Jolana Manniová

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The level of reading competences of pupils at basic schools in Slovakia

Jolana Manniová

Bratislava, Slovakia

manniova@gmail.com, jolana.manniova@fedu.uniba.sk

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Theoretical Part

1. Theoretical background

The pedagogic diagnostics of reading is a certain kind of scientifically founded knowledge of the pupil with a definite aim which is focused on the assessment of the complex state of reading. On the basis of a certain state and its description the pedagogic diagnosis is produced, that is an evaluating conclusion of the observed reading performance which serves as basis for adequate pedagogic measures.

We studied the works of Š. Cizmarovic, V. Kalná¹ and the author of this contribution, who define the pedagogic diagnostic of reading as a way of finding out, characterizing and assessing the level of the pupil's reading skills at a certain time, i.e. at a certain level of his development, as a prerequisite for the elimination of found insufficiencies and thus further development of the mentioned skill.

Source of important information about the reading skills of pupils are the following components: speed, correctness, activity, creativity, incentive and mainly interest in reading. The diagnostics of reading skills as a condition for knowing the pupil, revealing his/her potentials and abilities – as defined by B. E. Cullinam, O. Brown (1989), Z. Matejcek (1971), M. Korinek (1979), L. Mihalik (1987), Z. Jiránek (1955) and R. Náhlovský (1991) and others.

Several authors all over the world deal with the issue of pedagogic diagnostics – such as R. Vass, R. Long, J. Ryan, U. B. Pearson, G. Brooks, J. F. Hoffman, A. Rogojinaru, R. Popescu, M. Gosy, E. Szalay, M. Korinek, D. Dorovska, J. Hrebejkova, R. Bamberger (1983), K. Harris (1985), U. Anderse (1989), M. G. Patton (1990), S. W. Valencia (1994), H. Ceprano (1995), J. Kádár (1996), F. Gereben (1996) and others, who say that a good pedagogic diagnostic of pupil's reading is not only a crucial activity for educational requirements of schools but also an initiator of the cognitive development under the conditions of school instruction, where a conscious mental activity² in school practice is irreplaceable.

¹ Čižmarovič, Š., Kalná, V. (1991), Pedagogická diagnostika čítania mladších žiakov, SPN, Bratislava, p. 6.

Jolana Manniová, PhD., Comenius University in Bratislava (Slovakia), Faculty of Education.

² Vygotskij L. S. (1970), Myšlení a reč, SPN, Praha.

We have known about several variable criteria of assessment in the pedagogic diagnostic of reading, such as of M. Tobler, M. Belenkova, M. Magalova (1992), P. Antonacci (1995), I. Y. Libermann (1995) moreover with the results of several correlational, predictive and diagnostic studies of S. A. Brady (1998), V. A. Mann (1991), D. J. Sawyer and others.

We may observe in the researches carried out a certain **convergence of opinions**. We can see different opinions on decoding words, which are primarily determined by higher levels of the reading process, i.e. by the context, expected skills, visual-perceptive and phonological abilities, where the word is understood as a phonologic structure and reading as the transcription of this structure into the alphabetical code. If this process is to be carried out fluently, the reader must be equipped with a certain technique and mode of reading.

Empirical part

1. Aims of the research

The aim of the empirical part of the research was to collect exact data about the process of reading instruction – teaching reading – in the 2. and 3. grades of basic schools, about influencing factors, about the results of this instruction – teaching (reading performance). We proceeded by three empiric investigations.

- 1. Research of the reading performance of pupils in grades 2. and 3.
- 2. Observation of real teaching process in grades 2. and 3.
- 3. Research on the opinions of teachers on teaching reading.

We publish in this article (research paper) the results of the research called **Research on the reading performance (level) of 2. and 3. grade pupils.**

The objective of the research was to record and find out the level of reading performance of 2. and 3. grade basic school pupils in selected regions. We paid attention to the report of the following indicators of reading:

- a) the level of the technique of reading;
- b) mode way of reading;
- c) speed of reading.

These three indicators represent a sensitive indication of the pupils reading performance and the quality of teaching reading and the work of the teacher during individual lessons are reflected. The gathered data in fact belong to the rare empiric data about reading performance of pupils in several regions of Slovakia.

2. Methods of research

The research on reading performance was carried out during the school year 2009/10, (November–February) and collected data were gradually processed and evaluated in 2010/11. We diagnosed the reading performance individually in the presence of the author of this article and the teacher. A record was made on each pupil's reading, where we focused our interest on the identification of the following criteria:

A. Defects in the technique of reading:

 Mistakes in sounds: changing, omitting, adding, incorrect length, interchange in length;

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- Mistakes in syllables: jumbling, letting out, adding, repeating, pause in syllables (words), incorrect punctuation;
- Mistakes in reading words and sentences: omission of words, jumbled words, double reading;
- Mistakes in reading **sentences**: incorrect intonation in the middle of the sentence, at the end of the sentence.

B. Mode of reading: the pupil is spelling, insecure in reading syllables, fluent in reading syllables, makes up words.

C. Reading speed: the speed of spontaneous reading was recorded, the pupil was not stopped or interrupted. The time was recorded from the beginning of the text to the end of reading the text.

Reading was diagnosed with the each pupil under two different conditions: without preparatory reading (A) and with preparatory reading (AA). Preparatory reading is carried out at the beginning of diagnostic texts. These are some few words and one sentence, which are difficult to read and pronounce (word with difficult spelling construction, words with unknown content, preposition). Preparatory reading was intended to help the reading of the text itself, which was adapted to the length of 150-153 syllables, which are 78-82 words. The classification of the text according to the number of syllables was chosen for a more exact definition of length. The index of repetition of words in the text for grade 2 was 1,25 and for grade 3 it was 1,23.

Texts for grade 2:

Dvaja priatelia ("Two friends" – without preparatory reading – A).

Malá srnka ("The small hart" – with preparatory reading – AA).

Texts for grade 3:

Výmysly ("Phantasies" – without preparatory reading – A).

Závisť

("Envy" – with preparatory reading – AA).

The statistic processing of data was carried out by more methods. Except of descriptive statistics (frequency of mistakes, arithmetic average and standard deviation) we used two significance tests.

In search for an answer to the question whether reading without preparation and reading with preparation showed statistically significant results we used Wilcoxon's nonparametric test. For the comparison of two research samples Kruskal-Walis's test was used. For the calculation of the test variable we proceeded from the U-test.

3. Test sample

The research sample – test sample was set up by pupils of the 2. and 3. grade of basic schools. We focused our attention on these, because in the 1. grade pupils acquire basic reading literacy in the subjects of Slovak language and literature. In the 2. and 3. grades they acquire reading skills on concrete reading lessons and lessons of literary education on which one of the main objectives is to master the technique of reading. The total number of pupils in the sample was 885. Their composition was as follows:

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Grade	Boys	Girls	Total
2.	219	222	441
3.	222	222	444
Total	441	444	885

The participating schools in our sample were both from towns and the countryside in the following localities:

Basic schools in Bratislava (3 schools)

Basic schools in Stará Turá (3 schools)

Basic schools in Galanta (2 schools)

We worked with pupils in linguistically homogeneous environment (Bratislava, Stará Turá) and with pupils in a linguistically mixed region (Galanta). In this region the language of instruction was Slovak but some of the pupils originated from bilingual families. It was interesting, therefore, to investigate if a bilingual environment influences the results of reading performance in comparison to the monolingual environment.

4. Research outcomes and their interpretation

A. Overall view on the pupil's reading performance

no.1. In the first 4 columns the average frequency of the occurrence of mistakes while reading in four indicators are observed. In the fifth column the average time-span in seconds is given.

It can be observed that pupils do not have the same number of mistakes in separate individual indicators. The most mistakes, i.e. the least correct reading, were observed in reading words, then syllables and finally sound – vowels. This can be justified by the fact that while transferring from the reception of a syllable to reading the whole word intervals between the syllables of the word are not shortened and thus the optic picture of the word does not become one single acoustic stimulation and an acoustic unit resulting in mistakes in the reading technique and reading mode. Difficulties in the synthesis of words automatically continue in difficulties in reading words.

Chart no. 1.	Overall r	esults of the	pupils'	reading	performance	(arithmetic average	e) n = 885

Sounds	Syllables	Words	Sentences	Speed
1,82	3,55	4,15	0,47	80,2

We found out that on average while reading our texts pupils made 10,02 mistakes converted to the overall length of the text, which comprised 78-82 words. Further on we found that pupils read the text on average in 80,2 seconds. The best result was 34 seconds and the worst was 394 seconds. The quantitative data are displayed in the chart Although opinions on the syllable as a phonetic unit and its basis are differing, we consider it a natural unit of the spoken language. The reading of a syllable as a unit and the skill of reading the text with the help of connected syllables as a whole is an important assumption for reading words. Teachers should pay more at-

tention not only in the first grades to this critical phase of their pupils' acquisition and adoption of reading skills.

B. Reading with preparatory reading and without preparatory reading

Our second objective was to compare the results with preparatory reading and without preparatory reading. More exact data are in the chart no. 2, in which the statistic significance or non-significance of detected differences between the two ways of reading are visible. preparatory reading could be observed in the speed of reading.

From the psychological point of view preparatory reading draws the attention of the pupils on words and the sentence in which mistakes may occur. During the actual reading of the text, the pupil stops at phenomena from the preparatory phase. Double reading and repeated pauses are the result of "shadowing" in the read text³, which then prolong the speed and fluency and act negatively not only on the recipient but also

Chart no. 2. Average number of mistakes in pupils' reading with preparatory reading or without preparatory reading (Wilcoxon's test)

Sounds 1-5	-	Syllables 6-11		Words 12-16		Sentences 17-20		Speed 21	
AP SD	4	P SD		AP SD	AP SD		AP SD		
А	1,85	1,86	3,54	2,77	4,02	3,79	0,46	0,51	
AA	1,78	1,91	3,55	3,02	4,27	4,05	0,48	0,51	
Z	-	-1,5971		-,1574		-3,6121		-1,1380	
Р		,1102	,8749		,00	,0003 +++		,2551	

Explanations:

A = reading without preparatory reading AA = reading with preparatory reading AP = arithmetic average SD = significant deviation

It is obvious that the pupils' performance was very similar not depending on if they were reading with or without preparation. The differences in the rate of mistakes within individual criteria are statistically insignificant except of the rate of mistakes in reading words, where on the contrary a statistically very significant difference in favor of the group of pupils reading without preparation could be observed. Similarly a statistically important difference in favor of the group reading without Z = data from Wilcoxon's test P = values of significance +++ = significant values on the level of 1%

the listeners. We could speak also about further sensomotoric mechanisms in regenerative activities which raise the sensitivity to mistakes. Reading with preparatory reading is probably such a mechanism and it fosters the occurrence of mistakes with pupils of younger school age. Didactic consequences are mentioned in the overall conclusion of this research.

3 Ribot T. (1989), La Psychologie de l'attention, Alca, Paris.

C. Results of the diagnose of reading with preparatory reading and without preparatory reading in relation to gender and locality

Differences in the level of performance between the localities and gender are given in chart no. 3, from which we can see from global perspective, that statistically significant differences in the level of reading performance between most of the subgroups (locality, gender) do exist independently if the pupils read with preparatory reading (AA) or without preparatory reading (A). Most significant are the differences in the subgroup of younger boys (2. grade) where they are present in each indicator. The same applies significantly to the group of older boys (3. grade).

With younger girls (2. grade) we found a statistically significant difference between localities in the index: syllables (both A and AA), in words (A and AA). In the group of older girls (3. grade) the results are a little more diffuse. There were differences between schools in the indexes: sounds-vowels (A and AA), syllables (AA), words (AA).

It may be stated that the level of reading performance in the given three localities are different independent from the fact if preparatory reading was applied. The origination from a certain school played a more important role than the applied technology, what is more significant for boys.

The most frequent mistakes in **sound** were in adding or mixing up sounds mainly in the 2. grades. The lowest number of mistakes were made by pupils in mixing up the length of sounds in both grades. Concerning **syllables**, the most frequent was the repetition of syllables and pausing between syllables.

There occurred cases of doubled or tripled reading of syllables. Pupils in second grades in Bratislava did not have greater problems in their reading technique and reading mode similarly to pupils in grade 2 in Galanta but had difficulties with reading speed. We observed most mistakes in the third grades with syllables and words, which do influence the fluency of reading which on the other hand limits the speed of reading. Repetition of syllables and connected syllable reading is in the 2. grade a so called normal phenomenon. In grade 3 reading in syllables does not disappear, but our research proves its presence. The spread of mistakes in the pause within a word between syllables. While in grade 2 words are synthesized from sounds and a pause in the word between syllables occurs only secondary, in grade 3 it is a frequent mistake in the synthesis of words from syllables. This mistake proves the insufficient mastering of the phase of the synthetic exercise of syllables into words. Further mistakes were the kinetic inversion of whole syllables, contamination, i.e. fusion or creation of one word from two or more words, speech defects - the pupil changed in his spoken performance one sound by another (e.g. l instead of r.)

Concerning the mistake rate in **words and sentences**, they occur with pupils who had problems with reading syllables. An interesting finding with girls in grade 2 in Galanta can be reported. They had most frequent mistakes in jumbling words, in doubled reading, repetition of words and the pause in words between syllables. In reading sentences pupils of grade 2 made mistakes in intonation in the middle and the end of the sentences similarly to boys in grade 3 in Galanta. Nr 4 (2) 2012 Kultura i Wychowanie

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		Sounds	Syllables	Words	Sentences
A	Total: 219 BA 2 CH 1. GA 2 CH 2. ST 2 CH 3.	7,0043 7,3452 0,02+	16,8176 17,1915 ,00+++	46,5610 47,1090 ,00+++	13,1369 17,4492 ,00++
АА	Total: 219 BA 2 CH 1. GA 2 CH 2. ST 2 CH 3.	12,7110 13,2587 ,00++	32,9918 33,4747 ,00+++	41,5104 42,1739 ,00+++	4,9413 6,6116 ,03+
A	Total: 222 BA 2 D 1. GA 2 D 2. ST 2 D 3.	,5679 ,5927 ,74	15,8139 16,1821 ,00+++	42,4771 43,2099 ,00+++	1,8588 2,4497 ,29
АА	Total: 222 BA 2 D 1. GA 2 D 2. ST 2 D 3.	1,3883 1,4527 ,48	39,5859 40,2589 ,00+++	20,4083 20,8002 ,00+++	1,4649 1,9360 ,37
A	Total: 222 BA 3 CH 1. GA 3 CH 2. ST 3 CH 3.	9,8927 10,4577 ,00+++	22,0536 22,3206 ,00+++	17,4313 17,6700 ,00+++	1,5129 2,0197 ,36
АА	Total: 222 BA 3 CH 1. GA 3 CH 2. ST 3 CH 3.	28,7140 30,7553 ,00+++	11,3720 11,6176 ,00+++	41,1895 41,5881 ,00+++	4,5009 6,1127 ,04+
A	Total: 222 BA 3 D 1. GA 3 D 2. ST 3 D 3.	9,6138 10,2832 ,00+++	,4255 ,4327 ,80	4,6443 4,7140 ,09	1,1180 1,6584 ,43
АА	Total: 222 BA 3 D 1. GA 3 D 2. ST 3 D 3.	11,9287 13,0166 ,00++	12,1950 12,4236 ,00+++	9,0390 9,1575 ,01++	,0002 ,0003 ,99

Chart no. 3. Differences in reading performance according to gender and locality (Kruskal-Walis test)

Explanations:

A = reading without preparatory reading AA = reading with preparatory reading BA = Bratislava

GA = Galanta

ST = Stará Turá

1. = x2 reference group

2. = x2 selected group
3. level of significance:
+++ = statistically significant on the level of 1%
++ = statistically significant on the level of 2%
+ = statistically significant on the level of 5%

The **mode of reading** sentences showed insufficiencies and the weakest results in the performance of boys in grade 2 in Bratislava and in grade 3 in Galanta. Most frequent mistakes were fluent reading in syllables and uncertain syllable reading. These mistakes could be observed more often with boys. We observed also making up, adding – where girls were leading decisively.

With some pupils we could observe doubled reading resulting from reading sound-vowels, doubled reading resulting from reading in syllables, further melodic reading, which resulted both from local dialectic deviations of pronunciation acquired in the families and carelessness.

Most statistically significant differences could be observed in the speed of reading (in 6 subgroups), where pupils from Galanta read most slowly, which can be explained by the fact that some pupils originate from bilingual families and thus it is natural that their reading speed is lower. On the other hand pupils from Bratislava read at the highest speed because besides school instruction they have at home and outside their school a more stimulating environment.

Summarizing the results in each indicator, we find that phenomena which are observed in grade 2 are in grade 3 eliminated only to a certain extent and that some of them prevail.

Conclusion

Our objective was to get a complex view based on the results from our research through which we were able to find and prove data, which from the perspective of the development of reading and literary education create a positive trend for further development of the pupils' reading skills. Our findings from the research clearly prove, that the most frequent mistake in the mode of reading was reading in syllables which was proved also by direct class observation in the sample grades. In this field the most important finding of the whole research is the fact that the inner level of reading synthesis in the 3. grades is not yet completed and that pupils read in syllables what is in contradiction with current objectives of education.



Foto: Lycée Le Mirail Źródło: CC: http://da.wikipedia.org/wiki/Fil:Cdi.jpg

Biblioteka szkolna

Further significant deficiencies besides the already mentioned ones were observed in the development of speech, mainly in the sphere of phonetics and grammar in mixed bilingual regions. For the improvement of this problem a more active approach of the teachers to Slovak language and literature teaching, where independence, creativity and incentive should dominate in both content and theme. This requires an active approach of parents in domestic preparation, too.

It can be recommended on the basis of these findings to teachers at basic schools to pay increased attention to the mode and techniques of reading during instruction. The fact that older teachers

do not pay enough attention to the topical information – findings about teaching reading – leads them to remain in their outdated stereotypes. Younger teachers on the other hand lack necessary experience and knowledge about the specific conditions of the child reader. Effective motivation and the positive example of the teachers with help of thorough practice by non-traditional methods and forms help change the curious child reader gradually to an active reader.

To be able to evaluate the process of reading acquisition with each pupil from the development of his/her reading competencies individually and thus define further strategies of his personal development, it is necessary to diagnose in the educational process only the read text itself, without preparatory reading. Individual or group applicable reading programmes should then help ensure potential possibilities of the development of reading skills of each pupil both in the framework of school instruction and outside-school activities.

An objective comparable progress in the reading skills of the pupil through various modifications and alternatives of the instruction of reading techniques will represent in this phase the application of the most important motivational and activating stimulator.

Jolana Manniová

Bratislava, Slovakia

manniova@gmail.com, jolana.manniova@fedu.uniba.sk

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Abstract

The reading competences of pupils of younger school age in grades 2 and 3 of basic schools on the basis of exact data about the process of teaching reading and the influencing factors was collected and diagnosed. We focused our attention on the criteria of level, mode and speed of reading. We proceeded by three empiric investigations, which provided us with a relatively complex perspective on the subject matter of our investigation. The data which we have gathered belong to the few empiric ones about the reading performance of pupils in Slovakia. They may be useful as basic data for the comparison of reading performance in other researches.

Jolana Manniová, PhD., Comenius University in Bratislava (Slovakia), Faculty of Education.