompanied by concerts. This is an interesting solution (already used at many vernissages), but it would have to involve setting aside time for “live” music events during the visit. However, in an age with so many possibilities, not least thanks to digital technology, combining art and music should not pose a major problem.

**Figure 3. Frequency of teachers searching for cultural events organised by art galleries/museums**



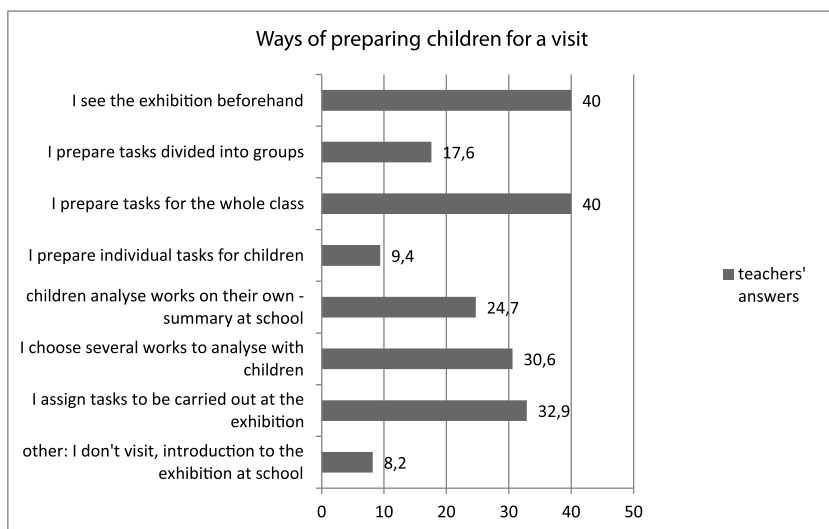
The data in Figure 3 indicate that a few teachers follow the cultural events organised by art galleries or museums sporadically or do not seek them out at all. However, the vast majority of respondents are interested in regular or occasional cultural events held by galleries and museums. This is a positive sign that indicates a high awareness among teachers and a need for exhibitions tailored to the needs and perceptual possibilities of younger pupils.

**Figure 4: Practical tips given by teachers for art galleries/museums regarding the needs of young art viewers**



The early childhood education teachers were asked about measures that would be more effective at encouraging young art audiences to attend exhibitions. The data in Figure 4 indicate that the majority of respondents noted free entry for schools and small-scale temporary exhibitions prepared for younger pupils as their practical tips. Quite a large group of respondents would like to be informed (notices sent to schools) about exhibitions for younger audiences. The needs indicated by teachers in this respect are an additional signal about the educational role played by children's visual contact with art.

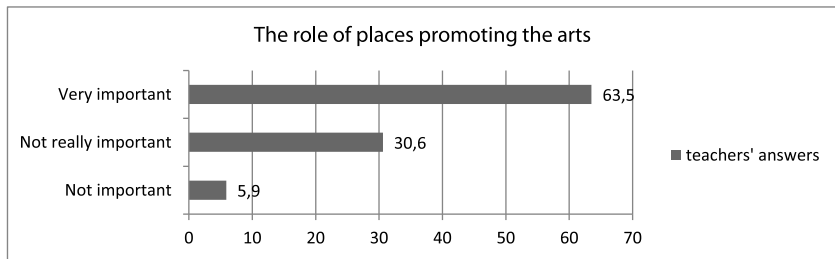
**Figure 5: Ways in which teachers prepare children to visit art galleries/museums**



The data shown in Figure 5 show that less than half of the respondents personally view the exhibits before going to an exhibition with their pupils. This fact is important in that it allows for the planning of lessons that focus on selected works of art and that take into account the cognitive abilities of students in years 1–3. Approximately one in three respondents noted that they select works of art for analysis, which is very important when introducing children to museum exhibitions. Some teachers prepare tasks aimed at the whole class, but unfortunately much

less often for group or individual work. One in three respondents only set tasks for children at the exhibition. Some educators (one in five) decide to analyse at school objects which the pupils have viewed on their own. Occasionally, teachers indicated that they do not take children to exhibitions or that they do not have a need to organise such excursions for younger classes. In addition, in their questionnaires they ticked the answer stating that children's viewing of exhibitions is of little importance for the process of enriching their knowledge and forming the attitude of an active viewer of art.

**Figure 6. The role of venues promoting the arts in teaching and developing the attitude of an active audience among early childhood children**



The issue of interest to us was the role of galleries and museums in the process of acquiring knowledge and forming attitudes of active art consumers among early school-aged children. From the data in Figure 6, it can be concluded that the majority of respondents appreciate the importance of these institutions for enriching pupils' knowledge and building the attitude of an active participant in such cultural events. However, almost one in three respondents believe that the role of institutions providing facilities of artistic value in this respect is minor. A few teachers, on the other hand, do not see a role at all. In summary, although the majority of teachers perceive the role of venues promoting art in the process of enriching knowledge and forming an attitude of active consumers among early school-aged children as very important, a large proportion of them still do not sufficiently notice the value and impact of these venues in shaping children's intellectual interests and personality.

The opinions indicated by the majority of teachers about the significant role that venues promoting the arts play in the process of enriching knowledge and shaping an attitude of an active consumer among early school-aged children can be confirmed by the majority of the respondents searching for interesting cultural events (Figure 3) and the need for organising child-orientated exhibitions and disseminating information about them to schools (Figure 4).

### **Conclusions of the study**

The research on early childhood education teachers' encounters with art was conducted after the two-year epidemic in Poland. Therefore, the questions referred to the period before the pandemic and a few months after the restrictions were lifted. The analysis of the answers given by the teachers leads to the conclusion that, despite the possibility of travelling from schools to museums and galleries by public transport, almost half of the teachers consider travelling this distance as an organisational/logistical obstacle that sometimes makes it impossible to plan excursions to exhibitions. However, contrary to this opinion, the vast majority of them do organise such outings for their pupils. The follow-up questions show that they most often take advantage of the workshops and museum activities prepared by these institutions. Unfortunately, they participate less frequently in such interesting and motivating events for children's creative activity as competitions on art and art knowledge. This is all the more unfortunate because the final post-competition vernissages, which open exhibitions, are an attractive introduction for children to look at the collections and become active consumers of art.

The vast majority of the surveyed teachers follow cultural events organised by art galleries or museums regularly or from time to time, thus showing an interest in temporary or occasional cultural events that enrich their personal experience (self-improvement) and enable them to use this knowledge in their professional practice.

An important prerequisite for making the collections in museums and art galleries more accessible, as pointed out by the teachers of early childhood education, is free entry for pupils to exhibitions and the wide dissemination of information sent directly to schools about exhibitions aimed specifically at young art consumers. Thus, it can be assumed that the single free visiting days designated in some institutions (especially for permanent exhibitions) are not sufficient; in the case of temporary exhibitions, for which a fee usually has to be paid, many do not opt for them (financial barrier). In addition, the respondents highlighted the need for small, recurring exhibitions, primarily organised with younger audiences in mind.

Visits to exhibitions by pupils in years one to three should be planned because thorough preparation for the children's encounter with art is essential, so an important prerequisite for going to a museum or gallery should be that the teacher is familiar with the collections in advance. Unfortunately, not enough teachers make use of this opportunity. And yet, especially young pupils' first visits to museums should be an extraordinary experience, and information about selected objects of artistic value should be exceptionally attractive. This requires thorough preparation. Unfortunately, the research shows that only a few of the respondents select works to be analysed with children, most often choosing to assign tasks during joint viewing and without dividing the students into proactive groups.

Although the majority of the respondents emphasised the significant role of galleries and museums in enriching children's knowledge and forming an attitude of an active art consumer, some teachers attribute little importance to them. The question can be asked at this point is why? Are we as a teaching community sufficiently prepared to perceive art? An understanding of art and the ability to feel pleasure in its reception certainly makes it easier to introduce children to the world created by visual means of expression.

It is worth quoting Jolanta Skutnik (2008), who claims that a contemporary museum should

both foster the process of creation and enable active reception. ... That is why today's museums are increasingly trying to be active cultural



centres, centres of documentation, education, as well as centres of meetings and discussions supporting exhibition activities, combining classical museum functions with educational and dissemination – public functions. (pp. 20–21)

The teacher, carrying out the tasks set out in the curricula and supported by the institutions and the state (e.g. teacher training, free entry for children, online offers sent to schools or temporary exhibitions aimed at young viewers) can additionally implement and/or complement activities to make museum exhibitions attractive and effective for pupils.

**Funding:** This research received no external funding.

## References

- Andre, L., Durksen, T., & Volman, M. L. (2017). Museums as avenues of learning for children: A decade of research. *Learning Environ Res*, (20), 47–76.
- Act of 25 October 1991 on the organisation and performance of cultural activities. *Journal of Laws* 2020.194. Retrieved May 31, 2022 from <https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/organizowanie-i-prowadzenie-dzialalnosci-kulturalnej-16794454>
- Act of 21 November 1996 on museums [version as of 15 February 2022]. *Journal of Laws* 2022.385. Retrieved May 31, 2022 from <https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/muzea-16798154>
- Ciot-Mazowiecka, W. (1907). *Metodyka nauki rysunku do użytku nauczycieli szkół ludowych* [Drawing teaching methodology for use by school teachers]. Wydawnictwo im. S. Staszica.
- Golaszewski, T. (1967). *Funkcje muzeum w wychowaniu estetycznym dziecka* [Functions of the museum in the aesthetic upbringing of the child]. Nasza Księgarnia.
- Grzegorzewski, B. (1978). *Muzeum a wychowanie dziecka* [Museum and child upbringing]. WSiP.
- Hooper-Greenhill, E. (2007). *Museum and education: Purpose, pedagogy, performance*. Routledge.
- Martyka, A. (2012). *Dzieci w muzeum, muzeum dla dzieci* [Children in a museum, a museum for children]. *Przestrzeń i Forma* 18, 131–140.
- Pater, R. (2013). Edukacja muzealna dla dzieci: przestrzenie alternatywne [Museum education for children: Alternative spaces]. *Elementary Education in Theory and Practice*, 4, 55–76.
- Pater, R. (2016). *Edukacja muzealna, muzeum dla dzieci i młodzieży* [Museum education, a museum for children and young people]. Wydawnictwo UJ.
- Pavlou, V. (2022). Museum education for pre-service teachers in online environment: Challenges and potentials. *International Journal of Art & Design Education*, 41(2), 257–267. <https://doi.org/10.1111/jade.12404>
- Piwowska, E. (2012). *Planowanie wycieczek dla dzieci do muzeów i galerii sztuki* [Planning trips for children to museums and art galleries]. Wydawnictwo AJD.
- Piwowska, E., & Zentko, J. (2019). Sztuka sakralna na Słowacji w zapisach graficznych dzieci w wieku wczesnoszkolnym – wybrane aspekty [Sacral art in

- Slovakia in the graphical records of early school-aged children: Selected aspects]. *Studia Scientifica Facultatis Pedagogicae*, 8(5), 116–123.
- Samur, O. A., Kocyigit, S., Inci, E., Aydogan, S., & Baydilek, N. S. (2015). Impact of museum education on 60–72 months children's scientific processing skills, social skills and perception of museum. *International Journal of Academic Research*, 7/2(1), 231–236. <http://dx.doi.org/10.7813/2075-4124.2015/7-2/B.43>
- Sani, M. (2013). Muzea i uczenie się przez całe życie. Podręcznik Europejski. Powody sukcesu redakcyjnego. [Museums and lifelong learning. European Manual. Reasons for editorial success]. *Muzealnictwo*, 54, 182–190.
- Skutnik, J. (2008). *Muzeum sztuki współczesnej jako przestrzeń edukacji*, [Museum of contemporary art as a space for education]. Wydawnictwo Uniwersytetu Śląskiego.
- Skutnik, J. (2019). „Co to jest muzeum” – postrzeganie instytucji muzealnej przez dzieci w wieku od pięciu do siedmiu lat [“What is a museum”: Children's perceptions of a museum institution between the ages of five and seven]. *Cultural Management*, 20(2), 255–283. <http://doi.org/10.4467/20843976ZK.19.016.10533>
- Szeląg, M. (2014). *Raport o stanie edukacji muzealnej* [Report on the state of museum education; Supplement Part 2]. Wydawnictwo Universitas.
- Szuman, S. (1975). *O sztuce i wychowanie estetycznym* [About art and aesthetic education]. WSiP.
- Tan, F., Gong, X., & Tsan, M. C. (2021). The educational effects of children's museums on cognitive development: Empirical evidence based on two samples from Beijing. *International Journal of Educational Research*, 106, 101729, 1–10. <https://doi.org/10.1016/j.ijer.2020.101729>
- Turos, L. (1999). *Muzeum - swoista instytucja edukacyjna. Wybrane problemy w ujęciu historycznym i współczesnym* [The museum is a kind of educational institution: Selected problems in historical and contemporary terms]. Oficyna YPSYLN.
- Tzibazi, V. (2018). Museum education and democracy. *Journal of the Comenius Association*, 27, 17–19.
- Tzibazi, V. (2022). *Museum Pedagogy and Early Years Children: A Critique of Research, Policy and Practice*. Vanias.

Ewa Piwowarska, Jolanta Karbowniczek, Urszula Ordon  
*Early Childhood Education Teachers' Encounters With Art  
Presented in Museums and Galleries: Selected Aspects*  
(pp. 419–436)

---

Wojnar, I. (1984). *Teoria wychowania estetycznego - zarys problematyki* [Theory of aesthetic education: An outline of the issues]. PWN.

Yates, E., Szenasi, J., & Hemmings, M. (2022). Children as experiencers: Increasing engagement, participation and inclusion for young children in the museum. *Childhood*, 29(1), 58–74. <https://doi.org/10.1177/09075682211064429>



**Agnieszka Szymańska**

<https://orcid.org/0000-0001-9976-0410>

Cardinal Stefan Wyszyński University in Warsaw, Poland

[elysium5678@gmail.com](mailto:elysium5678@gmail.com)

**Joanna Świdarska**

<https://orcid.org/0000-0001-7439-2973>

The Maria Grzegorzewska University in Warsaw, Poland

[j.swiderska@aps.edu.pl](mailto:j.swiderska@aps.edu.pl)

## Childhood Experiences and Needs: Parental Goals, Mistakes, and Personality Traits and Their Adult Daughters' Ability to Meet Their Needs

(pp. 437–459)

Suggested citation: Szymańska, A. & Świdarska, J. (2023). Childhood Experiences and Needs: Parental Goals, Mistakes, and Personality Traits and Their Adult Daughters' Ability to Meet Their Needs. *Multidisciplinary Journal of School Education* 12(2(24), 437–459. <https://doi.org/10.35765/mjse.2023.1224.21>

### Abstract

**Objectives of the research:** The purpose of this study was to determine whether women's childhood experiences are related to their ability to meet their needs in adulthood.

**Research methods:** The survey was conducted online with a random sample of 402 women between the ages of 21 and 50. In order to answer the research questions, text mining algorithms and cluster analysis carried out by data mining algorithms were used.

**A short description of the context of the issue:** The ability to fulfill one's needs is an important determinant of personal happiness, well-being and mental health. The study examined whether women who had experienced fewer parental mistakes were better at meeting their needs, and whether there were intergroup differences between women who were more and less efficient at fulfilling their needs in terms of the personality traits their parents tried to mold in them during childhood and the personality traits that the women developed.

**Research findings:** The results revealed that women who experienced fewer parenting errors in childhood and whose parents tried to shape in them personality traits such as Stability (Alpha-Plus), Plasticity (Beta-Plus) and Integration (Gamma-Plus) indeed developed these traits and were more effective in fulfilling their needs in adulthood.

**Conclusions and recommendations:** Experiencing more parenting mistakes in childhood is associated with the development of unfavorable personality traits and lower competence in meeting needs in adulthood.

**Keywords:** parenting goals, personality project, personality traits, parenting mistakes, satisfying needs

### Need Satisfaction and Experiencing Happiness

The relationship between the satisfaction of needs and the experience of happiness was one of the main themes of the work of Abraham Maslow, who created the theory of the hierarchy of needs (Miner et al., 2013). According to Maslow, people must have their needs satisfied in order to achieve happiness. The link between need satisfaction and happiness is confirmed by numerous studies (Drakopoulos, 2008).

Maslow described five classes of needs. *Physiological needs*, such as drinking, eating, sleeping or breathing, are necessary for survival. Their satisfaction is fundamental to human existence and the satisfaction of other needs, such as the *need for security*.

The need for security concerns not only physical security, but also social and psychological security. Satisfying this need allows one to focus on the *need for belonging and love*, or the need for closeness, friendship and maintaining relationships with other people. Failure to satisfy this need can lead to social isolation, alienation and depression. Next is the *need for esteem, respect, prestige* and recognition of one's uniqueness, as well as appreciation of one's talents and a sense of accomplishment. Satisfying this need paves the way for satisfying the last need in the hierarchy, that is, *the need for self-actualization*: reaching one's full potential. (Winston, 2018).

According to Maslow (1964a), some people who have satisfied the need for self-actualization experience a so-called *peak experience*, which can be similar to a mystical experience and is a profound experience of happiness. Contemporary research seems to confirm the link between the satisfaction of needs in the hierarchy and the experience of happiness (Şimşek & Demir, 2013).

### **The Source of Satisfaction of Needs in Childhood**

Satisfying needs is a learned skill. To achieve happiness, one must learn to be happy. This is a process that begins during a child's upbringing (Şimşek & Demir, 2013). Parents shape their children's competence in meeting needs by teaching them various activities, such as eating, going to sleep on their own, or otherwise handling their own needs independently. This is a process called scaffolding (John et al., 2018). As a result of this process, the adult is able to take care of his or her needs. For a child to learn how to meet their own needs, adult help is needed. When a parent teaches a child the rules of social behavior, including ways of meeting one's needs, he/she transfers some of his/her parental control (Szymańska, 2017a). While taking care of the child's needs, the parent simultaneously cares for the proper development of the child's personality (Millon and Davis, 1996; Prince and Howard, 2002).

### **Satisfying needs in adulthood and the experience of parenting mistakes in childhood**

However, for this process to be successful, parenting must proceed without major disruptions. These disruptions can involve events and situations that can be considered erroneous. Sometimes these may include parental behaviors that are detrimental to the child's development. These are usually called *parental mistakes* (Gurycka, 1990). Depending on the theory, different parental behaviors are classified as incorrect. However,

many studies confirm that certain parental behaviors, such as aggression, excessive strictness, constraining the child's activity, indifference, pampering the child, or doing various activities for the child instead of letting him/her learn the activity, can have adverse effects on the child's development (Millon & Davis, 1996).

Can the experience of these parental mistakes in childhood interfere with the process of learning to satisfy one's needs, and consequently contribute to lower need satisfaction in adulthood? According to psychological theories, the answer is yes. A child who often witnesses such parental behavior experiences a great deal of stress, which disrupts the learning process. A parent who frequently makes mistakes not only fails to satisfy the child's legitimate needs, such as the need for security, but can also disturb the child's internal balance. The child may then experience difficulties in learning how to meet these needs (Şimşek & Demir, 2013). Therefore, parental errors have an impact in two ways: on the one hand, they disrupt the child's current needs, and on the other, they make the child unable to learn how to meet his/her own needs. This study tested whether experiencing parental mistakes in childhood is associated with lower levels of need fulfillment in adulthood. This was the first research hypothesis (H1).

**Parents' upbringing goals and children's need satisfaction in adulthood.** In the process of upbringing, parents shape their children's personality. They do this by, among others, by choosing parenting goals, sometimes referred to as the *personality project* (Gurycka, 1979; LeVine, 1974). These selected traits can, in turn shape the children's ability to meet their own needs: research shows that need satisfaction is related to personality traits (Nishimura & Suzuki, 2016). Therefore, this study tested the co-occurrence between adult women's perceptions of their parents' parenting goals (what personality traits they wanted to shape in them) and their level of need satisfaction. This was the second research hypothesis (H2).

**Parental goals and mistakes and the formation of a child's personality.** Parental goals or the personality project, together with parental mistakes, are activities that determine the child's experience (pathways in the



model, see Figure 1). This experience consists of the following: (a) a record of what happened (descriptive information), (b) whether what happened was good or bad (evaluative information), and (c) how the child will act in similar situations in the future (programmatic information, Gurycka, 1985). Descriptive information includes data on the child's perceptions of the parents' goals and mistakes, evaluative information – data on whether the parents' attitudes and goals were right or wrong, and programmatic information – on how to cope in the future, for example, when someone is being aggressive. Apart from this information, the experience also includes data on how the child felt (emotions), what the child thought (mental activity), what kind of relationship the child had with the parent (relational contact), and how the child behaved (Greenberg, 2002). This experience, when repeated, creates tendencies that later develop into personality patterns (Gurycka, 1990; Millon & Davis, 1996; Millon, 2010). Of course, the child does not remember all the events that he/she experienced. According to Howe (2000), this is impossible even with highly emotional events. However, what is remembered is a generalized representation of these events. Therefore, examining children's experiences of their parents' goals and mistakes means examining their mental representations.

Since the beginning of psychology, parenting mistakes and negative childhood experiences have been associated with personality development, especially personality disorders (Kutter, 2000; Millon & Davis, 1996). Contemporary psychotherapeutic research confirms that people struggling with severe personality problems had difficult childhoods and numerous painful experiences (Millon & Davis, 1996). Is the development of certain *personality meta-traits* associated with higher or lower levels of parental mistakes experienced in childhood? This was the third research hypothesis (H3). Is it related to the shaping of specific personality traits? This was the fourth research hypothesis (H4). If the answers to these questions are yes, it can be said that future well-being and happiness are related to childhood experiences.

**Personality traits and need satisfaction.** The ability to meet one's needs is also related to personality type. Studies show that need satisfaction is

positively correlated with extraversion and openness to experience, low agreeableness and conscientiousness, and negatively correlated with neuroticism (Nishimura & Suzuki, 2016).

Contemporary research on Big Five traits reveals that there are personality types in the population that are combinations of the Big Five traits (DeYoung et al., 2002; Strus et al., 2014).

Guided by research findings revealing that the Big Five personality traits are related to the ability to meet one's needs, this study examined whether those with higher levels of need satisfaction are more likely to manifest certain meta-traits? This was the fifth research hypothesis (H5).

## Method

### Research Objective and Hypotheses

The purpose of this study was to examine whether there is a co-occurrence between the level of parental mistakes experienced in childhood, the personality traits shaped by parents, the personality traits actually developed, and the level of need satisfaction in adult women. Figure 1 depicts a model that shows the relationship between (a) parental goals, or the personality project that parents shape in their children, (b) parental mistakes, (c) the child's perception of parental goals and parental errors, or the child's experience, (d) the child's personality traits, and (e) the level of need satisfaction.

In the proposed model, personality moderates the relationship between childhood experiences and the ability to meet one's needs. Therefore, depending on the child's personality, the relationship between childhood experiences and the level of need satisfaction may be buffered or may lead to a synergy effect (Nowak, 2007).

The objective of this study was to investigate the potential correlation between the extent of parental mistakes encountered in childhood, the personality traits influenced by parents, the personality traits developed over time and the level of need fulfillment in adult women. Accordingly, the study verified the following hypotheses:

**H1:** Women who experienced more parental errors in childhood have lower levels of need satisfaction in adulthood.

**H2:** Women who have higher and lower levels of need fulfillment differ in terms of the personal qualities that their parents tried to develop in them.

**H3:** Women who experienced fewer parenting mistakes (both mothers' and fathers') exhibit more plus-type personality traits, while those who experienced more parenting mistakes exhibit minus-type traits.

**H4:** Women develop more strongly those personality traits that their parents tried to develop in them.

**H5:** Women with plus-type personality traits have a greater need for fulfillment than women with minus-type traits.

### **Approval of the Research Ethics Committee**

All procedures involving human participants in the study were in accordance with ethical standards. The research received approval from the Research Ethics Committee of the Institute of Psychology of the Białystok School of Public Administration on December 10, 2015.

### **Research Sample and Procedure**

The survey was conducted online in 2018. Using the  $k = 2$  operator, kindergartens were randomly selected from a list compiled by the Ministry of Education for each voivodship.

The study included 402 women between the ages of 21 and 50 ( $M = 34$ ,  $SD = 5.4$ ), with the largest representation of those between the ages of 28 and 39.

### **Variables**

The main dependent variable was the level of satisfaction of the women's needs. The independent variables were (a) the women's mental representations of their parents' parenting goals, i.e., the personality traits that their parents wanted to develop in the women during their childhood (according to their perceptions), (b) the women's mental representations

of the parental mistakes they experienced during their childhood, and (c) the women's personality traits.

**Representation of parenting goals.** *Parenting goals* are the various personality traits that parents want to develop in their children. They are sometimes called the personality project (Gurycka, 1979). The discrepancy scale was used to study the parental goals and the child's level of development in terms of the traits shaped by the parents (Szymańska & Dobrenko, 2017).

**Representation of parenting mistakes.** Parenting mistakes are situations or parental attitudes that cause adverse effects in the child's *development* (Gurycka, 1990, 2008). Parental mistakes include such parental behaviors as (a) strictness, (b) aggression, (c) constraining the child's activities, (d) indifference to the child and his or her affairs, (e) the parent's self-accentuation, that is, overly focusing on the parent's own image of the child, (f) pampering the child, (g) doing things for the child, (h) idealizing the child, and (i) inconsistency.

The mental representation of parental mistakes reflects how the child experienced these mistakes. This study analyzed women's experiences of parenting mistakes (the mistakes of mothers and of fathers were analyzed separately). The study used a questionnaire to examine the mental representation of parenting mistakes developed by Gurycka (author of the theory of parental mistakes) to assess the children's perceptions of parenting errors. (Gurycka, 1990).

**Personality traits.** According to Cattell, they constitute the "mental structure of personality" (Strelau, 2001, p.533). This study refers to the Circumplex Personality Model by Strus et al. (2014). In this model, the authors describe eight personality meta-traits consisting of combinations of Big Five traits (Costa & McCrae, 1992). These are: Stability (Alpha-Plus), Plasticity (Beta-Plus), Self-restraint (Delta-Plus), Integration (Gamma-Plus), Disinhibition (Alpha-Minus), Passiveness (Beta-Minus), Sensation seeking (Delta-Minus) and Disharmony (Gamma-Minus) (Strus et al., 2014a).

**Meeting one's needs.** This is a variable that consists of five corresponding to the needs described by Maslow in his pyramid of needs: (a) physiological, (b) security, (c) belonging and love, (d) need for esteem,

and (e) self-actualization. (Maslow, 1964b). According to Maslow, human needs are arranged in a hierarchy, and a person can meet higher-level needs when he/she has satisfied lower-level needs. The Needs Satisfaction Inventory, which was created by Lester (2013) and adapted to Polish conditions by Jarosław Jastrzębski was used to measure needs according to Maslow's concept of the hierarchy of needs.

### **Data Analysis Method**

The study used two data analysis methods. The first was text mining algorithms and the second was data mining algorithms that carried out a cluster analysis (Elder et al., 2012). The text mining algorithms counted the personality traits that the women surveyed listed as goals of their parents (Szymańska, 2017b) and created new binary variables that represented each personality trait that the women mentioned. These new variables were sequentially classified into one of the eight dimensions described in the Circumplex Personality Model of Strus et al. (2014). In this way, parents' parenting goals were represented in the form of a personality project. As was revealed, the minus meta-traits corresponded only to traits considered undesirable. Accordingly, the higher the women's scores on the minus traits of parental goals, the more often their parents listed these traits as undesirable (see Figures 2, 3 and 4).

The second method of analysis involved data mining algorithms performing cluster analysis. They extracted clusters of individuals who were similar in terms of their level of need satisfaction, their experience of parental mistakes, and the personality traits that their parents wanted to develop in them, as well as the personality traits they actually had. This method made it possible to determine the significance of differences between the clusters, to determine how strong the effect size was, and, using a standardized mean, to show how strong each variable was within a group (whether scores were low, medium or high) (Elder et al., 2012).

## Results

Cluster analysis identified two groups of women who had similar scores on the following variables: (a) the perception of their parents' parenting goals, (b) the level of parenting errors experienced, (c) personality traits, and (d) the level of satisfaction of one's own needs (see Figure 2). The algorithms classified 192 women into the first cluster, 48% of the sample, and 210 women into the second, 52% of the sample.

There were slight differences between the two groups of women in terms of personality traits shaped by their parents (see Table 1).

There were medium differences between clusters for experiencing the following parental mistakes: aggression, constraining the child's activities, and the parent's self-accentuation. The differences were small and/or very small for the experience of the following mistakes: strictness, pampering the child, doing the child's tasks for them, idealization and inconsistency. On the other hand, they were large for the experience of parental indifference (see Table 1).

Large differences between the clusters were found for the following variables: Plasticity (Beta-Plus), Integration (Gamma-Plus), Disinhibition (Alpha-Minus), Passiveness (Beta-Minus) and Disharmony (Gamma-Minus). The differences were medium for Stability (Alpha-Plus) and very small for Self-restraint (Delta-Plus) and Sensation-seeking (Delta-Minus).

Both clusters were characterized by large effects for all needs. The women in both clusters differed significantly in terms of being able to meet their own needs.

Parents of women who belonged to the first cluster developed in them the trait of Self-restraint (Delta-Plus), and also tried to ensure that their daughters did not develop the trait of Sensation seeking (Delta-Minus), which is the opposite of Self-restraint.

Women in the first cluster experienced parental mistakes of strictness, aggression, constraining of activity, indifference, parental self-accentuation, being pampered, being idealized, and facing a lack of consequences at a moderate degree, which was higher than for the women in the second cluster. Women in this cluster had also been replaced in their duties by

their parents to a low extent, and they experienced the mistake of parental indifference to the greatest extent.

They exhibited significantly lower levels of personality traits such as Stability (Alpha-Plus), Plasticity (Beta-Plus) and Integration (Gamma-Plus), as well as significantly higher levels of Passiveness (Beta-Minus) and Disharmony (Gamma-Minus).

Their levels of need satisfaction were also significantly lower than that of women in the second cluster (satisfaction at a moderate level, with a normalized mean ranging from 0.40 to 0.70). The second cluster consisted of women whose parents primarily developed in them the traits of Stability (Alpha-Plus), Plasticity (Beta-Plus) and Integration (Gamma-Plus). They also made sure that their daughters did not develop the trait of Sensation seeking (Delta-Minus).

These women experienced low levels of aggression, activity restriction, parental self-accentuation, being pampered, being relieved in their duties and inconsistency. They experienced strictness, indifference and being idealized at a moderate level. Regarding personality traits, women belonging to this cluster reported high Integration, moderate (elevated) Stability (Alpha-Plus) and Plasticity (Beta-Plus) and low Disinhibition (Alpha-Minus) and Disharmony (Gamma-Minus). The subjects satisfied the needs for belonging and love, self-esteem and self-actualization at a high level, and physiological and safety needs at a moderate level.

The results confirmed the first hypothesis. Lower levels of need satisfaction in adulthood were primarily related to higher levels of parental mistakes, above all the mistake of indifference, in childhood. Conversely, higher levels of need satisfaction coincided with lower levels of parental mistakes experienced in childhood.

The second research question was also answered. A lower level of need satisfaction in adulthood was associated with having traits like Self-restraint (Delta-Plus) developed in childhood. On the other hand, higher levels of need satisfaction in adulthood were associated with traits such as Stability (Alpha-Plus), Plasticity (Beta-Plus) and Integration (Gamma-Plus) that were developed in childhood. The results clearly support the

validity of the first and second hypotheses. Childhood experiences are related to the satisfaction of needs in adulthood.

The third hypothesis was also confirmed. Lower levels of experiencing parental mistakes coincided with the development of plus-type personality traits, especially Integrated Personality (Gamma-Plus), which was the most desirable type, as well as Stability (Alpha-Plus) and Plasticity (Beta-Plus). Higher levels of parental errors were associated with the development of minus-type personality traits, especially Passiveness (Beta-Minus) and Disharmony (Gamma-Minus).

Finally, the fourth hypothesis was confirmed. The development of specific personality traits co-occurred with adult women's identification of these traits as their parents' parenting goals. This result held true for the traits of Stability (Alpha-Plus), Plasticity (Beta-Plus), and Integration (Gamma-Plus), but only for women whose parents made fewer mistakes overall. Adult women who experienced more parental mistakes in their childhood did not develop the traits they indicated as their parents' parenting goals.

The results also confirm the fifth hypothesis. Plus-type personality traits, that is, Stability (Alpha-Plus), Plasticity (Beta-Plus), and Integration (Gamma-Plus), co-occurred with higher levels of need satisfaction, while higher levels of minus features (Passiveness, i.e., Beta-Minus, and Disharmony i.e., Gamma-Minus) were related to lower levels of need satisfaction.

The same analysis was made for the internal representation of adult women's relationships with their mothers, that is, for the women's perceptions of parental mistakes made by their mothers, as well as the personality traits that their mothers wanted to develop in them. Cluster analysis revealed the existence of two clusters of women similar in terms of variable scores (see Figure 3). The first cluster comprised 193 women (48% of the total sample), while the second cluster included 209 women (52% of the sample). Differences between the clusters were small and very small for personality traits shaped by the parents, with the exception of self-restraint (Delta-Plus), in which the distances between the clusters were of medium size (see Table 2). Differences between clusters were high for the parenting mistakes of aggression, activity restriction, indifference,



parental self-accentuation and inconsistency Differences were average for the mistake of strictness and small for pampering, doing things for the child and idealization. There were large differences between clusters in fulfilling the need for safety, belongingness and love, physiological needs, and medium differences between the need for self-esteem and self-actualization.

Summarizing the results obtained in this part of the analysis, it should be noted that they confirm the conclusions of the first analysis. The fewer parenting errors women experienced in childhood, the better they were at meeting their needs in adulthood (H1). They exhibited plus-type personality traits to a greater degree (H3). Better need satisfaction was related to the fact that their parents developed Stability (Alpha-Plus), Plasticity (Beta-Plus) and Integration (Gamma-Plus) in them, and prevented the development of Disinhibition (Alpha-Minus, H2). Women indeed developed those traits that their mothers wanted them to develop more strongly, but only if their mothers did not make too many parenting mistakes (H4). Women with stronger plus-type personality traits were also better able to meet their needs (H5).

The final analysis was carried out to examine the relationship between the women's need satisfaction, their personality traits, their memories of their fathers' parenting mistakes, and the personality traits that their fathers wanted to develop in them. Cluster analysis again identified two groups of women based on outcome variables (see Figure 4). It classified 179 women into the first cluster (45% of the total sample) and 223 women into the second cluster (55% of the sample). Differences between the clusters were small for the personality traits that their fathers had shaped in the women, except for the traits of Stability (Alpha-Plus) and Self-restraint (Delta-Plus), for which the differences were medium (see Table 3). Differences between the clusters were high for the women's experience of the mistakes of aggression, activity restriction and parental indifference, while they were medium for their experience of parental self-accentuation, being idealized and facing and inconsistency, and small for the mistakes of strictness, being pampered and being relieved in their activities/duties. In terms of personality meta-traits, differences

between clusters were high for Integration (Gamma-Plus), Disinhibition (Alpha-Minus), and Disharmony (Gamma-Minus), medium for Stability (Alpha-Plus), Plasticity (Beta-Plus), and Passiveness (Beta-Minus), and small for Self-restraint (Delta-Plus) and Sensation seeking (Delta-Minus). For all the needs, the differences between the two clusters proved to be large.

Also, an analysis of women's recollections of their experiences in their relationship with their fathers confirmed earlier findings. The fewer parenting mistakes the women experienced in childhood, the better they were at meeting their needs in adulthood (H1). Regarding their fathers, women in both clusters claimed that they experienced more indifference than from their mothers. It was also confirmed that the women's need satisfaction was related to the fact that their fathers developed Stability (Alpha-Plus), Plasticity (Beta-Plus), and Integration (Gamma-Plus) in them, and prevented the development of Disinhibition (Alpha Minus, H2). The results confirmed that fewer parenting errors of the fathers are associated with the development of plus-type personality traits in the daughters (H3). Women who developed the traits of Stability (Alpha-Plus), Plasticity (Beta-Plus), and Integration (Gamma-Plus) in childhood co-occurred with better need satisfaction in adulthood (H4). Plus-type meta-traits were associated with women's better need satisfaction (H5).

## Discussion

The study confirmed the hypotheses. It showed that the parents of women who had strong plus-type personality traits, especially Integration (Gamma-Plus), Stability (Alpha-Plus), and Plasticity (Beta-Plus), actually put more effort into developing these traits in them: these women did indeed display these traits in adulthood. Their parents also tried to prevent the development of Disinhibition (Alpha-Minus).

Women who had stronger plus-type personality traits were also better able to fulfill their needs. They had their physiological and safety needs met at moderate levels, and their needs for belonging and love,

self-esteem and self-actualization at high levels. In turn, women whose parents tried to develop Self-restraint (Delta-Plus) type traits (obedience, submission, docility) had weaker plus-type traits and minus-type traits at a similar, average level. These women were much less proficient at fulfilling their needs. All their needs were met at a moderate level.

The two groups of women differed significantly in the experience internalized from their relationships with their parents. Women whose parents developed plus-type traits in them and who, as adults, exhibited these traits strongly were very good at fulfilling their needs, as well as experienced significantly fewer parental mistakes from their parents, both mothers and fathers, during their childhood. Their experience of parenting mistakes (of both mothers and fathers) was moderate/low. On the other hand, women whose parents focused on developing restraint traits in them (Delta-Plus), who displayed similar levels of plus- and minus-type traits, and who were able to satisfy their needs on a moderate level, experienced significantly more parental mistakes, especially the mistake of indifference.

An analysis of the profiles shown in Figures 2, 3 and 4 makes it possible to clearly associate high scores in the experience of indifference with lower levels of needs satisfaction in adulthood, and at a similar, moderate level with plus- and minus-type personality traits. It can also be observed that high scores in needs satisfaction are accompanied by high scores in plus-type personality traits, particularly in the case of integrated personality, and low and moderate levels of parenting errors experienced in childhood.

The study was designed so that multiple groups of variables could be analyzed at the same time. This was possible by using data mining algorithms, which allowed grouping people similar to each other in terms of the variables analyzed, showing statistically significant differences and effect sizes between the groups. Thanks to the use of the normalized mean, it can be very quickly discerned whether a group's score was low, moderate or high. The study used two proprietary tools from the creators of the theories of parenting mistakes and the Circumplex Model of Personality, which was also a methodological advantage.

Unfortunately, a considerable limitation of this study was the retrospective analysis of the experiences of parental mistakes and goals. All data on childhood experiences were collected from adult women. Retrospective studies are known to be biased (Sato & Kawahara, 2011). In this case, however, the problem is of different nature. We examined the experience of parental mistakes or goals related to what the adult daughters remembered and how they understood these situations, not what happened. These aspects of the research are very important. We have not studied the actual situation, only the subjective experience or representation of past events. However, if we had asked their parents, instead of asking adult daughters, the material obtained would also have been retrospective. Again, we would not have received information about what really happened, but rather what the parents remembered. We would therefore be examining the subjective experiences of the parents.

However, it is the child's experiences of these events, not the parents', that shape the child's personality. Therefore, we investigated the experiences of adult women, because they were more closely related to how they function and what personality traits they exhibit in adulthood. In order to answer the question of what really happened, how the children experienced these situations and how their personalities developed as a result, longitudinal studies should be carried out (Babbie, 2007).

**Funding:** This research received no external funding.

## References

- Costa, P. T. J., & McCrae, R. (1992). Four ways five factors are basic. *Personality and Individual Differences, 13*, 653–665.
- DeYoung, C. G., Peterson, J. B., & Higgins, D. M. (2002). Higher-order factors of the Big Five predict conformity: Are there neuroses of health? *Personality and Individual Differences, 33*, 533–552.
- Drakopoulos, S. A. (2008). The paradox of happiness: Towards an alternative explanation. *Journal of Happiness Studies, 9*(2), 303–315. doi:10.1007/s10902-007-9054-5
- Elder, J., Hill, T., Miner, G., Nisbet, B., Delen, D., & Fast, A. (2012). *Practical Text Mining and Statistical Analysis for Nono-structured Text Data Application*. Oxford, England: Elsevier.
- Greenberg, L. G. (2002). Integrating an emotion focused approach to treatment into psychotherapy integration. *Journal of Psychotherapy Integration, 12*(2), 154–189.
- Gurycka, A. (1979). *Struktura i dynamika procesu wychowawczego* [The structure and dynamics of the upbringing process]. Wydawnictwo Naukowe PWN.
- Gurycka, A. (1985). *Skuteczność wychowania w świetle badań psychologicznych 1976–1979* [Effectiveness of upbringing in light of psychological research, 1976–1979]. Wydawnictwa Uniwersytetu Warszawskiego.
- Gurycka, A. (1990). *Błąd w wychowaniu* [Parenting mistakes]. Wydawnictwa Szkolne i Pedagogiczne.
- Gurycka, A. (2008). Błędy w wychowaniu [Mistakes in parenting]. In E. Kubiak-Szyborska & D. Zajac (Eds.), *O wychowaniu i jego antynomiach* [On parenting and its antinomies]. Wydawnictwo WERS.
- Howe, M. L. (2000). *The fate of early memories: Developmental science and the retention of childhood experiences*. American Psychological Association.
- John, St. Ashley, M., Ozahtaci, B., & Tarullo, A. R. (2018). Parental executive function and verbal ability matter for scaffolding. *Journal of Family Psychology, 32*(3), 406–411. doi: 10.1037/fam0000374
- Kutter, P. (2000). *Współczesna psychoanaliza* [Contemporary psychoanalysis]. Gdańskie Wydawnictwo Psychologiczne.
- Lester, D. (2013). Measuring Maslow's hierarchy of needs. *Psychological Reports, 113*(1), 15–17. doi: 10.2466/02.20.PR0.113x16z1

- LeVine, R. (1974). Parental goals: Across-cultural view. *Teachers College Record*, 76, 226–239.
- Maslow, A. H. (1964a). *Religions, values, and peak-experiences*. Ohio University Press.
- Maslow, A. H. (1964b). Teoria hierarchii potrzeb [The hierarchy of needs theory]. In J. Reykowski (Ed.), *Problemy osobowości i motywacji w psychologii amerykańskiej* [Issues in personality and motivation in American psychology] (pp. 135–164). Wydawnictwo Naukowe PWN.
- Millon, T., & Davis, R. (1996). *Disorders of Personality: DSM-IV and Beyond* (2nd ed.). John Wiley and Sons.
- Millon, T. (2010). Using evolutionary principles for deducing normal and abnormal personality patterns. In T. Millon, R. F. Krueger, & E. Simonsen (Eds.), *Contemporary directions in psychopathology: Scientific foundations of the DSM-V and ICD-11* (pp. 453–472). The Guilford Press.
- Miner, M., Dowson, M., & Malone, K. (2013). Spiritual satisfaction of basic psychological needs and psychological health. *Journal of Psychology and Theology*, 41(4), 298–314. <http://doi.org/10.1002/ffj.1254>
- Nishimura, T., & Suzuki, T. (2016). Basic psychological need satisfaction and frustration in Japan: Controlling for the Big Five personality traits. *Japanese Psychological Research*, 58(4), 320–331. doi:10.1111/jpr.12131
- Nowak, S. (2007). *Metodologia badań społecznych* [The methodology of social studies]. Wydawnictwo Naukowe PWN.
- Prince, D. L., & Howard, E. M. (2002). Children and their basic needs. *Early Childhood Education*, 30(1).
- Şimşek, Ö. F., & Demir, M. (2013). Parental support for basic psychological needs and happiness: The importance of sense of uniqueness. *Social Indicators Research*, 112(3), 661–678. doi: 10.1007/s11205-012-0075-z
- Strelau, J. (2001). Osobowość jako zespół cech [Personality as a trait structure]. In J. Strelau (Ed.), *Psychologia. Podręcznik akademicki* [Psychology: Academic handbook] (Vol. 2, pp. 525–560). Gdańskie Wydawnictwo Psychologiczne.
- Strus, W., Ciecuch, J., & Rowiński, T. (2014). The circumplex of personality meta-traits: A synthesizing model of personality based on the big five. *Review of General Psychology*, 18(4), 273–286. doi: 10.1037/gpr0000017

- Szymańska, A. (2017a). Coping with difficulties in parenting situations – Parental control, obedience enforcement and directiveness. *Studia Psychologica*, 59(1), 3–21.
- Szymańska, A. (2017b). Wykorzystanie algorytmów Text Mining do analizy danych tekstowych w psychologii [Use of text mining algorithms to analyze textual data in psychology]. *Socjolingwistyka*, 33, 99–116.
- Szymańska, A., & Dobrenko, K. (2017). The ways parents cope with stress in difficult parenting situations: the structural equation modeling approach. *PeerJ*, 5: e3384. <http://doi.org/DOI10.7717/peerj.3384>
- Winston, C. N. (2018). To be and not to be: A paradoxical narrative of self-actualization. *Humanistic Psychologist*, 46(2), 159–174. doi: 10.1037/hum0000082

## Tables

**Table 1. Analysis of Variance Results for the Cluster Analysis of Parental Goals and Mistakes, Personality Traits, and Need Satisfaction in Adult Women**

	Between SS	df	Within SS	df	F	p	$\eta^2$	Interpretation of $\eta^2$
Stability	17.90	1	814.15	400	8.7951	.003	.021	small
Plasticity	6.49	1	313.17	400	8.2952	.004	.020	small
Self-restraint	43.82	1	800.31	400	21.9036	.000	.052	small
Integration	6.13	1	165.95	400	14.7697	.000	.036	small
Disinhibition	18.96	1	721.97	400	10.5064	.001	.026	small
Passiveness	1.58	1	282.95	400	2.2367	.135	.005	very small
Sensation-seeking	8.65	1	672.41	400	5.1484	.023	.013	small
Disharmony	1.78	1	377.10	400	1.8829	.170	.005	very small
parents' strictness	125.20	1	14037.75	400	3.5675	.059	.009	very small
parents' aggression	1690.67	1	18577.91	400	36.4018	.000	.083	medium
constraining child's activity	2194.04	1	14837.98	400	59.1466	.000	.129	medium
parents' indifference	5832.56	1	27389.02	400	85.1809	.000	.175	big
parents' self-accentuation	1112.54	1	16141.45	400	27.5697	.000	.065	medium
parents' pandering to the child	603.07	1	15755.05	400	15.3111	.000	.037	small
replacing the child in their activities	75.08	1	16823.84	400	1.7850	.182	.004	very small
idealization of child by parents	891.08	1	22739.41	400	15.6747	.000	.038	small
parents' inconsistency	1013.44	1	20130.40	400	20.1376	.000	.048	small
Stability of daughters	887.62	1	6654.43	400	53.3548	.000	.118	medium
Plasticity of daughters	3085.14	1	12616.50	400	97.8128	.000	.196	big
Self-restraint of daughters	85.38	1	13137.69	400	2.5994	.108	.006	very small
Integration of daughters	3812.29	1	7425.74	400	205.3553	.000	.339	big
Disinhibition of daughters	2622.64	1	12335.64	400	85.0425	.000	.175	big
Passiveness of daughters	2530.65	1	10408.13	400	97.2567	.000	.195	big
Sensation-seeking of daughters	70.25	1	12959.20	400	2.1683	.141	.005	very small
Disharmony of daughters	9709.76	1	11455.82	400	339.0334	.000	.459	big
daughters' need of safety	9735.33	1	22517.58	400	172.9374	.000	.302	big
daughters' need of belonging	11120.69	1	27647.60	400	160.8919	.000	.287	big
daughters' need of esteem	18042.01	1	22316.57	400	323.3834	.000	.447	big
daughters' need of self-actualization	16909.73	1	27617.79	400	244.9107	.000	.380	big
daughters' physiological needs	8074.29	1	21319.67	400	151.4899	.000	.275	big



**Table 2. Analysis of Variance Results for the Cluster Analysis of Mothers' Goals and Mistakes and Adult Women's Personality Traits and Need Satisfaction**

	Between SS	df	Within SS	df	F	p	$\eta^2$	Interpretation of $\eta^2$
Stability	7.914	1	378.38	400	8.3657	.004	.020	small
Plasticity	1.019	1	97.03	400	4.1988	.041	.010	small
Self-restraint	41.110	1	345.20	400	47.6362	.000	.106	medium
Integration	3.055	1	105.45	400	11.5870	.000	.028	small
Disinhibition	16.269	1	329.49	400	19.7498	.000	.047	small
Passiveness	.012	1	124.57	400	.0382	.845	.0009	very small
Sensation-seeking	3.255	1	308.22	400	4.2242	.040	.010	small
Disharmony	1.049	1	183.09	400	2.2925	.1301	.006	very small
mothers' strictness	361.028	1	4860.42	400	29.7117	.000	.069	medium
mothers' aggression	2538.109	1	5578.02	400	182.0078	.000	.313	big
constraining child's activity	2902.162	1	4918.76	400	236.0078	.000	.371	big
mothers' indifference	6269.727	1	7833.88	400	320.1337	.000	.445	big
mothers' self-accentuation	1895.736	1	4039.96	400	187.6986	.000	.319	big
mothers' pandering to the child	176.507	1	6323.40	400	11.1653	.001	.027	small
replacing the child in their activities	325.538	1	7671.40	400	16.9741	.000	.041	small
idealization of child by mothers	287.361	1	8489.68	400	13.5393	.000	.032	small
mothers' inconsistency	1654.438	1	7246.54	400	91.3229	.000	.186	big
Stability of daughters	583.123	1	6958.93	400	33.5180	.000	.077	medium
Plasticity of daughters	273.835	1	15427.81	400	7.0998	.008	.017	small
Self-restraint of daughters	105.684	1	13117.38	400	3.2227	.073	.008	very small
Integration of daughters	1158.962	1	10079.07	400	45.9948	.000	.103	medium
Disinhibition of daughters	1324.054	1	13634.23	400	38.8450	.000	.089	medium
Passiveness of daughters	278.888	1	12659.89	400	8.8117	.003	.022	small
Sensation-seeking of daughters	120.594	1	12908.85	400	3.7368	.053	.009	very small
Disharmony of daughters	3836.018	1	17329.56	400	88.5428	.000	.181	big
daughters' need of safety	5136.627	1	27116.28	400	75.7719	.000	.159	big
daughters' need of belonging	8984.977	1	29783.30	400	120.6713	.000	.232	big
daughters' need of esteem	5667.234	1	34691.35	400	65.3446	.000	.140	medium
daughters' need of self-actualization	5414.046	1	39113.47	400	55.3676	.000	.122	medium
daughters' physiological needs	5196.281	1	24197.68	400	85.8972	.000	.177	big

**Table 3. Analysis of Variance Results for the Cluster Analysis of Fathers' Goals and Mistakes and Adult Women's Personal Characteristics and Need Satisfaction**

	Between SS	df	Within SS	df	F	p	$\eta^2$	Interpretation of $\eta^2$
Stability	25.89	1	373.71	400	27.71	.000	.064	medium
Plasticity	4.57	1	177.95	400	10.28	.001	.025	small
Self-restraint	32.33	1	340.91	400	37.93	.000	.086	medium
Integration	1.09	1	59.35	400	7.33	.007	.018	very small
Disinhibition	10.01	1	257.43	400	15.56	.001	.037	very small
Passiveness	1.32	1	128.29	400	4.10	.043	.010	small
Sensation-seeking	1.70	1	257.28	400	2.64	.104	.006	very small
Disharmony	2.18	1	160.25	400	5.45	.020	.013	small
fathers' strictness	192.99	1	7327.29	400	10.53	.001	.025	small
fathers' aggression	1639.24	1	6621.39	400	99.02	.000	.198	big
constraining child's activity	1670.17	1	5774.11	400	115.70	.000	.224	big
fathers' indifference	4454.30	1	7766.82	400	229.40	.000	.364	big
fathers' self-accentuation	380.50	1	4315.37	400	35.26	.000	.081	medium
fathers' pandering to the child	32.55	1	4296.85	400	3.03	.082	.007	very small
replacing the child in their activities	282.51	1	5956.76	400	18.97	.000	.045	small
idealization of child by fathers	852.19	1	7828.75	400	43.54	.000	.098	medium
fathers' inconsistency	634.99	1	7737.71	400	32.82	.000	.075	medium
Stability of daughters	590.76	1	6951.29	400	33.99	.000	.078	medium
Plasticity of daughters	1745.71	1	13955.94	400	50.03	.000	.111	medium
Self-restraint of daughters	58.46	1	13164.61	400	1.77	.183	.004	very small
Integration of daughters	2232.16	1	9005.87	400	99.14	.000	.198	big
Disinhibition of daughters	2236.38	1	12721.90	400	70.31	.000	.149	big
Passiveness of daughters	1539.88	1	11398.89	400	54.03	.000	.119	medium
Sensation-seeking of daughters	2.96	1	13026.49	400	0.09	.763	.001	very small
Disharmony of daughters	5889.95	1	15275.63	400	154.23	.000	.278	big
daughters' need of safety	7464.26	1	24788.65	400	120.44	.000	.231	big
daughters' need of belonging	8189.43	1	30578.85	400	107.12	.000	.211	big
daughters' need of esteem	11831.21	1	28527.37	400	165.89	.000	.293	big
daughters' need of self-actualization	10578.68	1	33948.83	400	124.64	.000	.237	big
daughters' physiological needs	4881.57	1	24512.39	400	79.65	.000	.166	big

## Figures

**Figure 1. A model of the relationship between parental goals and mistakes, their adult daughters' experiences, and their personality traits and needs fulfillment skills**

