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## **The Level of School Readiness of Five-year-olds within the Area of Social Development in View of the Pedagogic Principles of Maria Montessori – an Analysis Report**

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### **Introduction**

In general, social development is understood as a socialization process the objective of which is making a person develop certain skills and abilities necessary for the effective functioning in the society (K. Hurrelmann, 1994, p. 16; quotation according to S. Kowalik, 2002, p. 72) and preparing a person for seizing and fulfilling their own role in adult life. During the socialization process, the person extends his/her knowledge about their group, social roles, relations among people playing given roles, as well as rights and obligations within the group. Moreover, the person learns to accept certain attitudes, standards and values. Apart from the fact that the person becomes integrated into the social group, another important aspect related to social development is the process in which the person shapes themselves within the group, i.e. autonomization, which leads to “unique patterns of reacting, thinking and acting in different situations” (M. Kielar-Turska, 2004, p. 113). In kindergarten, the child’s social development is very dynamic and intensive. The person enters a broader social environment which makes it possible for them to start new relations, take up different roles, develop experience related to the contact with adults and other children. Furthermore, the child shapes his or her own image within the context of the social group. He or she adopts certain attitudes accepted by the group in which the child lives.

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It is assumed that a child graduating from kindergarten masters certain skills relevant to their development abilities. Such skills include:

- paying attention to others;
- the sense of one's own uniqueness and influence;
- communicating with others in important situations;
- understanding that the surrounding world is organized in a reasonable manner;
- the sense of belonging to a group – following social agreements;
- understanding the concept of ownership;
- behaving according to certain principles.

The social development of a kindergarten child is understood as the process of interacting with other people, taking up and learning different tasks, obligations and social roles, as well as shaping attitudes. It is accomplished through the child's contact with other people. At the beginning, such contact takes place in the family, through relations with close family members. Later, it develops in educational institutions, in the so-called broader social environment.

Depending on the theoretical and practical assumptions adopted in particular educational institutions, the process of social development manifests itself in different forms. However, it always aims to achieve the same objectives. Montessori kindergartens offer an example of an alternative approach to education. The number of day nurseries, kindergartens and schools based on the assumptions of the Montessori pedagogic system is increasing. It is one of the reasons as to why research on the way the system functions in Poland should be carried out. The organization of the educational process in Montessori kindergartens is characterized by the child's individual work in mixed-age groups. The emphasis is laid on developing the child's independence and, at the same time, the responsibility for oneself and for the social and material environment. An important element of the Montessori education is independence and freedom to make decisions concerning one's own actions. This is fulfilled according to the principles in the so-called prepared

environment, specified by M. Montessori (M. Montessori, 1952, 1970, B. Surma, 2007).

However, the emphasis laid on individualization may, in this concept, be questionable with regard to children's correct acquisition of social skills. Moreover, in the books by M. Montessori we do not find direct explanations related to social development in her concept (M. Montessori, 1994; B. Surma, 2007, p. 51–56, P. Trabalzini, 2009, p. 175–182). Therefore, one should carry out diagnostic analysis when monitoring the process of children's social development in view of Montessori pedagogic principles. Comparative analysis of children's social behaviour in Montessori kindergartens and schools versus traditional schools was carried out by Sabina Guz between 1994–2000. The descriptions of analysis results confirm the thesis that an educational environment prepared according to the pedagogic principles of M. Montessori facilitates social development within the scope of pro-social behaviour and social relations among children in a group (S. Guz, 2006, p. 183–214). These studies take into account different indicators of social behaviour than those associated with school readiness and were carried out using different methods. To date, the research has been carried out on stimulating values in the Montessori system (I. Sikorska, 2010), the results of research on school readiness for learning mathematics were published (B. Surma, 2013), and attempts were made to describe the educational system (B. Bednarczuk, 2007, M. Miksza, 2000, J. Dybiec et al.)

The objective of the article is to determine the degree to which five-year-olds attending a Montessori kindergarten achieved the level of school readiness within the area of social development. The analysis was carried out with the use of the school readiness test prepared according to the guidelines of the Ministry of Education. It is a pilot study.

### **Methodological assumptions of the author's own analysis**

The main issue concerning the analysis was formulated in the form of the following question:

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- What was the level of school readiness of children born in 2007 who attended the Integrated Montessori Kindergarten in Cracow in the school year 2012/13?

The nature of the study that was undertaken was diagnostic and explanatory, therefore the details of the problem were focused on answering the following questions:

- What was the level of school readiness of children born in 2007 within the area of social development in the research carried out in September 2012 and April 2013?
- What is the difference between the results of September 2012 and April 2013 among the children in question?

The main study method was document analysis with the categorized observation technique. In order to specify school readiness in the kindergarten, the teachers carried out two tests using the "school readiness diagnosis card" published by Nowa Era publishing house (E. Derewlana, et al, 2002). In order to analyse the test results (in this case partial ones) only one area mentioned in the issue of the study was used.

Specifying school readiness within the scope of social development referred to the area described by the test authors as the independence development area. The skills specified by the following indicators were evaluated:

- the child gets dressed on their own,
- ties up their shoes without help,
- prepares and tidies up their workplace,
- organizes different kinds of games for themselves,
- fulfills tasks,
- finishes the activities they started,
- tries to overcome difficulties
- makes good contacts with peers,
- makes good contacts with adults,

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- initiates games with peers,
  - follows all rules and norms established within a group,
  - cooperates with others in the group, adopting various roles,
  - easily adjusts to new situations,
  - reacts adequately to the situation.

The indicators separated within this area specify the child's readiness within the scope of independence in the activities that determine the child's self-reliance, their ability to organize their own actions, to specify the objective, to control the progress of tasks fulfilled and to finish what has been started. This area may be specified as related to a certain level of the person's autonomization, as well as taking over and learning tasks, obligations and social roles. Further indicators refer to the social and communication area. The child should be able to make good contacts with adults and peers. This way the process of the child's interaction with other people, and the way the child adopts rules and regulations established within a group, is evaluated. Since, to a certain degree, social development includes the emotional sphere, an analysis was also undertaken of the way in which the children reacted to new situations, and the adequacy of their reactions to different kinds of situations.

School readiness in the above mentioned indicators was evaluated in the following manner:

- Level A: the child performs the activities in question on their own (carefully/neatly/correctly); the child's actions reveal the fact that a given skill has been fully developed.
- Level B: the child performs the activities in question on their own, making single/insignificant/small/scarce mistakes; the child's actions reveal the fact that a given skill should be improved.
- Level C: the child tries to perform a task on their own or expects support (the child performs the activities imprecisely/not carefully/incorrectly/makes mistakes); the child's actions reveal that a given skill is being shaped and should be developed.

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- Level D: the child is unable to perform particular activities on their own or with the teacher's help, or the child performs tasks incorrectly; the child's actions reveal that a given skill has not yet been developed.

Within the group of children tested were all the children born in 2007, i.e. 22 children (12 boys and 10 girls) from four mixed-age groups functioning in the Integrated Montessori Kindergarten in Cracow. According to the guidelines, the children were diagnosed twice in the school year 2012/13. The first test was carried out in September 2012, and the second test took place in April 2013. All the test results have been analysed in terms of quantity. The children were given points for the level of school readiness they achieved (level A – 4 points; level B – 3 points; level C – 2 points; level D – 1 point) in order to check how many of them achieved the maximum level, then – the high level, the medium level, the low level and the lowest level.

#### **The level of school readiness of the children tested within the area of social development – the description of the test results.**

Within the area referring to social development, the children were evaluated by the teacher with the use of the categorised observation technique. There were 14 indicators determining the readiness level within this area. In order to analyse the results obtained, the following range of points was adopted: the highest level was 56 points; a high level was 49–55 points; the medium level was 42–48 points; a low level was 35–41 points; the lowest level was below 34 points, meaning that the child was not ready for school education. Such a range of points resulted from the need to analyse the results of the children who, in most cases, obtained A and B level grades.

In September only one child (4.5%) obtained the highest level of school readiness in terms of social development. The child was given the maximum number of points.

Eight children (36.4%) obtained the high level, meaning that in some aspects they were mastering a given skill, they could perform certain activities but they needed some help, or they made occasional mistakes. The number of points given (49 – 55) indicates that at least seven of the fourteen skills were fully developed, and the other skills were being improved.

Eight children, i.e. also 36.4% obtained the medium level. These children fell within the range of 42 – 48 points, which meant that most of the skills tested were evaluated as level B skills, i.e. skills that were being improved or perfected.

Three boys obtained the low level (13.6%). In one case the reason for low grades was the problem of bilingualism – at the beginning of the school year it was very difficult for the boy to make friends, to find his place in the group, to understand the rules and to organize different tasks. It was the first year of the boy's functioning in a Polish kindergarten. By April the boy's results had improved – from 35 to 48 points – which indicates that the child mastered most skills on the B level. The reasons for the poor results of the remaining two boys may include slower development within the area of fine motor coordination as well as communication and emotions. Two children (i.e. 9.1%) obtained the lowest level with results of 30 and 31 points respectively, which means that they were unable to perform most of the activities tested or that these skills were already being shaped. In these cases the reason for such poor results is the children's disability which makes them retarded in all areas of development.

The April results indicate that three children obtained the maximum number of points (13.6%). Eleven children obtained the high level (50%). Four children obtained the medium level (18.2%) and two children obtained the low level. And, just as in September, two children were on the lowest level, which means that in terms of social and emotional development, these children are unable to master the skills that shall make it possible for them to achieve success at school (Table 1).

**Table 1. The level of school readiness of the children tested in terms of social development**

Test date	September 2012				April 2013			
	Boys	Girls	Total	%	Boys	Girls	Total	%
The highest level	0	1	1	4.5	1	2	3	13.6
High level	4	4	8	36.4	7	4	11	50
Medium level	4	4	8	36.4	1	3	4	18.2
Low level	3	0	3	13.6	2	0	2	9.1
The lowest level	1	1	2	9.1	1	1	2	9.1
Total	12	10	22	100	12	10	22	100

Source: the author's own work.

During the school year 2012/13 most five-year-olds (more than 80%) obtained school readiness within the scope of the required skills. However, only three of them obtained the highest number of points, which means that social development, and especially certain skills specified in the test, are strictly related to biological maturity, and not to stimulation or exercises done by the children. This is illustrated by the detailed analysis of the test results in tables 2 and 3.

On the basis of the results of the five-year-olds tested in September 2012, one may conclude that the largest number of children with the highest level of independence referred to getting dressed (16 children), making good contact with adults (17 children) and peers (14 children), as well as organising different games (12) and initiating games with peers (10 children). It may be assumed that being in a mixed-age group, in which the children are free to choose their activity, in which they have to obey certain rules and in which the development material is limited, makes the children obtain good results within the scope of social skills such as communicating with others and organising games. Moreover, a half of the children tested are able to prepare and tidy up their workplace, and 10 children need some help with these activities.

Indicator 7, which refers to the evaluation of the ability to try to overcome difficulties, shows that 12 children (5 boys and 7 girls) have not yet



achieved the highest level. In September, only 6 children had this ability, and 4 children achieved level C. It was difficult for 8 boys and 6 girls (indicator 11) to follow all the rules and standards established within the group. 5 boys and 5 girls were unable to cooperate with others in the group through adopting various roles. In September 2012 it was difficult for 6 boys and 7 girls to quickly and properly adjust to new situations, and 4 boys and 7 girls at times did not react adequately to new situations. These skills cannot be trained. It is also impossible to make the children master these skills more quickly. It is because these skills are related to psychological, emotional and neurological development. The children achieved the lowest grades in the evaluation of independence while tying up their shoes, which is often caused by the impossibility of practicing this skill in everyday life. To perform this activity one needs a proper level of fine motor skills as well as sight and movement coordination, which – to a large degree – depends on the child's level of maturity achieved around the age of 7.

**Table 2. The level of school readiness within the area of independence of the children born in 2007. Test date: September 2012.**

Independence development indicator	Boys				Girls				Total			
	A	B	C	D	A	B	C	D	A	B	C	D
1. The child gets dressed on their own	8	4	-	-	8	2	-	-	16	6	-	-
2. Ties up their shoes	2	-	6	4	3	3	2	2	5	3	8	6
3. Prepares and tidies up their workplace	6	6	-	-	5	4	1	-	11	10	1	-
4. Organizes various games for themselves	6	6	-	-	6	3	1	-	12	9	1	-
5. Fulfils tasks	4	4	4	-	4	4	2	-	8	8	6	-
6. Finishes activities that have been started	5	4	3	-	3	6	1	-	8	10	4	-
7. Tries to overcome difficulties	4	5	3	-	2	7	1	-	6	12	4	-
8. Makes good contacts with peers	6	5	1	-	8	2	-	-	14	7	1	-
9. Makes good contacts with adults	8	3	1	-	9	1	-	-	17	4	1	-
10. Initiates games with peers	5	5	1	1	5	4	-	1	10	9	1	2
11. Follows all the rules and norms established within the group	3	8	1	-	3	6	1	-	6	14	2	-

12. Cooperates within the group, adopting various roles	5	5	2	-	4	5	1	-	9	10	3	-
13. Easily adjusts to new situations	2	6	4	-	2	7	-	1	4	13	4	1
14. Reacts adequately to the situation	6	4	1	1	2	7	1	-	8	11	2	1

The second test was carried out in April 2013. Since only three children obtained the highest grade in all 14 indicators, detailed results of other children should be analysed in order to determine which skills within the area of social development have not been shaped or have proved to be the most difficult for the children. It is worth mentioning that more than 68% of children obtained the high or medium levels, which means that in the near future the children may obtain the highest level of the skills tested. What needs to be done is to adjust tasks to the children's abilities and making it possible for the children to master such skills as tying up their shoes (only 6 children could do that; 9 needed some help, 6 could make the first knot, and 4 are uninterested in tying up their shoes), finishing tasks that have been started (11 children need additional stimuli to encourage them to achieve the expected result), trying to overcome difficulties (8 children made attempts, 11 children needed external motivation or reinforcement, 3 were unable to cope with difficulties). Only 5 children easily adjusted to new situations and the behaviour of 15 children indicated that they still have some difficulties with dealing with emotions. Moreover, 11 children did not always react adequately to a new situation. Only 9 children obtained the proper level of readiness within this area. Almost all the children made good contacts with peers and adults. Initiating games with peers is related to the child's personality and communication skills. Thus, shy children prefer submitting to others rather than initiating games on their own. However, one might notice that a mixed-age group makes it possible for all the children to adopt the role of a game initiator. Older children easily interact with younger children, organising time one for another. This way each child may find a game partner and fulfil one's needs through adopting different roles. This is confirmed by the results of the sociometric research carried out among the children attending this kindergarten.

**Table 3. The level of school readiness within the area of independence of the children born in 2007. Test date: April 2013.**

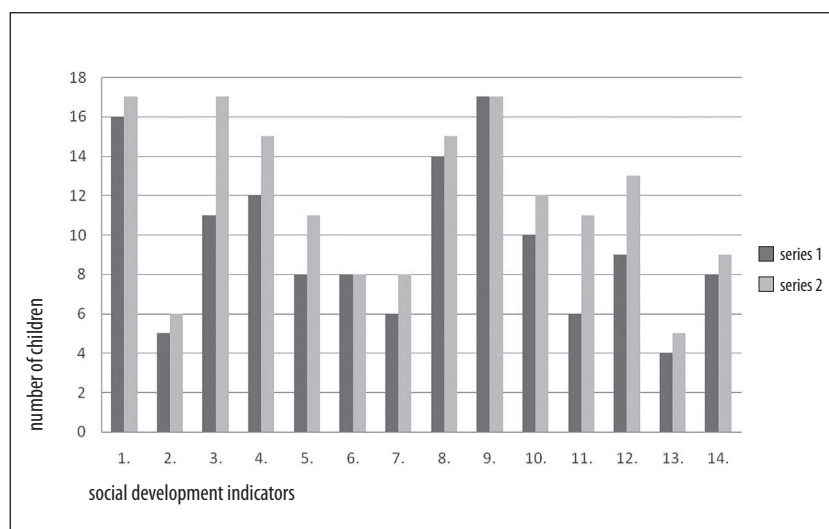
Independence development indicator	Boys				Girls				Total			
	A	B	C	D	A	B	C	D	A	B	C	D
15. The child gets dressed on their own	8	4	-	-	9	-	1	-	17	4	1	-
16. Ties up their shoes	2	3	4	3	4	3	2	1	6	9	6	4
17. Prepares and tidies up their workplace	10	2	-	-	7	2	1	-	17	4	1	-
18. Organizes various games for themselves	9	3	-	-	6	3	1	-	15	6	1	-
19. Fulfils tasks	6	4	2	-	5	4	1	-	11	8	3	-
20. Finishes activities that have been started	5	5	2	-	3	6	1	-	8	11	3	-
21. Tries to overcome difficulties	5	5	2	-	3	6	1	-	8	11	3	-
22. Makes good contacts with peers	6	6	-	-	9	1	-	-	15	7	-	-
23. Makes good contacts with adults	8	4	-	-	9	1	-	-	17	5	-	-
24. Initiates games with peers	7	3	1	1	5	4	1	-	12	7	2	1
25. Follows all the rules and norms established within the group	6	5	1	-	5	4	1	-	11	9	2	-
26. Cooperates within the group, adopting various roles	7	3	2	-	6	3	1	-	13	6	3	-
27. Easily adjusts to new situations	2	9	1	-	3	6	1	-	5	15	2	-
28. Reacts adequately to the situation	6	5	-	1	3	6	1	-	9	11	1	1

In order to illustrate the progress, the test results of all the children were collected and compared. Chart 1 shows the differences between the first and the second test indicating the differences between the children on the A level. The graphic picture of the results obtained also shows which skills were the most difficult for the children.

After comparing the test results from September and April it is possible to determine that the second test revealed a significant improvement in most of the skills that were tested. However, not all the children have mastered the skills tested at the highest possible level. Significant progress refers to the number of children who can prepare and tidy up their workplace, organise various tasks for themselves, perform different tasks, follow all the rules and norms established within the group, as well

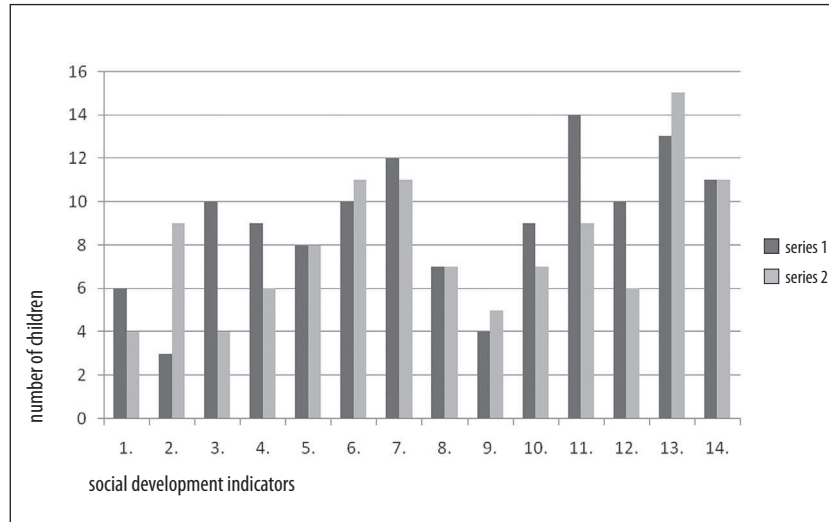
as cooperate within the group. However, there are still not many children who can tie up their shoes, finish the activities they started or adjust to new situations.

**Chart 1. The comparison of the test results within the area of social development – level A**



It is true that the inability to tie up one’s shoes does not have a bad influence on school education. However, children’s inability to master all other skills may make it difficult for them to adapt to school conditions and to adjust to the requirements that do not take into account the lack of readiness/maturity in emotional development, the lack of persistence in overcoming problems, and the lack of aspiration for regular learning. The comparison of the B level test results within the area of social development reveals that there were more children who were improving when it came to the ability to tie up their shoes (indicator 2), trying to finish the task they started (indicator 6), and dealing better with new situations. These skills are to be perfected. In other cases, the smaller number of children in the second test means that their performance was evaluated as being better, which is illustrated in chart 1.

**Chart 2. The comparison of the test results within the area of social development – level B**



### Summary of the test results

The main problem with the test result analysis that was carried out was the question of the degree to which the five-year-olds attending the Montessori kindergarten are prepared for school in terms of mastering social skills. The results of September 2012 made it possible to determine which skills needed to be improved. Furthermore, these results made it possible for the teachers to plan some individual work with the children. Only three children (13.6% of the total) mastered all the required skills at the highest level. 78.2% of the children tested obtained the high or medium level, which means that the process of shaping their school readiness within the area of social and emotional development is in progress. The fact that the children have not fully mastered some skills that were tested may be the reason for their poorer performance at school, more rapid discouragement from regular learning and emotional difficulties, when compared to older, more mature children. The results indicate that

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within one year of preparation for school the children made significant progress, but – due to their age and biological development – not all of the required skills had been mastered at the highest level. One needs to remember that some skills cannot be shaped through exercise. Social and emotional development is strictly related to the process of growing up. It means that some skills cannot be mastered more quickly. Such skills include an adequate reaction to new situations, overcoming difficulties, as well as performing and planning tasks on one's own.

The children from the Montessori kindergarten had the opportunity to shape a lot of skills related to independence and the development of emotional resistance. A mixed-age group facilitates the shaping of good relations with other people. Most children developed these skills at the highest level; some of them at the B level. This is a very good result, taking into account that within the tested group there were some children with development problems.

As the above mentioned test results are related to a pilot study, one cannot draw any general conclusions. In most cases, the children diagnosed obtained a satisfactory level of social development. One should take into account that these skills are constantly being shaped and mastered, which is connected with the age of the children. Being successful at school shall depend on lowering school requirements and adjusting the teaching and learning methods to the abilities of a six-year-old.

In order to illustrate children's development process in terms of educational principles determined by M. Montessori, one should continue the study, increasing the number of children tested both in Montessori and in traditional kindergartens, and comparing the test results.

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#### **Abstract**

Children of kindergarten age develop very quickly. With proper stimuli, they should reach the appropriate level of school readiness around the age of six. The subject of the study carried out in one of Cracow's kindergartens was to determine the level of school readiness in terms of social development. Tests were carried out among five-year-olds attending a kindergarten based on the pedagogic principles of Maria Montessori. The author wished to know what social skills were developed by the children within the context of an alternative method of interaction. The test group included 22 children from four mixed-age groups. The school readiness evaluation was carried out twice in the school year 2012/13, with the use of the categorised observation technique. The results show that within one year's time of preparation for school the children made significant progress, but – due to their age and biological development – not all the required skills were shaped at the highest possible level. In the second test only 13.6% children obtained the highest grade in all the test indicators. More than 78% children obtained the high or medium level, which means that the skills tested have not been fully shaped. Children need more time for improving and reinforcing these skills. Social and emotional development is strictly related to the process of growing up. Therefore, certain skills cannot be shaped faster. These include an adequate reaction to new situations, overcoming difficulties, as well as performing and planning tasks on one's own. The test results confirm that the Montessori educational context facilitates the shaping of such skills as independence of action, making good contacts with adults and peers, or preparing and tidying up the workplace. It was a partial and pilot study.



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**Key words:** social development, social relations, social attitudes, social skills, school readiness of five-year-olds, Maria Montessori method

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