DOI: 10.35765/mjse.2023.1224.04
Submitted: 18.10.2022
Accepted: 09.11.2023
Published: 30.12.2023

Anna Kwatera
https://orcid.org/0000-0002-9421-7248
University of the National Education Commission, Krakow, Poland
anna.kwatera@up.krakow.pl

Mariusz Dzięglewski
https://orcid.org/0000-0001-6863-3830
University of the National Education Commission, Krakow, Poland
mariusz.dzieglewski@up.krakow.pl

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

(pp. 79–103)

Suggested citation: Kwatera, A. & Dzięglewski, 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.

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

(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),

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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 unsupportive attitudes from head teachers and teaching staff (Kwatera 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

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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,

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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"[a]/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

[a] "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

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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[a]	
					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
Total	**74**	**36**	**48.6**	**118**	**27**	**22.9**	**47**	**39.8**	**19**	**16.1**	**15**	**12.7**

[a] 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

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.).

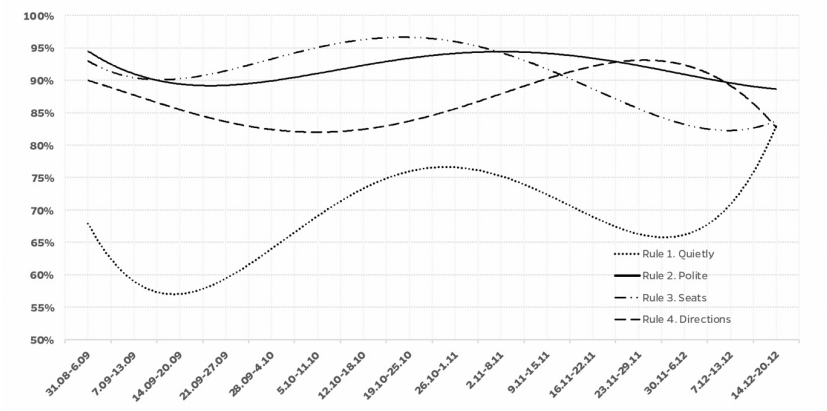
First the coaches and then the teachers prepared and adopted new procedures for the game in the new online environment.

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.

ISSN 2543-7585 e- ISSN 2543-8409

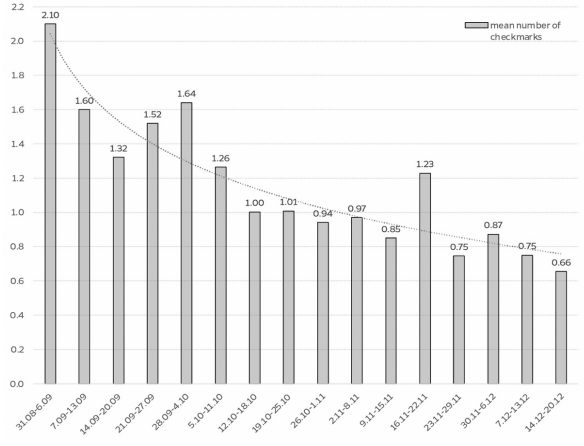
Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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)

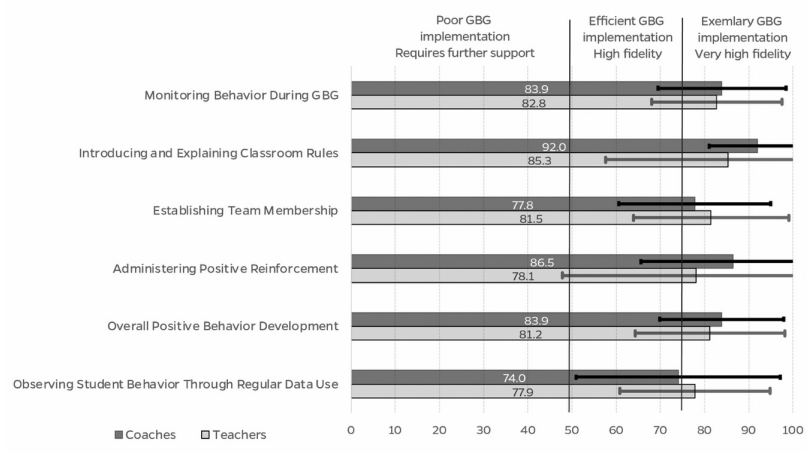


ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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[a] in a given area with their standard deviations)



[a] *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.*

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

> 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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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:

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

(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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

ISSN 2543-7585 e- ISSN 2543-8409

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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

References

American Institutes for Research. (n.d.). *About the game*. Retrieved October 21, 2023 from 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., Krous, 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.

ISSN 2543-7585 e- ISSN 2543-8409

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

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.

Kwatera 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.

ISSN 2543-7585 e- ISSN 2543-8409

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. Kowalczuk (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

Multidisciplinary Journal of School Education • Vol. 12, 2023/2 No. 24
Communication and Social Change

ISSN 2543-7585 e- ISSN 2543-8409