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DEVELOPING READER'S LITERACY IN PRIMARY EDUCATION

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Abstract: Reading and reader's literacy are essential prerequisites for developing key competences, especially competencies for learning, and are still used as a tool to achieve other goals that are the gateway to success in work and personal life. The topic of the article is reader's literacy and its development at pupils of primary education through the use of methods developing reader's literacy in the teaching process.

Keywords: Pupils. Reader's literacy. Key competencies. Methods. Teaching process.

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Научная статья

РАЗВИТИЕ НАВЫКОВ ЧИТАТЕЛЬСКОЙ ГРАМОТНОСТИ В СИСТЕМЕ НАЧАЛЬНОГО ОБРАЗОВАНИЯ

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Аннотация: Навыки чтения и грамотности являются необходимыми предпосылками для развития ключевых компетенций, особенно компетенций для обучения, и по-прежнему используются как инструмент для достижения других целей, которые являются залогом успеха в работе и личной жизни. Тема статьи - читательская грамотность и ее развитие у учащихся начальной школы посредством использования методов, формирующих читательскую грамотность в процессе обучения.

Ключевые слова: учащиеся. грамотность читателя. ключевые компетенции. методы. процесс обучения

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Introduction

More recently, the need to develop reader's literacy as part of the education process in our schools has been increasingly pronounced. This requirement arises from the current need of today's society, in which the ability to understand texts in different situations and contexts is the foundation of a successful life for every person and the prosperity of society as a whole. Calling for the targeted development of reading literacy is reinforced in us by the unfavorable results that our pupils have achieved in recent years in international PISA and PIRLS research. Despite the importance of reading literacy in our lives, in PISA testing, in 2015, the performance of Slovak pupils in reader literacy was already five times below the average of the participating OECD countries. Compared to 2012, the average performance of our pupils decreased by another 10 points, and experts point out that we are a country whose results are falling sharper than in other OECD countries. This alarming finding is a reason to look for effective ways to develop reading literacy. The Ministry of Education, Science, Research and Sport is also responding to our worsening results by the National Strategy for the Improvement of the Level and Continuous Development of Reading Literacy. One of its main goals is to improve pupils' outcomes in order to achieve literacy levels above the OECD countries average in the PISA 2018 test. The Year of Reading Literacy, which is borne out by the slogan "Thinking is Movement should also contributes to Reader's literacy at primary school is developed by an innovative approach in the teaching process. Therefore, the main theme of a proven pedagogical experience (OPS) is to develop reading skills at pupils of the third year of elementary school [1. Borovská, 2015].

In the case of pupils in primary education in the 3rd year it was found that pupils do not read with understanding, they have a negative attitude to reading itself, which is also reflected in the pupil-book relation. Some pupils have not read a single book on a voluntary basis and their free time is spent by computer games. On the basis of the findings, we find it important to look for new ways of working, new motivation, to give children an opportunity for success in order they are not indifferent to the desire for knowledge and find meaning and pleasure in reading. Reading literacy, enabling acquisition, learning, memorizing and applying of knowledge and information, is irreplaceable in the education process. Through this ability, a pupil achieves new knowledge and their application in solving various tasks, situations and problems. Therefore, learners' reading skills and habits should be built in early education phases.

Reading literacy

Reading helps to personal development and moral improvement of man. In the past, reading was understood only as a technical skill, where it was based on the belief that every reader would take the same meaning from the text. Later on, this view spread to the understanding of the text and the corresponding thought processes. It was caused by culture, environmental conditions, and so on.

Reading is related to the concept of literacy, which includes the interaction between the society requirements and individual competencies. Although literacy has been perceived as an ability to read and write for several centuries, the use of the term literacy has now been extended by a number of other skills, e.g. mathematical literacy, computer literacy, cultural literacy.

At present, the concept of reading literacy is constantly evolving and changing. At the same time, it cannot be understood as a skill that the pupils fully achieve during the

first years of school attendance, but as a constantly evolving set of knowledge, skills and strategies which are developed when pupils interact with their mates and society in various situations throughout their life [2. Heldová et al., 2009]. According to the Prucha, Walterová and Mares [3. 2001, p. 34] reading literacy is defined as *"a complex of knowledge and skills of an individual that allow him or her to deal with written texts commonly found in life practice."* This is a skill not only of reading, i.e. to be able to read and understand texts, but also to search, process and compare the information contained in the text, to reproduce text content and others. Reader's literacy is understanding and use of written texts and their reflection in achieving personal goals, developing own knowledge and ability to participate in society [2. Heldová et al., 2009]. In the international research, reading literacy is characterized as *"the ability to understand a written text, to think about it and use it to achieve its own goals, to develop its own knowledge and potential and to participate actively in society"* [4. Straková et al., 2002, p.10].

The development of reader's literacy takes place at certain stages. Each level of reading literacy is conditioned by the previous stage of development. From the ontogenetic point of view, it is possible to characterize three stages of reader's literacy development.

1. The stage of spontaneous literacy is characterized by first contacts with literacy and its manifestations in adult behavior. In active form it manifests in adult communication with the child, reading, manipulating with books and magazines. The child also notices what adults do with written text, what they read (books, magazines, leaflets, texts on the Internet), what they write (notices, messages, etc.). In this period, children imitate adult readers and try to record their own "written speeches" and then "read" them. The stage is formally completed by starting compulsory school attendance.

2. The teacher's intentional influence on pupil literacy as well as on his / her ideas is characteristic for the stage of development of reader's literacy. It is a long time period in which the increase in skills is most pronounced. This period is divided into two further sections:

- a) The first section is the training period for reading and writing techniques. In the literature, we find the stage of the initial reading literacy [5. Wildová, 2004], the stage of elementary literacy [6. Doležalová, 2005] or the stage of basic literacy [7. Gavora, 2003]. This period is characterized as a period of writing and reading practice. The practice of initial reading and exercising should be practiced on texts of a certain literary level. At some children the initial reading literacy stage may take up to the third grade of primary school.

- b) After mastering the technical side of reading, the stage of basic literacy begins [7. Gavora, 200] At this stage, pupils should learn methods, techniques and strategy of working with texts. It is the pupil's ability to understand the meaning of the text been read, to reproduce the information properly. The performance is judged by reading speed, error occurrence, fluency and text comprehension.

3. The final stage in the development of reading literacy is the period of functional literacy. According to Gavora [8. Gavora, 1992], it is the ability to use reading and writing beyond elementary literacy to achieve different goals. This stage is characterized by a competence to use acquired knowledge and skills to solve problems in life situations. Reader's literacy is labeled as functional literacy in literacy models, which is characterized by the ability to process textual information. The theoretical

issues of functional literacy have been applied to the PIRLS international research methodology, which identifies the level of 4 comprehension processes (searching for information, drawing conclusions for the complete understanding of the information and literary text [9. Kašiarová, 2011]).

Reader's literacy is the most important area functional literacy. As one of the conditions of increasing education, science and culture, economic and social development of society, and as a means of cultivating a person, it deserves extraordinary attention. It has an irreplaceable role in the educational process, as it allows the acquisition of information and knowledge from all the education fields. It is therefore an irreplaceable basis for lifelong learning.

The pragmatic goal of functional literacy is the processing of text information and its effective use in the most diverse life situations. The range of texts that man receives and produces is very broad, so overall functional literacy is a sum of three domains:

- Contextual literacy – to have the knowledge and skills necessary to understand and use information in contextual texts (prose, poetry, commentary, etc.)
- Document literacy – to have the knowledge and skills needed to search for and use information in short, incoherent texts (forms, notices, instructions).
- Numerical literacy – to have the knowledge and skills needed to operate the numbers that are part of the texts (accounts, invoices, orders of goods from the catalog).

PIRLS text comprehension levels

The notion of reader's literacy has penetrated into awareness in the last decade mainly through the framework of international studies focused on this area (PISA, PIRLS). Today, we can meet this term not only in the pedagogical literature but it gradually comes to the school environment and beyond it as well [2. Heldová et al., 2013].

In PIRLS studies, reading literacy is defined as *"the ability to understand and use such written forms that society requires and are of value to an individual. Young readers can construct meaning from various texts. They read for education, participation in readers' communities, at school, and everyday life for pleasure"* [10. Obrancová et al., 2004, p. 8]. Reader's literacy is a complex phenomenon of cognitive components of value attitudes, strategies, routines and knowledge. PIRLS research divides reader's literacy into three sub-areas: aspects of comprehension, reader's intentions, reader's behavior and attitudes.

1. The processes of understanding refer to the procedures of individual readers that construct the meaning of the text. When working with a text, the reader can focus on searching for information, drawing conclusions from reading text, interpreting and integrating thoughts from text content, reviewing and evaluating the content or formal characteristics of the text. The process of understanding is influenced by individual knowledge and experience that enables the reader to understand the language, texts and the world.

2. Reader's intentions are the reasons that lead the reader to read. For an adult population, we have three reasons for reading: reading from interest and pleasure, reading to engage in society and reading for learning. Children of younger school age are

mainly interested in learning and interest. These two groups were identified in the PIRLS studies as:

- reading for literary experience - the reader becomes part of the story, the environment, the characters, the text is an opportunity to experience the fantastic situations and feelings,
- reading for information and its use - the texts are based on real life and, on reading them, the reader receives the information on the functioning of the world. These include, in particular, informative texts whose order is chronological or non-chronological. Within one text, both forms may appear.

3. Reader's behavior and attitudes reflect the attitude of the individual to reading, written culture, which reflects on the approach to lifelong learning.

Although in the PIRLS studies these aspects have been examined separately, in real reading situations, they are always applied in mutual relationships, depending on the context.

In evaluation of reading literacy in PIRLS studies, reading comprehension is monitored at four levels of understanding:

1. **Search for certain information** - The reader identifies information in the text that is explicitly worded and is important for understanding the text.
2. **Formulating Conclusions** - The reader derives from the text information or context which is not directly formulated in the text but directly derives from the text.
3. **Interpreting and integrating ideas and information** – the reader constructs meaning beyond the text when interpreting looks for the ideas of the text connection, while using prior knowledge, skills, attitudes and experiences; the interpretation takes place in addition to the integration of ideas and information from the text to one another and to the integration and synthesis of the previous knowledge and knowledge of the reader.
4. **Evaluation of content, language and textual elements** - the reader critically analyzes and evaluates the text content as well as its form, understanding includes a reflection structure of the text, language and means of expression, literary forms, including the author's personal point of view and style, in addition to reader's knowledge about the world uses his or her language skills, language conventions, builds on his or her previous experience with reading texts, evaluates the text in terms of ideas, formulated information and the reader is based on his or her understanding of the world.

The first two comprehension processes focus on the text and work with it, the other two processes focus on the reader, on his ability to understand, interpret, but also on his reading experience and information.

Since 2001, international research on reading literacy has been conducted, involving many countries on a voluntary basis. Research, in addition to the results found, theoretically defines the content of literacy, which also entails requirements for the reader living in that society. PIRLS testing determines the level of reading skills on the scale 1- 4, which shows what pupils achieve at individual levels:

Table 1 Levels of reading skills according to PIRLS

Levels	Literary text	Informative text
First	<ul style="list-style-type: none"> - recognize the explicit details in the text - to search for a specific part of the story and to create from the text the judgment that follows directly from the text 	<ul style="list-style-type: none"> - to seek and reproduce explicit information that is readily available (in a precisely defined section) - partly to make the judgment that follows directly from the text
Second	<ul style="list-style-type: none"> - identify major events, story engagement and important story details - to learn about the characteristics, feelings and motivations of the main characters that result from the text directly - fair part of the information between the different parts of the story 	<ul style="list-style-type: none"> - check and re-produce one or two information from the text - to make judgments to provide information from the actual part of the text - use subtitles, text in frames, and an illustration to search for a piece of text
Third	<ul style="list-style-type: none"> - to search for essential parts of the text and to recognize important details throughout the text - explain the relationship between intentions, deeds, events and feelings of characters, and prove it with evidence from the text - unknown some of the used text elements (e.g. visual expressions, main idea) - to interpret and relate story events and facets in the whole of the text in their entirety 	<ul style="list-style-type: none"> - receive and use various organizational elements of the text to find and identify relevant information - to make judgments based on abstract or implicitly included information - to integrate information across the text in order to recognize and explain the main ideas - to compare and evaluate parts of the text and to justify your choice - partial understanding of text elements such as metaphor and author's attitude
Fourth	<ul style="list-style-type: none"> - combine thoughts across the text to provide interpretations of character properties of characters, intentions and feelings, and document it from the text - partially evaluate the composition of the story 	<ul style="list-style-type: none"> - to interpret and interpret complex information from different parts of the text and to illustrate it with an example from the text - understand the function of organizational elements - integrate information across the text to determine the sequence of activities and fully justify your choice

Methods of developing reading literacy

Among the best methods of developing pupils' reading literacy, which are used in lessons within action pedagogical research are: Reading with Questions in Pairs, Reading with Prediction, Keyword Search, I Know – I want to know, I know – I got known, Index Map, INSERT Method for effective reading and thinking), Free Writing Method, puzzled sentences and others.

Methods supporting reading literacy develop at pupils the following competencies:

- know and distinguish texts (artistic and material), read various texts (both content and form), to generalize certain moments of material and certain artistic texts. Learn to express aesthetic experience of emotional experience

- Read with comprehension. Understand the substance of the text, identify key words. Have interest in the text to find a problem, define and solve the problem - apply acquired theoretical knowledge and practical reading skills with an understanding of real life situations.

- Ability to process text - make a concept, outline or annotation. Analyze text (recognize the main ideas), logical connectors between ideas (time, relationship, causal). Explain the main idea (explicitly or implicitly expressed) in the text.

- Ability to work with text - analyze and evaluate. To assess the content and formal point of view, to analyze it, to justify its position. Ability to think independently and be open to new ideas, leading learners to evaluate the information sources on which the text was created.

- Compare specific text with other texts.

- Evaluate text in terms of language culture.

- Understand that effective reading is the basis of self-education - lifelong learning.

Aim of the Research

The aim of the paper is to highlight how the methods developing reading literacy enhance students' ability to understand the text. The main objective of the survey is:

- to analyze the level of reading literacy of pupils of the 3rd year according to the four levels of PIRLS text understanding at the beginning and at the end of the research

We also defined several partial goals to achieve the main goal:

- to find out the level of search for explicit information in the text

- to determine the stage of drawing straight conclusions from the text

- to determine the degree of interpretation and integration of ideas

- to discover the extent of content and language evaluation

Formulation of the hypothesis

H1: We expect that by applying methods developing reading literacy, pupils will achieve a better score in the literacy test at the end of the research than at the beginning

Characteristics of the research sample – Pupils of the third year

The research sample was made up of pupils in the third year class of the elementary school in a village Šenkvice with 21 pupils, 10 boys and 11 girls. The two of them have a diagnosed developmental brain disorder - the borderline, one girl started to go to school early. In the class there are children with very good but also average results and pupils with educational problems as well.

Among the most popular pupils' subjects belong physical education, science and mathematics. Pupils attend sports activities, for example, gymnastics, ground hockey. Children in this class have difficulties in writing dictations, doing grammar exercises, reading with comprehension, and their relationship to reading itself is rather negative.

In order to better identify pupils and analyze their learning styles, which are an important starting point and a condition for successful learning, and also the condition of a teacher's success, we chose the Gardner's 8 Intelligences Questionnaire as a diagnostic method. The questionnaire was completed by all pupils in September 2017. The overall evaluation shows that the most represented motion intelligence is 84% and the least developed linguistic intelligence is 40%.

Graph 1 Percentage representation of children's intelligence by Gardner questionnaire

Source: Author's processing

The method of research

The pedagogical action research was used as the basic research tool, which included the use of the test method - the entrance and exit test of reading literacy (the same test).

1 Reader's literacy test

The aim of the first research was to describe and analyze the level of understanding of a text at pupils of the third year class using the didactic literacy test (Annex A).

A) to describe and analyze the level of understanding of a text at 3rd grade pupils. The starting point for the compilation of the tasks was the publication of N. Kašiarová and B. Sihelský - Creation of tests for the development of reader's literacy of pupils in primary education [9. 2012, p.11-12]. The test contains fourteen tasks, enrolled into four levels that respect specific PIRLS reading goals.

The test examines four levels of understanding:

- Level A - search for explicit information,
- level B - drawing conclusions that are not directly listed in the text,
- level C - interpreting and integrating information using previous knowledge and experience,
- Level D - content, language and text elements evaluation

The test contains 14 items, each of which follows one of four levels of understanding:

- Finding explicit information - 20.8% of items - answers to questions require information that is listed directly in the text, most often as a separate sentence or phrase.
- Delivering conclusions that are not listed directly in the text - 29.2% of the tasks - answers to these questions require the student to find the information and the resulting conclusions.
- Interpretation and integration of information - 29.2% of questions - answers to these types of questions require the reader to draw conclusions based on information that is not implicitly expressed in the text. The student must apply his / her own knowledge and experience when reading the text.
- Evaluation of the content of the language and text elements - 20.8% of the items - the answers in this area are focused on the pupil's ability to evaluate the literary genres, the structure of the language expression and language patterns.

The test tasks respected the following structure:

- introductory information,
- task core - what a pupil should do, active verbs are highlighted in different fonts,
- form of a response - where and how a pupil should respond, this section is highlighted by a different font type (italics).

Text: Information text for the third grade pupils included in the educational section Nature and Society focused on information about Slovakia. The text is related to the subject about Homeland. Slovakia is full of mysteries, part of the cave. The theme of the cave is close to the pupils, as they went for a field trip to the cave Driny and Dobšinská ice cave.

Table 2 shows how the reader's processes were represented in questions, how they were scored and the percentage of questions in the test.

Table 2 Processes of understanding and their distribution in the test

Processes of understanding questions	Understanding questions	in%	Points for area	in%
Search explicit information	1,2,3	21.5%	5points	20.8%
Conclusion of Conclusions	4,5,6,7,8	35.7%	6 points	29.2%
Interpretation and integration of information	9,10,11,12	28.5%	7 points	29.2%
Evaluation of content of language and text elements	13,14	14.3%	5 points	20.8%
Total	14 questions	100%	23 points	100%

Source: Author's processing

Questions 1, 3, 5, 6, 7, 8, 9, 11 had a point score of 1 point, tasks 4, 12, 14 were awarded a score of 2 points and questions 10 and 13 had a score of 3 points. Pupils could earn 1 point for each correct answer. They received 0 points for a wrong answer or for an unsatisfactory answer.

The course of research

The two-stage research was aimed at verifying the impact of the methods developing reading literacy on the development of reading and comprehension. The first stage was held in November 2018. The level of understanding of the text was searched by an entrance reader's literacy test, which was completed by 21 pupils from the 3rd grade class. Each test included an informative text about Driny Cave, a map of a tour route and tasks. After the test was distributed, the children read the information text and task instructions. Then the pupils had the opportunity to ask for any ambiguities. Children were pointed at the words in bold and explained how to respond to the tasks. The test was to be completed in 60 minutes.

The second phase of the research was carried out in May 2019. In this section, through a questionnaire and a final reading literacy test, we verified the success of methods developing reading literacy. When introducing the test and the questionnaire to the pupils, we proceeded like in the first stage of the survey.

The planned procedure of action research was as follows:

- input testing – reader's literacy test
- experimental action in the form of methods developing reader's literacy
- output testing – reader's literacy test
- comparison of input and output test results

Action research was completed with an output test. Testing took place in the natural environment of the class. The goal of the final test was to find out whether the systematic introduction of reading literacy methods influences the development of reading with comprehension and the relation of pupils to books and readings. By testing it was possible to find and compare the level of understanding of the text in the input test and the level of understanding achieved in the output test.

Evaluation of results and their interpretation

In order to verify the established hypotheses quantitative and qualitative analysis of the results has been developed. The data were processed using mathematical - statistical methods. The data were obtained on the basis of input and output testing of pupils within the pedagogical research carried out. The tables are presented not only to interpret the results obtained from input and output testing but also to compare these results. The qualitative evaluation method was used primarily to evaluate relationships and phenomena. In order to improve the clarity of the studied issue, the input test and the input questionnaire throughout the work is marked as the first research and the output test as well as the output questionnaire, is named as second research.

Didactic literacy test (Annex A) was evaluated by means of a table. The tables show the overall score, score and percentage score.

Level A - Search for explicit information

Labeling of explicit information in the text requires not only understanding of the text but also understanding how the information relates to the information sought. The correct answer to this task group is a specific word, sentence, phrase or idea. The student locates the information that is clearly stated in the text.

This part of the text consisted of three tasks in which students sought information on:

- the length of the cave route,
- three natural caves,
- the search of ponds on the map of the cave

For each correct answer to the individual task, a score was awarded, as follows:

1st task - completing numerical data = 1 point,

2nd Task - assigning three names = 3 points, for each correct information was given a point,

3rd task – giving the correct word = 1 point.

The number of points earned and percentage success in the first three tasks of the third grade students is shown in the following table.

Table 3 Level A-Point Rating and Percentage of Partial Tasks

Task number	Point score	Total point score	Number of points scored in the didactic test.		Percentage of success	
			1. re-search	2. re-search	1. re-search	2. re-search
1.	1	21	15	19	71.4%	90.5%
2.	3	63	39	50	61.9%	79.4%
3.	1	21	21	21	100.0%	100.0%
TOTAL	5	105	75	90	71.4%	85.7%

Source: Author's processing

The data in the table show that the most successful students were in solving the third task, which was focused on searching the ponds on the map. In both studies, the success rate was 100%. The second task, where the children were supposed to indicate three cave forms, made them the biggest problems. In this task, the students achieved 39 points (61.9%) at the beginning of the research, and at the end of the survey the point score of this task increased to 50 points (79.4%). It can be said that the success rate of the first task was 71.4% at the beginning of the research and 90.5% at the end. Pupils in this item complemented the length of the cave tour.

Level B - Drawing Conclusions

At this level of understanding, the student conveys information, ideas or connections between them, which, although they are not explicitly stated in the text, directly come from the text. The reader processes data through thought processes such as analysis, synthesis and deduction. Concluding the conclusions allows the reader to fill in the "gaps" in the meaning which can occur in the texts.

This component of the didactic test consisted of five tasks, three of which required work with a table:

- to find two cave names that are not marked on the map,
- to state why Curtain Cave is not on the map,
- to decide on the occasion when the last visitors from the cave leave,
- to identify the entry fee for the 3rd grade pupils,
- to decide about the possibility for a three-member group to enter the cave.

In this section, each pupil could get 6 points for the correct task assignment in the following way:

4th task - write two names of parts of the cave = 2 points, if the pupil completes only one correct name he has earned 1 point,

5th task - give cause for not marking the cave Curtain on the map = 1 point,

6th task - to indicate the possibility of leaving the last visitors from the cave = 1 point,

7th role - set the entry fee = 1 point,

8th task - determine the possibility of entering the cave for a three-member group = 1point.

The number of points earned and the percentages achieved in the 4th - 8th tasks of the pupils is shown in the following table.

Table 4 Level B - Point Rating and Percentage of Partial Tasks

Task number	Point score	Total point score	Number of points scored in the didactic test.		Percentage of success	
			1. re-search	2. re-search	1. re-search	2. re-search
4.	2	42	37	39	88.1%	92.9%
5.	1	21	13	15	61.9%	71.4%
6.	1	21	15	18	71.4%	85.7%
7.	1	21	19	19	90.5%	90.5%
8.	1	21	10	10	47.6%	47.6%
TOTAL	6	126	94	101	74.6%	80.2%

Source: Author's processing

Based on the results of level B, it is clear that for the pupils the most difficult task was the eighth one, where they decided to enter the cave for a three-member group. Respondents could choose from four options. Only ten pupils (47.6%) in the first and second tests indicated the right option. Highest score points were reached in the fourth task where pupils achieved 88.1% in the first research, and 92.9% in the second. Why Curtain Cave is not on the map was the fifth task. The correct argument was given by thirteen pupils (61.9%) in the first test and fifteen pupils (71.4%) in the second test. The most common reason was: *because the Curtain Cave is a nickname of Driny Cave; for the true name of the Cave is the cave of Driny; it is really called Driny Cave.* 90% of the children's determined the entry fee correctly (the seventh task), the two pupils did not meet

the question. The sixth task was focused on selecting time data. The pupils should have determined when the last visitors from the cave leave. They had a choice of four options. 71.4% of the pupils were successful at the beginning of the research and at the end it was 85.7%.

Level C - interpreting and integrating information

At this stage, the pupil gets above the level of text, interpreting if he or she finds connections between the ideas of the text, using his / her previous knowledge. Mastering reading literacy at level C assumes to search for essential parts of the text, to recognize details throughout the text, to link information across the text, to explain the main ideas, partially interpret and associate story events and character deeds, partially understand and recognize text elements.

In the didactic test level C was formed by the following tasks focused on:

- the use of the information given in the table "Opening hours"
- calculation of the entrance fee to the cave for a four-member family
- indication of the name *cave pearl*
- justification of the naming of *the Cake Hall, The Treasury*

Tasks that consisted C level were assigned the following score:

9th task - to indicate the possibility of visiting a cave at a certain time = 1 point

10th task – to give the entry fee for a four-member family = 3 points

11th task – to determine correct naming = 1 point

12th task – to write down two reasons, according to which *Cake Hall and Treasury* are named = 2 points (1 point was assigned to each reasoning).

For all the correct answers in this section, the pupil could get 7 points. The following table shows the number of points earned and percentage success in individual C levels.

Table 5 Level C - Point Rating and Percentage Success of Partial Tasks

Task number	Point score	Total point score	Number of points scored in the didactic test.		Percentage of success	
			1. re-search	2. re-search	1. re-search	2. re-search
9.	1	21	14	17	66.7%	81.0%
10.	3	63	49	53	77.8%	84.1%
11.	1	21	12	15	57.1%	71.4%
12.	2	42	12	13	28.6%	31.0%
TOTAL	7	147	87	98	59.2%	66.7%

Source: Author's processing

According to the statistically processed results, it can be seen that the least successful were pupils in the twelfth task. Only 28.6% of pupils knew how to give the reason why the parts of the cave are named the Cake Hall and the Treasury. In fact, this percentage figure was represented by nine pupils, three of whom earned two points for this task and six pupils one point. The most frequent reasons included: *The Cake Hall - there*

are cake-shaped droplets there; liquid cake shaped formations; Treasury - the most precious part of the cave; there are precious cave treasures; a precious room where there are droplets in the shape of gems and jewels. At the end of the research, pupils achieved 31.0% success rate. Highest scores were reached in the 10th task where the pupils had to calculate the entry fee for a four-member family. All pupils answered this question to at least two points. In the first research, the actual number of points scored was 49 and in the second research 53 points. In question no. 9 the pupils achieved in the first test fourteen points (66.7%) and in the second test seventeen points (81.0%). In this role, children decided about the possibility to visit the cave at the appointed time. In the eleventh task, which means naming a cave, the pupils had to choose from four options. Twelve pupils in the first research (57.1%) scored the right choice and fifteen pupils (71.4%) in the second study.

Level D - Evaluation of the content of language and text elements

At this level, the reader passes from the creation of meaning to the critical assessment of the text, critically evaluates the text, its content and form. He or she evaluates the likelihood whether the events described may actually have occurred, assesses the completeness and clarity of the information in the text and evaluates the content of the text in terms of its overall value or its significance to the reader. He or she blends ideas across the text to provide interpretations of the characters, differentiates and interprets complex information from different parts of the text and complements it with an example from the text. The reader in this understanding process uses his / her knowledge of the world, knowledge of language and language conventions. It relies on previous reading experience.

This test section contained two tasks:

- Why would I invite my friend to Driny Cave
- What is the purpose of the educational walkway that leads to Driny Cave

For each correct answer in this part of the test, the following score was assigned.

13th task - write three reasons to invite a friend to the cave = 3 points

14th task - indicate the justification of the educational walkway = 2 points

The percentage achievement rate and point rating of these two tasks is shown in the following table.

Table 6 Level D - Scores and Percentage Achievement of Partial Tasks

Task number	Point score	Total point score	Number of points scored in the didactic test.		Percentage of success	
			1. re-search	2. re-search	1. re-search	2. re-search
13.	3	63	29	38	46.0%	60.3%
14.	2	42	6	8	14.3%	19.0%
TOTAL	5	105	35	46	33.3%	43.8%

Source: Author's processing

Level D evaluation has brought interesting results, and has also highlighted the low level of understanding of text- evaluation of language content and text elements. Task 4 in the first research was completed by 5 pupils who earned six points together (one pupil correctly stated both reasons, the other one only one). In the second research, the number of right answers increased to six pupils who reached eight points together (19.0%). The reasons for the use of the educational walk in Driny Cave were the following: *to know in what hills we are located, what plants grow around the cave, what animals live in the Little Carpathians, which rocks are located around the cave, how the cave was created*. In the thirteenth question, children were looking for a reason to invite a friend to a cave. In the first research, sixteen pupils answered and their score was 29. In the second research, the number of points scored was 38 and the children achieved a 60.3% success rate. The most frequent reasons for inviting a friend to a cave were: *"I would show you ponds with cave pearls, curtain decoration, Cake Hall, wall waterfalls, three ponds, cracked corridors, and the Treasury*. Wrong answers were: *"...because it's nice there, it's clean, there's good lighting."*

Graph 2 Percentage achievement of individual levels of text comprehension

Source: Author's processing

The results show that the pupils achieved the best results at level A, B, where the percentage success rate in the second study was around 80% (level A 85.7%, level B 80.2%). When comparing the results at these levels with the first research, it can be seen that the percentage success rates of A and B increased by 5.5%. Children in the first research achieved 71.4% success rate at level A and 74.6% success rate. Level C tasks have been mastered at 59.2% in the first level of research and 66.7% in the second research. Questions from level D, where the percentage success rate in the first test was 33.3% and in the second test 43.8% caused children the biggest problems. The results of the test show that the pupils did not have a problem with tasks aimed at finding simple and direct information in the text as well as the tasks connected with direct conclusions. The problem for students is level C and D. The children do not handle the tasks aimed at taking a separate evaluation and opinion, they are not able to sufficiently integrate their own thinking with the information in the text.

Table 7 Scores achieved in the reader's literacy test

	Scores achieved in the reader's literacy test	Percentage score
1research	291 bodov	60.2 %
2 research	335 bodov	69.4 %

Source: Author's processing

Based on the results obtained, it is quite clear that the scores of the reader's literacy test in the second research was higher than the scores in the first research. Therefore, hypothesis H1: *"We suppose that by applying reading literacy methods, pupils will get better point scores in the reading literacy test at the end of the research than at the beginning of the research"*, was confirmed as the pupils achieved 291 points in the test at the start of the research, and 335 points at the end, which is 44 points more.

Based on the analysis of the quantitative and qualitative data obtained in the pedagogical research carried out in the area of reading literacy development, it can be stated that the research results contributed somewhat to the solution of the given issue in the sense of the stated goals.

The aim of pedagogical research was to identify the impact of methods developing reading literacy on the level of understanding the text, and to create a positive relationship of pupils to books and reading.

The basis of the research was to verify or reject the hypothesis:

• H1: We expect that by applying reading literacy methods, pupils will get a better score in the literacy test at the end of the research than at the beginning. The hypothesis H1 was verified by a didactic reading literacy test, exploring the level of understanding the text at the end and at the beginning of the research. The tasks that the pupils dealt with were four levels of PIRLS comprehension:

- Level A - Search for explicit information
- Level B - Drawing conclusions that are not directly listed in the text
- Level C - Interpretation and integration of information using prior knowledge and experience
- Level D - Evaluation of content, language and text elements

The hypothesis was judged on the basis of the results obtained. Input didactic test included in the research at the beginning:

- Level A - 75 points (71.4%),
- Level B - 94 points (74.6%),
- Level C - 87 points (59.2%),
- Level D - 35 points (33.3%),
- Score reached - 291 points (60.2%).

Output didactic test included at the end of the research:

- Level A - 90 points (85.7%),
- Level B - 101 points (80.2%),
- Level C - 98 points (66.7%),
- Level D - 46 points (43.8%),
- Score reached - 335 points (69.4%).

The results show that the understanding of the text really improved. It can be seen that at the beginning of the research, the pupils achieved a score of 291 points in the test and at the end of 335 points and the percentage of pupils in the final test also increased. From these results it is possible to characterize individual levels of understanding the text. It is clear that the highest score was reached by the pupils at level A, B and the lowest point score at level D. However, from the above data, some improvement can also be observed at level D. According to the results achieved in the didactic test, it can be said that the hypothesis H1 was confirmed.

Conclusion

Reading literacy is a complex phenomenon of cognitive components of value attitudes, strategies, routines and knowledge. By reading the selected text, the reader processes and selects information by appropriate activities such as: identifying the hierarchy of information in the text, distinguishing important information from marginal one, finding relationships between the main idea and supporting information, compressing text, drawing conclusions, extracting explicit and implicit information, evaluating of the use, usefulness, novelty, reliability and veracity of the information and its critical reflection. The result of text processing should be the discovery of the information core of the text as a manifestation of global understanding of the text. Procedures by which an individual completes the information core.

The main aim of the paper was to find out whether the chosen methods of developing reading literacy would increase the respondents' ability to understand the text. The main goal of the research was to analyse the level of reading literacy of 3rd year students according to the four levels of understanding of the text PIRLS at the beginning and at the end of the research. Four partial objectives helped us to fulfil the goal. The sample of respondents consisted of 3rd year pupils of the selected primary school who had problems with writing dictations, completing grammar exercises, as well as problems with reading and understanding the text. We were also interested in their negative attitude towards reading itself. When diagnosing selected respondents, we used the so-called Gardner's questionnaire of 8 intelligences, which showed that students have the least developed linguistic intelligence, which accounted for 40%. This information is very important for teachers to know which area of intelligence is to be influenced more.

To achieve the results of the research, we used a didactic test of reading literacy, which we applied at the beginning and at the end of our research. The test determined 4 levels of their reading literacy. The results show that in order to search for explicit information, it is necessary not only to understand the text, but also to understand how the information relates to the information sought. The success rate of the first task in the entrance test was 71.4% at the beginning of the research and 85.7% at the end of the research. We can see that the success of performing tasks in the final test increased by 14.3%. The second task was to draw conclusions from the text. 71.4% of students successfully completed the given task in the entrance test and up to 85.7% in the final test, which represented an improvement at the end of the research, i.e. in the final test by 14.3%.

In the third task, students had to interpret and integrate information and then find connections between them. The success rate at the beginning of the entrance test was 59.2% and at the end of the research in the final test 66.7%, which shows that again there was a small improvement of 7.5%.

In the fourth task, the respondents had to critically evaluate the read text, its form and content. Subsequently, they had to combine ideas from the whole text and interpret complex information on the basis of what they had read. The percentage success rate of the given task was only 33.3% on the entrance test and slightly improved by 10.5% on the final test.

The results of our research showed a low level of text comprehension processes - evaluation of language content and text elements. Subsequently, the results clearly showed that students have the most problems in the interpretation and integration of information. Based on our findings, we recommend teachers to obtain information regularly on pupils' reading literacy tests, to increase students' interest in reading by organizing various meetings, discussions, where an interesting book would be discussed on the basis of reading, to organize discussions with interesting writers and to visit libraries.

Reading, despite the penetration of modern information technology, remains a fundamental component in acquiring knowledge, human expertise, as well as gaining various practical and professional skills. That is why the relationship of children, pupils and young people to reading should be constantly deepened. Reading comprehension is an indispensable and important component of the entire education process. Reading texts can be used not only for the development of reading competencies, but at the same time, it fulfils the educational objectives of other subjects and promotes the quality of reading literacy, which is a prerequisite for further education. Developing an intense interest in reading contributes to the acquisition of reading skills that are essential to the success of pupils not only in school career but also in adult life.

REFERENCES

1. BOROVSÁ, J. 2015. Rozvoj čitateľskej gramotnosti inovatívnymi metódami. Trenčín 2015. Metodicko-pedagogické centrum, Ševčenkova 11, 850 01 Bratislava. [online]. [cit. 18-04-2020]. Available on the Internet: chromeextensi-
on://oemmndcblldboiebfnladdacbdadm/https://mpcedu.sk/sites/default/files/projekty/vystup/16_ops_borovska_jana_rozvoj_citateľskej_gramotnosti_inovatívnyymi_metodami.pdf.
2. HELDOVÁ, D. et al. Výsledky štúdie OECD Pisa 2009 zaostrené na čitateľskú gramotnosť – tematická Správa. Available on the Internet: http://www.nucem.sk/documents/27/medzinarodne_merania/pisa/publikacie_a_diseminacia/2_tematicke_spravy/pisa_web.pdf.
3. PRŮCHA, J. - WALTEROVÁ, E. - MAREŠ, J. Pedagogický slovník. Praha: Portál, 2001. ISBN 80-7178-579-2.
4. STRAKOVÁ, J. a kol. 2002. Vědomosti a dovednosti pro život. Čtenářská, matematika a přírodovědná gramotnost patnáctiletých žáků v zemích OECD. Praha : Ústav pro informace ve vzdělávání. ISBN 80-211-0411-2.

5. WILDOVÁ, R. a kol. Čtenářská gramotnost a podpora jejího rozvoje ve škole. Praha: Univerzita Karlova, 2012. ISBN 978-80-7290-579-9.
6. DOLEŽALOVÁ, J. Funkční gramotnost-proměny a faktory gramotnosti ve vztazích a súvislostech. Hradec Králové: Gaudeamus, 2005. ISBN 80-7041-115-5.
7. GAVORA, P. Rozvoj porozumenia textu. In Gavora, P. - Zápotočná, O. Gramotnosť: vývin a možnosti jej didaktického usmernenia. Bratislava: UK, 2003. ISBN 80-223-1869-8, s.113-133.
8. GAVORA, P. Žiak a text. Bratislava: SNP, 1992. ISBN 80-08-00333-2.
9. KAŠIAROVÁ, N. Čitateľská gramotnosť v primárnom vzdelávaní. Bratislava: MPC, 2011. ISBN 978-80-8052-383-1.
10. OBRANCOVÁ, E. et al.. Čitateľská gramotnosť žiakov 4.ročníka: výsledky medzinárodnej štúdie. Bratislava: ŠPU, 2004. ISBN 80-85756-85-4.
11. Ladányiová, 2006 -?

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