

Socio-cultural Capital as a Factor Differentiating Students' Skills in the Field of Speech Reception and Creation as well as the Analysis and Interpretation of Cultural Texts

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Abstract

The purpose of this article is to analyse the relations between students' cultural and social capital and their competence test results in the field of the Polish language. The data come from the research carried out in 2013 in 60 middle schools in 5 provinces of Poland. Students filled in survey questionnaires regarding their school and family environment and 3 competence tests. Two types of socio-cultural capital were distinguished – soft and hard capital. The hard socio-cultural capital affects approximately 10% of the students' results. If the soft and hard capital resources and the extent of identification with school were increased by one level, this would result in an average increase in the 1st form students' results of the test regarding cultural texts analysis and interpretation by 21.4%.

Keywords: cultural capital, social capital, tests of students' skills, social determinants of the effectiveness of the educational process

Introduction

Teaching effectiveness does not only depend on the student's individual predisposition or the teacher's teaching techniques. A number of external factors connected with the school and out-of-school environment influences the teaching

results achieved by teachers. The above obvious statement is supported by observations of teachers, who have to struggle with the social conditions of teaching results every day. The thesis about the influence of the factors on the effectiveness of the teaching process is not unfamiliar to sociologists, e.g., P. Bourdieu (1977) explained differentiated achievements of French students in reference to their access to resources of the cultural capital. Thanks to the empirical studies of the Institute of Education Research from 2013, teachers' and sociologists' observations can be supported by an in-depth statistical analysis.

Research Problem

Within the presented article, the following issues will be discussed:

- To what extent are the students of secondary schools differentiated in terms of access to resources of the socio-cultural capital?
- To what extent are the students' skills concerning the speech reception and creation as well as the analysis and interpretation of cultural texts differentiated by access to resources of the socio-cultural capital?
- To what extent does the socio-cultural capital explain the students' skills level from the statistical point of view?

Research Focus

P. Bourdieu pays attention to the cultural capital as one of the most important factors of differentiating students' skills acquired during the education process (Bourdieu, Passeron, 1977). The cultural capital describes individual and social resources of skills, customs, speaking styles, knowledge about the world, taste, and practised life styles. The cultural capital and its social, economic and symbolic dimensions are responsible for differentiating the position of individuals in the social structure. Borderlines between communities are specified by different configurations of particular types of the capital (Bourdieu, Passeron, 1977; Bourdieu, 1986; Bourdieu, 1996). P. Bourdieu differentiates three dimensions of the cultural capital, which he calls embodied, objectified and institutionalized capital. The embodied form refers to cultural competences of an individual: awareness of conventionalities, knowledge about different forms of high culture, and cultural taste. The material creations of culture such as paintings, sculptures, books, etc., constitute the objectified form of the cultural capital. Education level is the institutionalized form of the cultural capital (Bourdieu, 1983, 1986).

P. Bourdieu defines the social capital as a set of real or potential resources which are connected with possessing a lasting net of more or less institutionalized relationships based on the mutual awareness and acknowledgement. It means the

relationships created within social groups support their members providing them with the capital possessed by the group (Bourdieu, Wacquant, 2001). The more dense the connections nets of an individual are, the bigger the social capital is. Trust is the glue of the social capital. "Trust is an essential component of social capital. (...). Trust lubricates cooperation. The greater the level of trust within a community, the greater the likelihood of cooperation. And cooperation itself breeds trust" (Putnam, 1993, 270–271). There are 3 basic dimensions of the social capital – structural, behavioural and normative ones. The condition of the growth of the social capital is not only the existence of a net of relationships but the development of the net, too, which requires social trust. According to P. Bourdieu, the resource of the social capital can grow only as a result of the material and symbolic exchange of the relationships. It means the social capital, which is possessed by an individual, depends on the extent of his/ her relationships, activity in terms of creating new relationships and on the cultural, symbolic and economic capital of those who are connected with the individual (Bourdieu, 1983, 1986).

Research Methodology

Research General Background

P. Bourdieu believes that an affiliation of a specific cultural-symbolic space including a common identity and shared life styles, access to elements of culture, effective use of symbolic resources, and contacts and social relations are decisive factors of differentiating the position of an individual within varied social worlds penetrating each other. The forms of the cultural and social capital influence the teaching effectiveness significantly. The education level aspired to by students "is in fact the guaranteed product of the combined effects of cultural transmission by the family and cultural transmission by the school (the efficiency of which depends on the amount of cultural capital directly inherited from the family)" (Bourdieu, 1996, 23).

Research Sample

The presented results are based on the empirical study conducted in 2013 in 60 Polish schools located in five different provinces (Lubelskie, Malopolskie, Mazowieckie, Podkarpackie, and Swietokrzyskie). 5,250 students aged 13–16, representing all forms of secondary schools, took part in the study in total.

Instruments and Procedures

Data were collected using two paper questionnaires filled in by parents at home, by students at school and 3 competence tests written by students during their classes. The competence tests related to the main areas of the educational process with regard to the mother tongue: reception of speech (1st test), analysis and interpretation of cultural texts (2nd test) and creation of speech (3rd test). The students filled the 3 tests separately on 3 different days in the morning hours. The following table shows the basic features of the tests.

Table 1. Main features of tests

		Number of tasks	Number of open tasks	Maximum number of points to obtain
1st test	1st form	20	7	23
	2nd form	21	8	27
	3rd form	20	7	23
2nd test	1st form	17	14	27
	2nd form	18	15	35
	3rd form	17	14	30
3rd test	1st form	10	10	23
	2nd form	10	10	27
	3rd form	10	10	24

The questionnaire filled by the students included 46 questions referring to the school in general, lessons and teachers of the Polish language, reading books, periodicals and other written sources, as well as free time. The questionnaire dedicated to parents consisted of 55 questions about family, housing conditions and locality, educational plans, school attended by their children, reading books, financial situation, and professional status.

Implementation of the concept referring to cultural and social capital requires a significant modification in the case of a study dedicated to students of secondary schools. Firstly, the youth have barely built the dispositions and competences described by P. Bourdieu as indicators of the particular capital forms. Secondly, the peculiarity of the conducted studies has to be taken into consideration because verification of P. Bourdieu's theses under the conditions of Polish secondary schools was not their main aim. For this reason some assumed empirical indicators of the particular capital forms are sometimes less connected with the variables proposed by P. Bourdieu, although in accordance with the idea of the concept referring to cultural and social capital.

Seven measuring subscales of cultural capital were built:

- (1) the embodied capital: self-assessment of the communication competences (Alpha=0.612), frequency of using the offer of high culture (Alpha=0.744), and disposition towards school honesty (Alpha=0.873)
- (2) the institutionalized capital: motivation to acquire knowledge and skills (Alpha=0.822), preferences with regard to the Polish language as a school subject (Alpha=0.842), the parents' formal education (based on one item)
- (3) the objectified capital: the number of books in the parental household (based on one item)

Research Results

About 3/4 of the students assess themselves more or less positively in terms of the communication competences. A similar rate of the students assess themselves as motivated to acquire knowledge and skills to a larger or lesser degree. It does not correspond to the declarations of the students about the lessons of Polish. Only about 1/4 of them declare the Polish language as a favourite school subject. About a half of the students show a disposition towards school honesty to a larger or lesser extent. Fewer than 1/3 of the students are characterised by over-average frequency of using the offer of high culture. The results show, at the same time, that nearly a half of the parents have a relatively high degree of the formal education level. The declarations about the relatively high number of books are found out by more than 1/10 of the parental households of the students. The opposite situation is characteristic of nearly a half of the examined cases.

Table 2. Subscales of cultural capital

	1- the lowest level	2-	3-	4-	5- the highest level	Total
Embodied capital (%)						
Self-assessment of communication competences	1	3	20	43	33	100
Frequency of using the offer of high culture	10	25	34	24	6	100
Disposition towards scholar honesty	9	16	25	30	20	100
Institutionalized capital (%)						

	1- the lowest level	2-	3-	4-	5- the highest level	Total
Motivation to acquire knowledge and skills	0	3	19	54	24	100
Value of the mother tongue	13	29	33	19	5	100
Parents' education	7	23	23	34	13	100
Objectified capital (%)						
The number of books	23	25	40	13	1	100

The scale of the social capital was built in reference to the variables describing the students' relationships in the school environment. The results of the factor analysis and Cronbach's Alpha allow for a construction of the scale of the social capital based on the students' declarations with regard to their relationships with teachers in total, to their relationships with the teacher of Polish, to the atmosphere among the classmates and to the way in which the teacher of Polish assesses their students (Alpha= 0.737). The scale of the economic capital of the parental household was built on the basis of the parental assessment of the housing and material situation and on the information about the monthly net income per person in the household (Alpha=0.663).

Nearly 3/4 of the students are characterised by a high or very high degree of the social capital. The results are more differentiated in the case of the economic capital. A bad material situation is found in about 1/10 of the students' parental households while satisfying material conditions are visible in over 1/3 of the parental households.

Table 3. Social and economic capital of the parental households (%)

	1- the lowest level	2-	3-	4-	5- the highest level	Total
Social capital	1	5	21	57	16	100
Economic capital	0	10	56	30	5	100

Next, the above-mentioned variables were submitted to the factor analysis to reduce the data describing similar phenomena. Two groups of scales were found out which built the common factors. The first one are the following scales: the frequency of using the offer of high culture, school honesty, motivation to acquire knowledge and skills, value of the Polish language as a school subject and the

social capital. The other one are the scales measuring the parents' education level, the number of books in the parental household and the economic situation of the household. The reliability test showed that 2 scales can be built on the basis of the 2 groups of variables further named as the soft socio-cultural capital (Alpha=0.678) and the hard socio-cultural capital (Alpha=0.688).

In total, over 2/5 of the students are characterised by a high level of the soft socio-cultural capital, whereas nearly 1/3 of the students display high resources of the hard socio-cultural capital. On the contrary, 1/10 of the students are characterised by a low level of the soft socio-cultural capital and nearly 1/4 of the students are characterised by a low level of the hard socio-cultural capital.

Table 4. Soft and hard socio-cultural capital of students (%)

	1- the lowest level	2-	3-	4-	5- the highest level	Total
Soft socio-cultural capital	0	10	47	40	3	100
Hard socio-cultural capital	1	23	44	28	4	100

Further analysis requires standardisation of the scoring obtained by the students. The school system of assessment implemented in the case of exams conducted in the Polish secondary schools was assumed as the basis for the standardisation procedure according to the following pattern: 90% of the maximum scoring - very good result, 71–89% of the maximum scoring – good result, 51–70% - satisfactory result, 30–50% - poor result, below 30% - unsatisfactory result.

The analysis conducted in the cross tabs shows correlations without any doubts. The higher the resources of both types of the socio-cultural capital, the higher the test results are obtained by the students. Depending on the kind of the test and the school form, the correlation is stronger or weaker. For example, there was no student who, having a very low or low level of the soft socio-cultural capital, achieved a very good result of the test. Nearly 16% of the students who received the negative mark were characterised by a very low or low resources of this capital at the same time. On the other hand, over 3/4 of the students having a very good test result in the area of the analysis and interpretation of cultural texts showed at least high resources of the soft capital. The ratio of the students with the worst result of the test displaying at least a high level of the soft socio-cultural capital is nearly three times higher (76% vs 27%). The correlation is confirmed by the coefficient of tau-b, which equals to 0.247, $p \leq 0.5$.

Table 5. Grade of the soft socio-cultural capital and the result of test 2 for the 1st form (analysis and interpretation of cultural texts) (%)

Grade	Unsatisfactory result (0–8.0 points)	Poor result (8.1–13.5)	Satisfactory result (13.6–18.9)	Good result (19.0–24.2)	Very good result (24.3–27.0)
1+2	15.6	11.2	6.5	3.4	0.0
3	57.0	48.0	36.2	28.6	23.8
4	24.7	38.2	52.4	61.5	66.7
5	2.7	2.6	4.9	6.5	9.5
Total	100.0	100.0	100.0	100.0	100.0

Note. The first and second grades of the scale were aggregated because of a low number of cases

Still stronger correlations are observed in the case of the hard socio-cultural capital. There is not any student having low or very low resources of the hard socio-cultural capital who wrote the test of the analysis and interpretation of cultural texts at very good level. The share of the youth having a low or very low level of the hard capital in the student group with unsatisfactory result of the test equals nearly 40%. On the contrary, there is no student having very high resources of the hard capital who received the unsatisfactory mark. More than a half of the students who wrote the test very well show at least a high level of the hard capital. The share of the students representing the first forms and having a high level of the hard capital in the student group with the unsatisfactory mark amounts only to 13.8%. The correlation is confirmed by the coefficient of tau-b, which equals 0.231, $p \leq 0.5$.

Table 6. Grade of the hard socio-cultural capital and the result of test 2 for the 1st forms (analysis and interpretation of cultural texts) (%)

Grade	Unsatisfactory result (0–8.0 points)	Poor result (8.1–13.5)	Satisfactory result (13.6–18.9)	Good result (19.0–24.2)	Very good result (24.3–27.0)
1+2	39.6	30.6	22.2	12.7	0.0
3	46.6	46.6	44.5	40.9	46.1
4	13.8	18.1	29.4	40.3	46.2
5	0.0	4.7	3.9	6.1	7.7
Total	100.0	100.0	100.0	100.0	100.0

The presented correlations are repeated in the second and third forms if it is about the direction and strength of the connection. The rule is in force to a greater or lesser extent, the students achieve the higher results of the test, the higher resources of the socio-cultural capital they have.

To what extent can enlarging the resources of the socio-cultural capital influence the improvement of the students' achievements regarding the competence tests? The regression analysis was conducted to answer the question.

Table 7. Standardised regression coefficients of β and the determination coefficient of r^2 by particular forms, kinds of test and types of the socio-cultural capital

	The soft socio-cultural capital		The hard socio-cultural capital	
	β	r^2	β	r^2
Test 1, Form 1	.169	.029	.339	.115
Test 2, Form 1	.273	.075	.268	.072
Test 3, Form 1	.208	.043	.213	.045
Test 1, Form 2	.158	.025	.327	.107
Test 2, Form 2	.272	.074	.251	.063
Test 3, Form 2	.195	.038	.207	.043
Test 1, Form 3	.130	.017	.332	.110
Test 2, Form 3	.210	.044	.302	.091
Test 3, Form 3	.170	.029	.297	.088

The explanatory strength of the test results by variables describing the resources of the socio-cultural capital is very differentiated from the statistical point of view. On the one hand, the hard capital is explained by over 10% of the results variance characterising test 1 (speech reception) filled in by all the school forms. An important role of this capital is visible in the case of the third form, too. The determination coefficients show that about 9% of the results variance of test 2 (analysis and interpretation of cultural texts) and test 3 (speech creation) can be explained by the variance of the hard capital. On the other hand, connections are visible whose explanatory strength is weaker. The connection between the soft socio-cultural capital and the results of test 1 of the first forms is the record holder. Only 1.7% of the result variance of test 1 written by the third forms can be explained by the variance of the soft capital.

Discussion

What do the connections between the resources of the socio-cultural capital and the results of the competence tests mean in practice? To what extent could the enlarging of the students' socio-cultural capital improve their skills in the area of the speech reception and creation as well as analysis and interpretation of cultural texts?

It turns out that the enlarging of the hard socio-cultural capital of the students' parental household by one level (20% of the maximum value of the capital) would cause an average increase in the results of test 1 (speech reception) from 11% to nearly 13%, depending on the school form. A similar effect would be achieved in the case of the enlarging the hard capital by one level for test 2 (analysis and interpretation of cultural texts) and for test 3 (speech creation) for the third forms. An average increase in the results by more than 11% could be expected in the case of test 2 in the first and second forms after enlarging the resources of the soft socio-cultural capital by one level. The improvement of the test results by 8–9% could be expected in the case of test 2 for the first and second forms after enlarging the resources of the hard capital by one level and in the case of test 3 for all the forms and in the case of test 2 for the third forms after enlarging the resources of the soft capital by one level.

Table 8. Forecasted increase in the average scoring of the test in the case of enlarging the socio-cultural capital by one level by particular forms, kinds of tests and types of tests

	The soft socio-cultural capital	The hard socio-cultural capital
	Relative increase in the scoring (%)	Relative increase in the scoring (%)
Test 1, Form 1	6.6	11.2
Test 2, Form 1	11.3	9.4
Test 3, Form 1	8.0	7.0
Test 1, Form 2	7.3	12.9
Test 2, Form 2	11.5	9.0
Test 3, Form 2	7.8	7.0
Test 1, Form 3	5.4	11.1
Test 2, Form 3	8.4	9.8
Test 3, Form 3	7.5	10.7

It is worth paying attention to the fact that the hard socio-cultural capital has a slightly bigger explanatory strength to explain the variance of the test results than the soft capital, which is confirmed by the results of the multiple regression analysis.

Table 9. Standardised regression coefficients of β with 2 predictors and the determination coefficient of r^2 by forms, kinds of tests and types of the socio-cultural capital

	β for the soft socio-cultural capital	β for the hard socio-cultural capital	r^2
Test 1, Form 1	.177	.354	.159
Test 2, Form 1	.293	.267	.160
Test 3, Form 1	.200	.212	.087
Test 1, Form 2	.151	.327	.131
Test 2, Form 2	.270	.256	.139
Test 3, Form 2	.187	.212	.081
Test 1, Form 3	.105	.323	.117
Test 2, Form 3	.211	.294	.134
Test 3, Form 3	.179	.292	.120

The regression model, including three variables, shows the standardised coefficients of β describing connections between resources of the hard socio-cultural capital and the results of the tests are higher than the analogous coefficients for the soft capital, sometimes to a significant extent. There is one exception: test 2 (analysis and interpretation of cultural texts) for the first and second forms. The resources of the soft socio-cultural capital play a greater part in the explanation of the variance observed for the results of test 2. For example, taking into consideration test 1 (speech reception) for the first forms, enlarging the resources of the hard socio-cultural capital by one level (20% of the maximum value of the capital among the examined population) would cause an average increase in the students' results by 11.7%. At the same time, enlarging the resources of the soft socio-cultural capital by one level would cause an average increase in the test results only by 6.9%. In general, both types of the capital explain 16% of the variance observed for the results of test 1 (speech reception) and test 2 (analysis and interpretation of cultural texts) for the first forms. Both types of the capital play an important part in the explanation of variance found out for the results of tests 1 and 2 for the second forms and test 2 for the third forms (over 13%).

Further variables joined in the regression model could cause additional increase in the ratio of the explained variance of the test results. For example, inclusion of the variables describing the extent of the students' identification with the school and the students' preferences regarding the subject of the Polish language causes an increase in the ratio of the explained variance observed for the results of test 2 for the first forms by more than five percentage points – from 16.0% to 21.4%. An increase in the soft and hard socio-cultural capital as well as the degree of the students' identification with school and the extent of their preferences for the mother tongue as a school subject by one level would cause an average increase in the result of test 2 for the first forms by 23.2% (by 6.3 points). The biggest influence on the improvement of the results would have an increase in the identification with the school (+2.2 points) and an increase in the hard socio-cultural capital (+1.9 points). An increase in the soft socio-cultural capital would be of less importance (+1.7 points). An increase in the preference degree of the mother tongue as a school subject would not play any significant part (+0.5 points).

Conclusions

The obtained results clearly show the role of the socio-cultural capital for students' skills in the area of speech reception and creation as well as in the area of the analysis and interpretation of cultural texts. On the one hand, the enlargement of the soft and the hard socio-cultural capitals should lead to improvement of the skills. On the other hand, the resources of the capitals should be growing along with, e.g., increasing frequency of using the offer of high culture by students, stronger motivation to acquire knowledge and skills, a more positive attitude toward the mother tongue as a school subject or stronger support of readership in general. In this context, the creation of additional programs focused on the improvement of access to high culture, development of readership, work on a more positive image of the mother tongue as the school subject or motivation training in terms of the acquisition of new knowledge and skills is worth considering. Further analyses of this type should lead to an exact picture which of the individual, social, school and out-of-school factors influence the acquisition of skills by students in the area of speech reception, analysis and interpretation of cultural texts and speech creation.

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Triggering Children's Ways of Conceptualizing the World (Through the Analysis of the Meaning of the Concept of the Horizon)

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Abstract

The article presents the results of research carried out in the 2016/2017 school year in selected primary schools in an urban environment (Łódź). The aim of the study was to diagnose the ways of understanding the abstract concept of the horizon, in groups of 8- to 9-year-olds and 9- to 10-year-old children. The research was carried out in a venue that provided a natural learning environment (in two second grade classes and two third grade classes). The research adopted the strategy of didactic intervention. The researcher acted as an observer and a participant, and the research material came from participatory observation. The observation covered both the activities of pupils as well as the effects of these activities. The research material obtained in the course of conversations with children and their artistic activity was analyzed. The research results reconstructed the children's process of understanding the concept of the horizon and revealed possibilities of enriching educational discourse.

Keywords: *didactic intervention, participatory observation, understanding of the concept, ways of categorizing the concept*

Introduction – theoretical background for selecting the subject, terminology findings

Cognitivism introduced a real breakthrough in theories on the development of children's intellectual skills. Under the influence of cognitivism, there was a profound change in deliberations on cognitive processes and the nature of knowledge (Kövecses, 2006). Cognitivists have proved that difficulties in recognizing and understanding the meanings of abstract concepts are related to the order in which children acquire knowledge about different realms of reality, thereby laying the foundations for a completely different understanding of children's intellectual possibilities – above all, their innate, natural inclinations to think in an abstract way (Gopnik, Meltzoff, Kuhl, 1999). While admitting the important role of culture, with its symbolic systems, they found that teaching children to understand and interpret abstract concepts is possible, provided they can refer to their experiences from everyday life. In addition, through the naming of different phenomena, the child discovers and experiences the world in which they live – not only the physical one that surrounds, but most importantly, the intangible, spiritual one that is created in their mind (Driver, 1985). The status of language has also changed. Language is no longer perceived as an objective structure with a system of grammatical rules with built-in mechanisms to use, enabling the creation of understandable statements (Langacker, 1991). It is assumed that the structure of language is determined by patterns of neuronal activation that are part of the overall activity of the brain and body (Green et al., 1996). What is more, cognitive processes are largely individual. Meanings, however, consist of conceptual content, expressing specific aspects of the world around us indirectly; they are in thought processes or in the general ways of perceiving the world. They are filtered through personal, unique perception and recognition of what the individual in question is immersed in (Langacker, 1991).

The fundamental change introduced in the theory of cognitive processes by cognitivism resulted in a new concept of education, the essence of which is the creation of subjective ways of describing reality, discovering, interpreting and agreeing on meaning, developing inquisitive, scientific attitudes and cognitive independence (Cameron 2003, E. Bratland, D. Siemieniecka, B. Siemieniecki, 2016). In our research, the basic assumptions of cognitive research were applied. In the description of the empirical material, selected categories of cognitive abilities were included (categorizing certain structures, categorizing and describing a given situation on different levels of abstraction, schematisation) (R.W. Langacker, 1991).

Participants

During the research, both the sample and the research scope were deliberately selected. The study included children aged 8–9 (40 second grade pupils, comprising 22 girls and 18 boys) and 9–10 (42 third grade pupils, comprising 19 girls and 23 boys). The research was conducted in the 2016/2017 school year in selected primary schools, in the urban environment (Łódź). It was not limited to a narrow, selected group of pupils, but rather a representative group, representing different attitudes, views and experiences.

Research Methodology

In the attempt to reconstruct children's understanding, a qualitative research strategy was applied (Denzin, Lincoln, 2005). Our research strategy stems from the action-perception paradigm (Reason, Bradbury, 2008). This multi-directional, open model of analysis created the possibility to prepare an environment that triggers the intellectual capabilities of children as part of didactic intervention. It was essentially the "intentional creation of didactic conditions that cannot be found in school education, in order to observe the processes of learning in situations unforeseen and unproven by institutions" (Klus-Stańska, 2010: 132).

Procedure for Data Collection

As part of the research, the basic types of procedures for collecting qualitative data were applied: participatory observation, interview (direct, personal, focused), documents – children's creations, conceptual maps and audiovisual materials.

This study required the researcher to act as an interpretative participant-observer (Angrosino, 2007). The children's activities and the effects of these activities were observed. We juxtaposed the findings with the extensive statements of the pupils and characteristic examples of situations revealing the children's processes in conceptualizing selected abstract concepts.

1. The most important element of the research was to organize a varied educational environment. The stimulation of the children's thinking processes began with associations connected to the concept of *horizon*.
2. Following this, literary texts and illustrations from book covers were used. The children talked about the various dimensions of the universe described

in the book *När Pappa Visade Mej Världsalltet*, by Ulf Stark and Eric Eva Eriksson, and displayed on the covers of the books: *Safety, Reliability and Risk Analysis: Beyond the Horizon*; *Beyond horizons*; *Poza horyzont [Beyond the Horizon]*, *Polscy podróżnicy [Beyond the Horizon. Polish travelers]*

3. Further exploration of the children's experiences involved focus interviews. These focused interviews sparked interaction and increased group dynamics, having a positive impact on the number of ideas generated. It also inspired the children to remind each other of the different situations they had participated in. In such a friendly atmosphere, the children made spontaneous statements, initiated by selected questions: *What is the horizon? Is the horizon relevant to people? Can the horizon relate to something or someone else? What are horizons? What are horizons for children? What are horizons for adults? What are the differences between horizons? What is the horizon similar to? What are horizons for? Where do horizons come from? Does anyone designate horizons? Are horizons changing? Is the horizon similar to a border? How similar is the horizon to a border? How different is it? What does the horizon connect and what does it separate? What does the horizon close and what does it open? Is it possible to broaden horizons? What is beyond the horizon? What else can there be? What is more important: what is in front of or behind the horizon?* The material obtained from the children's conversations about their graphic representations of both their own output and the covers of the books with the title of horizon were equally important. The children shared their thoughts on the appropriateness of the selected illustrations for the book titles.

The literary texts as well as conversations with the children inspired by visual materials (illustrations and book covers), addressed existential issues, while the method of intersemiotic translation (artistic concretisations), the association mindmap and focus interview stimulated motivation.

Object of research

Understanding of the abstract concept of horizon by 8- to 10-year-old children was the subject of the research. The aim of the research was recognizing the ways in which children construct meanings of the concept of horizon and their cognitive abilities in terms of categorizing that came to light when defining the concept of horizon. The set objectives became the basis for the general research problem: How do children understand the meaning of the horizon concept? and four

specific problems: (a) Which attributes of the concept of horizon are considered to be important? (b) How do children categorize the concept? (c) To what extent do they have stereotypical associations? (d) What values do they attribute to the concept of horizon?

Analysis of data

When analyzing the data from, the method of explicating semantic features was used, based on the definitions formulated by the children. The dictionary definition (from the Dictionary of the Polish Language) served to verify the meanings suggested by the children. Comparison between the dictionary definitions and the children's descriptions of the subject reveals differences between semantic features significant from the point of view of adult language users and the features considered important for the children. The dictionary definition does not fully describe the meaning of the term, with only limited definitional features. The definitions the children gave contain a more complete picture of the subject, because they convey and reinforce individual ideas associated with the subject.

Results

Analysis of the semantic paraphrases used when describing the meaning of the horizon is indicative of the children's ability to distinguish the first dictionary meaning: (1) 'the line at which the earth's surface and the sky appear to meet: the horizon (the sun was hidden behind the horizon, the sun appeared above the horizon), the apparent approach'.

In the children's statements, attempts to interpret the third dictionary meaning rarely occurred: (3) 'range (knowledge, interests, ideas) broad, narrow, horizons of interest'; and the fourth dictionary meaning: (4) 'opportunities, perspectives (horizons of new life, new, amazing, horizons arise)'. In the children's statements the second dictionary meaning was not mentioned: (2) 'environment, surroundings (on the artistic horizon ...)'; and the fifth dictionary meaning: (5) 'curtain, wall forming the back of the stage, evoking the illusion of infinity (theatrical meaning)'. Examples of the children's statements are presented in Table 1 (the most frequent ones).

Table 1. Examples of the children's responses to the dictionary definition: (1) the line at which the earth's surface and the sky appear to meet

Age	Male or Female	Ways of categorising	Spatiality	Observer	Action	Source
8.0	female	<i>something you can see.</i>	<i>so far away that it curves</i>	<i>Child</i>	<i>runs away</i>	Just know
10.0	male	<i>line</i>	<i>away</i>	<i>Child</i>	<i>moves/disappears</i>	Don't know, teacher
9.0	female	<i>border/island</i>	<i>at the top/at the bottom</i>	<i>captain/pirate</i>	<i>approaches</i>	My house
9.0	male	<i>sunset</i>	<i>behind the water/behind the island</i>	<i>Traveller</i>	<i>plays tag/disappears</i>	Mum

(1) the line at which the earth's surface and the sky appear to meet

When defining the first dictionary meaning – the one most often represented in the statements – the pupils synonymously capture the concepts of horizon and skyline, which may result from the overlap of the horizon line with the skyline (in fact, the skyline includes a fragment of the Earth's surface, the horizon refers to the space above the surface of the Earth). Features of the concept (differently defined by the dictionary and the children) show the diversity of the descriptions. The facets typical of a scientific approach are as follows: type, origin, features, functions, and of the colloquial approach: looking for relationships with humans, indicating the time-space perspective and the behaviours of the “humanized horizon”.

The child's ways of categorising

Instead of categorizing words such as ‘line, scope, range, possibilities’, the majority of the children described the concept by using the following phrases: ‘something like ...’; ‘It is when someone ...’. The children's phrases indicate that they feel the need to categorize when defining concepts. The phrase “this is something that ...” is a categorization by indication. With the pronoun *this* and the indefinite pronoun *something*, the children seem to replace the category name that they do not know and cannot explain. The associations mindmap revealed the children's categorization on the basis of family resemblance. Around this core meaning (the horizon as an apparent contact of the sky with water), other meanings/expansions which the children included on the basis of similarity to the prototype (shore, line) were assigned. However, this is not a similarity, meaning that all elements have all definitional features – just like in the classical categorization.

Analysis of the statements shows that the concept of horizon used by the children was most frequently associated with holiday experiences and film images about holidays. In this area, the meanings were mostly connected with: water, shore, sun, island and ship. In addition, episodic associations were connected with: beach, sand, palm trees, sky, gulls, sunsets, ships, pirates, treasure, and chest.

Selection and arrangement of concept features from the children's perspective

Surprisingly, it turned out that the children at a younger school age were able to give differentiated semantic characteristics of the abstract concept of horizon: time and place of occurrence, relationship with man and activities (shifting and expanding).

Time and place (spatiality)

Describing the word in its first dictionary meaning, the children visualized the surface that separates what can be seen from what is not visible. Most often, there were descriptions of the apparent line separating the sky from the earth (land and water) into two parts, which determines the boundary between the space visible for observation and that obscured by the Earth. Commonly, the children also visualized the entire horizon, most clearly observed at the sea-side. In this case, it took the shape of a circle, (*the horizon is so far away that you can barely see, but you can see and see that it even looks as if it was becoming round*). There was also such output where the horizon was partially obscured by hills, trees, buildings (in mountainous terrain, the horizon is the most remote visible element of the landscape). This diversity of horizons is indicated by the statement: The horizon can have different shapes depending on the place we are in. Mountains meet the sky. What you see at this point is the horizon. The horizon can be found at any time of the year or day, however, in the conceptual model of the horizon from the children's perspective, two characteristics of temporal identification of the object are particularly evident. Predominantly, the children associate the horizon with summer (not a single piece presents the autumn or winter horizon) and the sunset rather than the sunrise (however, this contrast is not as clear as the previous one, because of pieces with the sun appearing in the sky). In the children's output, therefore, the height of the sun above the horizon changes. Taking into account elements of the topography of the place of observation in reality, the children describe the topographical horizon. In the children's output, objects usually appear on the horizon, they are completely visible, although the children visualize them as smaller (the question arises whether the children are aware of the sphericity of the Earth). Selected descriptions of objects that appear on the horizon are presented below:

Objects on the horizon	The Sun: Horizon, it's something that you can see as if the sun were coming in. The horizon is where the sun goes into the sea, goes out and on the other side the moon grows
	Water: There is the sea on the horizon, there is a lot of water
	Land / shore / island: When I see different fairy tales, it's how the captain tells from the horizon that the land is visible, because the horizon is above the ground; The horizon is in front of the shore, or maybe the horizon is the shore
	Ship: On the horizon you can see ships that are sailing to the horizon, and pirates are like coming in. The ship is sailing and the island is on the horizon

Scientific descriptions also indicate the existence of two horizons: astronomical (determined by a parallel to the horizon of the observer) and true (determined by the sphericity of the Earth).

Relationship with a person (as an observer)

The children also see the coexistence of the horizon and the observer. In their understanding of the horizon, there is always someone (their eyeline, or the distance equal to the height of the observer's eyes above the surface of the Earth). Usually, therefore, they visualize the horizon of the observer whom they always place in the centre (on the skyline, never on the horizon line or the horizon). Each time, the observer can look around the horizon: the land, water, an island. It is also important that the horizon viewed by a person is different to the features of the horizon: it is unattainable, elusive, free and independent.

Activities

The basic activities distinguished by the children are shifting of the horizon and widening of the horizon

Shifting of the horizon. The children notice that changing the observation site (movement) causes the horizon to move with the observer. We are not able to look beyond the horizon, as we cannot look beyond the horizon on the surface of the earth, we can approach the horizon, but the horizon is constantly moving away. This is confirmed by the verbs and adverbs in the children's statements: *when you sail, you see the island first, then sail on and, again, you see some plants, or some country or continent, that's another horizon.*

Widening of the skyline. The children also notice that the higher the observer is raised above the surface or water, the more distant her/his horizon seems. Because they do not live outside of space and time, they place the cognized reality in space and time and evaluate with the help of elemental semantic oppositions, defining the microcosm of ME (everything **on top** – evaluating positively, and what is **at the bottom** – negatively). Widening of the skyline is associated with climbing a high mountain where the destination is located. Climbing, overcoming difficulties, obstacles, reaching the top of a mountain triggers positive associations (you can see more from the top).

(2) range (of knowledge, interests, ideas);

(3) opportunities, perspectives

Statements on the meaning of the third dictionary definition (*look beyond the horizon, cross borders*) and the fourth dictionary definition (travel, reading books open new horizons) were less frequent.

Table 2. Examples of the children’s responses to the dictionary definitions: (3) range (of knowledge, interests, ideas); (4) opportunities, perspectives

Age	Male or Female	Ways of categorising	Observer	Action	Source
9.0	female	<i>when somebody</i>	<i>child</i>	<i>looks for</i>	Just know
10.0	female	<i>barrier or something</i>	<i>human</i>	<i>conquers</i>	Don’t know, teacher
10.0	male	<i>border</i>	<i>traveller</i>	<i>widens</i>	My house
10.0	male	<i>exists when</i>	<i>he</i>	<i>fights</i>	Mum

Thinking about the third and fourth aspect of meaning triggered the following statements:

(3) range	<p>People read books and broaden their horizon of knowledge. I am referring to the horizon of knowledge, because they read and expand their horizon of knowledge through these books. There is a smudged horizon there</p>
	<p>I do not know how to say it, the horizon is a barrier or something. It can be such a barrier of fear. He is trying to overcome the fear of heights, trying to fight to the end. He has such courage in his heart. It is the horizon of courage</p>
(4) opportunities/ perspectives	<p>He takes care of animals, and animals are his passion and his family does not allow him to do it, and he does it, he opposes the will of his parents, he exceeds this will. He crosses the border because it’s good for him.</p>
	<p>How can these Polish travelers be afraid, but they are looking for treasures. Someone does not believe them, and they say that they will succeed, they will succeed, they will succeed and then they return with the treasure because they had such imagination that something is there and that they will succeed. And these other people will be very surprised ... Madam, to broaden the horizons you must have courage and imagination and even desire.</p>

Based on the collected statements, it is clearly visible that for the children the horizon is not an unambiguous term and not determined in a precise way. The

third graders, defining the third and fourth dictionary meaning, pay attention to the aspect which mentions opening unusual horizons (*knowledge, courage, overcoming barriers, will*). They pay attention to the volitional, mental and emotional activity of a person who wants to broaden their horizons: to broaden horizons, one must have *courage and imagination and even desire*. What distinguishes this dictionary meaning is the information about the pursuit of something and the ability to consciously, deliberately, free of external coercion, perform certain activities.

Evaluation

The questions that the children asked the horizon caused its “humanization”. This led to placing the horizon in the circle of values and metaphysical anti-values: *to exist, create, discover, arise, live vs. disappear, end*, vital values: *do, look, travel* and sensory values: *like, be needed*. From the questions to the humanized horizon, we can draw the conclusion that the pupils in the research perceive the horizon as a distant, large/long object, escaping, disappearing, never-ending. The children's statements testify that we see things not as they are in objective reality, but rather as they appear in our experience:

Summary

In the research, we assumed that while maintaining certain conditions in organizing the educational environment, pupils would be willing to take the trouble to interpret difficult, complex existential problems. It was also assumed that a non-authoritarian style of working together was necessary, which is why the children's right was recognized to independent, sincere statements, authentic, though often not fully-formed, linguistic judgments.

Due to the conviction of the possibility of including existential problems in the traditional space of educational discourse, there is food for thought on the educational conditions that must be met in order to harmonize educational discourse with pupils' discourse anchored in the disordered and uncontrolled individual experiences.

The designated areas of analysis of the material gathered from the children's discourse allowed us to become acquainted with the discrepancy between what is school-related and what is private. The analysis made it possible to formulate postulates and “maps” of directions, showing ways of taking into account children's

viewpoints of the reality they grow in. The analysis also allowed for determining the possibilities of enriching educational discourse and triggering the linguistic images anchored in culture and personal experience created in young minds. Observation and reflection deprived of reductionist attitudes create invaluable opportunities to capture surprising, non-stereotypical reactions and include them as valuable (though not necessarily representative) in the whole picture of the phenomena examined.

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