TEXT COMPREHENSION – LEARNING STYLES – SCHOOL PERFORMANCE

Krisztina Bartha, Rita Fóris-Ferenczi

Abstract: The following study interprets the results of a research carried out in 2008 in Romania, on a smaller sample. The aim of the study is the analysis of the text comprehension skills of 14 year old pupils, and the presentation of the connections with the social background, learning styles and school performance. The gathering of the data was completed during the survey with the analysis of the native language curricula and textbooks, class monitoring, as well as with a questionnaire addressed to teachers. The present paper presents the data on text comprehension, as well as the correlations with social background and learning. It sums up the result of the class monitoring, as well as those of the teacher interviews, emphasizing the aspects which are relevant from the point of view of text comprehension developing.

Key-words: text comprehension, social background, learning styles, school performance, developing text comprehension

Introduction

The surveys on reading comprehension have been piquing a rising number of researchers lately. The teachers and the specialists leading these surveys have found that less and less pupils in the elementary and secondary education read, and they possess low-level text comprehension and text interpretation skills, which are indispensable in everyday and literary communication.

It is a difficult task to find out why the students do not read, why functional analphabetism is spreading, but one can agree that its reasons can be traced back to family socialization. On the other hand the exercises meant to develop reading comprehension are incumbent on the school system, and within it mainly (but not exclusively) on native language education, in this respect from the point of view of reading skills, the type of school is an important factor, together with the possibilities it offers, the interpretation and use of curricula and textbooks, as well as the preparedness and attitude of the teachers as well.

Our survey, which was lead in 2007 and preceded the research presented in this paper, aimed at the analysis of the reading comprehension skills of a smaller group and at the comparison of its results with other factors, which could be connected to reading comprehension: learning styles, learning strategies, school performance. The more we get to know the factors influencing or connected to reading comprehension, the more possibilities we obtain to develop the pupils’ reading comprehension skills, not only in the native language classes, but in others as well.

The sample of our former survey was made up by pupils from cities and downtown schools. The research presented in the paper was spread out to pupils from neighbourhood and small town schools.


2 The survey was carried out in the spring of 2007 including 93 seventh grader pupils from Cluj-Napoca and Oradea. We were interested in the effects of the social background and those of the pupils’ learning styles on their reading comprehension skills. The worksheet w - 1 - e used was an adapted version of the PISA survey, completed with Bernáth–Horváth–Mihály–Páldi’s test on learning styles, standardised in 1981 as well as with some data on the pupils’ social background and school performance.
At the same time we tried to find answers to the questions, which had been proven to be of importance based on the experience of the former study: how does the current native language curriculum interpret reading skills, what emphasis do the reading requirements have in it, how are these realized in the knowledge and task system of the textbooks, how is developing reading skills present in the classes, do the Hungarian language teachers deliberately operate the sub-skills of the reading skills, and how do these incorporate the knowledge on developing reading comprehension.

In order to analyze these topics we employed the methods of contents analysis (that of curricula and textbooks), monitoring (observation) and interviews.

In the present study we discuss some of the results of the research: the correlation of reading comprehension and school performance; the correlation of learning styles and school performance; the summing-up of the observations, as well as the analysis of the teacher questionnaires.

1. The aim, samples, data and mathematical instruments of the research

The aim of the research was to survey with the help of the reading comprehension worksheets whether the reading comprehension skills of the students match the requirements of the curriculum, and which are the areas with the most deficiencies. Due to the fact that reading comprehension skills are one of the general skill development requirements in the curriculum, our goal was to analyze and observe the relations between the pupils’ result and the current documents and textbooks. This is why we visited teaching classes, where we were able to observe the methods and aids the Hungarian language teachers used in order to develop this skill. In addition to this, we used teacher questionnaires in order to find out what the teachers thought about developing reading comprehension, what problems they face, what experiences they have in this area, how they evaluate the curriculum and the textbooks.

During this research we gathered and processed data using several methods. We applied document and content analysis in surveying the Hungarian language and literature curricula and the current textbooks. We observed Hungarian language and literature classes 45 times (V–VIII grades), in different types of schools. We surveyed the learning styles of students with the help of Bernáth–Horváth–Mihály–Páldí’s test elaborated in 1981. In addition, the pupils answered questions regarding their social background and school performance. We compiled and had the teacher questionnaires filled in order to observe the possible correlations between the statements of the teachers and the reading comprehension results. Due to the fact that very few questionnaires were filled, these results serve as guidance, presented as interesting data, thus we do not wish to make any far-reaching conclusions about them. We wished to compare the analysis of the curricula and that of the textbooks, the class monitoring, as well as the questionnaire on learning styles and the socio-cultural data with the results regarding text comprehension in order to observe the correlations between social background, learning styles, school performance, school education and the results obtained in the text comprehension worksheet.

The persons included in the survey were 65 seventh grader pupils, who had to fill not only the worksheet on reading comprehension, but communicated some data on their social background, which presumably have some effect on text comprehension. In addition, we registered the Hungarian language marks and the averages from the previous semester of all pupils. The research was conducted in a Hungarian monolingual, downtown school and a bilingual neighbourhood school in Cluj-Napoca, and at the same time we requested the pupils of three rural schools to take part in the survey, pupils from Gencs, Vajdakamarás, and Vajdaszentivány. When deciding which schools and classes to work with, we tried to choose schools, which were different in their character from one another, as we aimed to observe the possible differences in school performance in these different institutions. The percentage of these schools is the following: 33.8% of the pupils taking part in the survey frequented the downtown school, 30.8% frequented the urban, but not downtown school, and 35.4% frequented the rural schools. 83.1% of the pupils was over 14, and 16.6 were 13. The gender distribution was the following: 47.7% of the respondents were boys, while 52.3% girls. The gender distribution and that based on the types of schools is equally balanced.

In connection with the reliability of the applied worksheet, the Cronbach alpha result was 0.87 for the 62 pupils processed, which certifies that the worksheet is fit to measure text comprehension. The text
was a documentary presentation in the field of history, the exercises measured two levels of text comprehension: the retrieval of explicit and implicit information, as well as text comprehension and text interpretation: giving a title to the text (the global comprehension of the text, emphasizing the essence of the text), giving titles to the different paragraphs (emphasizing the essence in the different parts of the text, drafting), understanding unknown words from the context, the summing up of the text in 5–6 sentences, rephrasing the text in order to emphasize the essence, forming and justifying a personal opinion, the identification of comprehension difficulties, forming personal opinions, asking questions, emphasizing parts interesting from the point of view of the reader, analyzing the useful nature of information in the text.

2. The results of the research

2.1. Analyzing the data on social background

The questionnaire contained questions on the pupils’ social background and school performance. We assumed that there is a strong correlation between the pupils’ social background (good financial and family circumstances, the parents’ education and cultural openness), living environment (town or village) and their school performance, as well as the reading comprehension results. This correlation was analyzed in the case of the surveyed group by comparing the results of the above-mentioned questionnaire and worksheet.

The highest education of the father in 10.8% of the cases is elementary school, in 30.8% professional school, in 33.8% high-school and in 9.2% university. There were students who did not answer these questions.

Regarding the education of the mother: in 9.2% of the cases the mother had an elementary school education, 26.2% professional school education, 33.8% high-school and 15.4% college or university education.

It is worth analysing the totalizing of data on the parents’ education regarding the placement of the schools: there are great differences between urban and rural schools, but there are noticeable differences between the central and neighbourhood schools as well.

<table>
<thead>
<tr>
<th></th>
<th>Elementary</th>
<th>Professional school</th>
<th>High-school</th>
<th>College/university</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FATHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downtown school</td>
<td>4.5</td>
<td>9.1</td>
<td>45.5</td>
<td>22.7</td>
</tr>
<tr>
<td>Neighbourhood school</td>
<td>0</td>
<td>45</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>Village</td>
<td>26.1</td>
<td>39.1</td>
<td>8.7</td>
<td>0</td>
</tr>
<tr>
<td><strong>MOTHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downtown school</td>
<td>0</td>
<td>9.1</td>
<td>45.5</td>
<td>27.3</td>
</tr>
<tr>
<td>Neighbourhood school</td>
<td>10</td>
<td>35</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Village</td>
<td>17.4</td>
<td>34.8</td>
<td>21.7</td>
<td>0</td>
</tr>
</tbody>
</table>

In the case of the surveyed persons we found that there is a strong correlation between the pupils’ Hungarian language marks and the parents’ education. The strongest correlation was between the mothers’ education and the pupils’ marks: \( r=0.45, p<0.01 \) (see Table 2.), and there is a correlation in the case of the fathers as well, the result being: \( r=0.36, p<0.01 \). There is also a correlation between the fathers’ and the mothers’ education and the worksheet results: mother: \( r=0.43, p<0.01 \); father: \( r=0.35, p<0.01 \). The correlation coefficient between the mother’s education and the worksheet results is high.

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3 The source of the documentary text is the work-book of Gerényiné Németh Erika and Szamosiné Nagy Sára: Szövegértelmezési feladatok és megoldások 5–6. osztályosok részére.
which means that the higher the education, the better results we find in the pupil’s worksheet. In the case of fathers this correlation coefficient is somewhat lower, but still statistically significant. In both cases we see that the education of the mother has a higher impact on the school performances of the children. Although it was not an aim of our research, this is probably due to the fact that the mother’s help is much more accessible for the pupils. Should they have any learning problems or questions, they most probably seek out the help of their mothers.

Table 2. The parents’ education and its effects on the pupils’ school performances.

<table>
<thead>
<tr>
<th></th>
<th>Father’s education</th>
<th>Mother’s education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungarian language and literature</td>
<td>.36, p&lt;0.01</td>
<td>.45, p&lt;0.01</td>
</tr>
<tr>
<td>mark</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet results</td>
<td>.35, p&lt;0.05</td>
<td>.43, p&lt;0.01</td>
</tr>
</tbody>
</table>

Regarding the size of the home and personal libraries we can state that the pupils have the following opinions on the home libraries: 25.6% believed that their home libraries contained between 0–50 books, 29.2% believed they had 50–100 books, 24.6% considered that their home library has around 100–500 books, and 7.7% said more than 500. The results demonstrate that the majority of pupils have books of their own: 35.4% said that they had between 0–25 books of their own, 35.4% stated they possessed between 25–50 books of their own, 12.3% said they had between 50–100 books of their own, while 3.1% said, that they owned more than 100 books. The distribution based on the type of settlement they live in can be found in the following table:

Table 3. Home and personal libraries and the types of schools

<table>
<thead>
<tr>
<th>Home libraries / types of school</th>
<th>Percentage</th>
<th>Personal libraries / types of school</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. downtown:</td>
<td></td>
<td>1. downtown:</td>
<td>18.2</td>
</tr>
<tr>
<td>a. 0–50</td>
<td>9.1</td>
<td>a. 0–25</td>
<td>18.2</td>
</tr>
<tr>
<td>b. 50–100</td>
<td>22.7</td>
<td>b. 25–50</td>
<td>36.4</td>
</tr>
<tr>
<td>c. 100–500</td>
<td>36.4</td>
<td>c. 50–100</td>
<td>22.7</td>
</tr>
<tr>
<td>d. more than 500</td>
<td>13.6</td>
<td>d. more than 100</td>
<td>4.5</td>
</tr>
<tr>
<td>2. neighbourhood:</td>
<td></td>
<td>2. neighbourhood:</td>
<td>35</td>
</tr>
<tr>
<td>a. 0–50</td>
<td>15</td>
<td>a. 0–25</td>
<td>35</td>
</tr>
<tr>
<td>b. 50–100</td>
<td>45</td>
<td>b. 25–50</td>
<td>45</td>
</tr>
<tr>
<td>c. 100–500</td>
<td>35</td>
<td>c. 50–100</td>
<td>15</td>
</tr>
<tr>
<td>d. more than 500</td>
<td>5</td>
<td>d. more than 100</td>
<td>5</td>
</tr>
<tr>
<td>3. village:</td>
<td></td>
<td>3. village:</td>
<td>52.2</td>
</tr>
<tr>
<td>a. 0–50</td>
<td>47.8</td>
<td>a. 0–25</td>
<td>52.2</td>
</tr>
<tr>
<td>b. 50–100</td>
<td>21.7</td>
<td>b. 25–50</td>
<td>26.1</td>
</tr>
<tr>
<td>c. 100–500</td>
<td>4.3</td>
<td>c. 50–100</td>
<td>0</td>
</tr>
<tr>
<td>d. more than 500</td>
<td>4.3</td>
<td>d. more than 100</td>
<td>0</td>
</tr>
</tbody>
</table>

2.2. The correlation between text comprehension and school performance

The results according to which there is a correlation between the home library and the worksheet results and Hungarian language marks of the pupils are very interesting. The correlation between home libraries and Hungarian language marks is high: r=0.42, p<0.01, while the correlation between home libraries and the results of the worksheets is r=0.46, p<0.01. In this respect the bigger the home library, the more likely it is that the pupils have a higher mark in Hungarian language, as well as that they produce a high score in the worksheet. Taking into consideration the pupils’ personal libraries, we find that these are decisive factors as well. The correlation between the Hungarian language mark and the personal libraries is r=0.36, p<0.01, while the correlation between the worksheet and the Hungarian language mark is r=0.4, p<0.01 (see table nr. 7). These results demonstrate that the home learning and reading patterns of the pupils does have an effect on their school learning. If the pupils see their parents reading, feel that knowledge is important for them, they will follow this pattern as well. The correlation between the Hungarian language mark, the good results in the worksheet and
their libraries confirms that it is of a great help for the pupils to have books at home, which they can get down any time from the shelves or which are recommended for them to read by the parents. There is also a correlation between the parents’ education and the size of the home library (see table 4.)

<table>
<thead>
<tr>
<th></th>
<th>Home library</th>
<th>Personal library</th>
</tr>
</thead>
<tbody>
<tr>
<td>The father’s education</td>
<td>.49, p&lt;0.01</td>
<td>.33, p&lt;0.05</td>
</tr>
<tr>
<td>The mother’s education</td>
<td>.41, p&lt;0.01</td>
<td></td>
</tr>
<tr>
<td>Native language and literature mark</td>
<td>.41, p&lt;0.01</td>
<td>.36, p&lt;0.05</td>
</tr>
<tr>
<td>Worksheet results</td>
<td>.45, p&lt;0.01</td>
<td>.34, p&lt;0.05</td>
</tr>
</tbody>
</table>

We decided to examine the averages of the pupils because our hypothesis was that it was in correlation with text comprehension, as text comprehension is an important part of not only native language performance, but other subjects as well, and the pupils can have good results only if they are capable to understand other types of texts as well. We recorded the following results on averages: 3% of the pupils had an average between 6.00–7.00, 12% between 7.00–8.00, 24.2% between 8.00–9.00, while 36.5% had an average above 9.00 in the previous semester. In the case of the remaining 23.1% we did not get any measurable information on learning averages. The average is thus 8.71.

The Hungarian language and literature results based on the final marks – in our opinion – are in a correlation with the results of the reading comprehension worksheet. In the semester preceding the survey the Hungarian language and literature average of the pupils was 7.94. This could be distributed in the following way: 7.7% got a 5, 10.8% got a 6, 14.3% got a 7, 23.2% had an 8, 21.4% got a 9, and 19.6% had a 10. The remaining 13% did not answer this question.

The results of the worksheet were compared with the learning averages of the previous semester, as well as with the native language and literature results. Our hypothesis was proven right in both cases. The correlation between the worksheet results and the Hungarian language and literature mark is high, r=0.62, p<0.01. The correlation between the worksheet results and learning averages is strong as well: r=0.57, p<0.01.

These results support the theory that it is important to take into consideration text comprehension skills as these facilitate the rise in performance and we can presume an improvement in results in native language classes as well as other classes, where there may pay no attention to the acquisition of text comprehension techniques.

### 2.3. Learning styles and school performance

Bernáth–Horváth–Mihály–Páldi’s questionnaire on learning styles was filled out by 56 pupils, fewer than the text comprehension worksheet. During the examination of correlations we got the following results: in the surveyed group there was a strong correlation between auditory and visual styles, meaning that pupils using auditory styles often apply visual styles as well r=0.28, p<0.05 (see table 6.)

<table>
<thead>
<tr>
<th>Tiger's paw</th>
<th>Learning averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There is an even more obvious correlation between the auditory and interpersonal (social) learning styles (r=0.41, p<0.01 – see table 6.). This is most likely due to the fact that learners preferring the auditory style gladly tell others about their knowledge, they listen to new accounts, they willingly tell others about their own experiences, and while doing this, they listen to their own and to others’ voices.

<table>
<thead>
<tr>
<th>Tiger's paw</th>
<th>Learning averages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There is a correlation between intrapersonal and visual learning styles as well, r=0.32, p<0.05 (see table 6.). This correlation is also natural, as the pupils preferring intrapersonal learning styles acquire the information from books as they do not like to rely on others for this purpose. We found a
connection between the impulsive and kinaesthetic styles, here the correlation is $r=0.29$, $p<0.05$ (see Table 6.). This supports the fact that the pupils preferring movements are more impulsive, they have a quicker reaction time, they have a difficulty in engaging in the same situation, topic or task for a longer period of time. It is an interesting result that for the pupils in the survey we found a positive correlation between the impulsive style and mechanical learning ($r=0.36$, $p<0.01$ – see Table 6.). It is surprising also because one would expect the pupils who have impulsive styles not to be capable of focusing on the same information in order to learn it mechanically (see Table 6.).

There is a negative correlation between the pupils' learning average and the mechanical and impulsive learning styles ($r=-0.32$, $p<0.05$ for mechanical learning, $r=-0.30$, $p<0.05$ for impulsive learning styles). This could be understood from the point of view of the fact that they cannot retain any information on the long term with the use mechanical learning, nor through the impulsive learning styles. The pupils do not learn to think logically, to organize their knowledge and the information at their hand by using these styles (see Table 6.).

<table>
<thead>
<tr>
<th></th>
<th>Auditory</th>
<th>Visual</th>
<th>Kinaesthetic</th>
<th>Interpersonal</th>
<th>Intra-personal</th>
<th>Impulsive</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual</td>
<td>.28, $p&lt;0.05$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal</td>
<td>.41, $p&lt;0.01$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intra-personal</td>
<td>.32, $p&lt;0.05$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.36, $p&lt;0.05$</td>
</tr>
<tr>
<td>Impulsive</td>
<td>.29, $p&lt;0.05$</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

The Hungarian language average showed a higher correlation with personal styles ($r=0.28$, $p<0.05$). This sustains the fact that the preparation for Hungarian language and literature classes is best aided by the personal styles. It is understandable if we start from the assumption that in Hungarian language and literature classes pupils deal with text which they need to read at home, on their own; the results lead to the conclusion that within the Hungarian classes group-work is not applied (due to which the interpersonal style could develop on the long term). The impulsive style shows a negative correlation with the marks, $r=-0.34$, $p<0.01$ (see Table 7.).

<table>
<thead>
<tr>
<th></th>
<th>Intra-personal</th>
<th>Impulsive</th>
<th>Mechanical</th>
<th>Average</th>
<th>Native language marks</th>
<th>Worksheet results</th>
</tr>
</thead>
<tbody>
<tr>
<td>School performances</td>
<td>-.32, $p&lt;0.05$</td>
<td>-.3, $p&lt;0.05$</td>
<td>.28, $p&lt;0.05$</td>
<td>.34, $p&lt;0.05$</td>
<td>.8, $p&lt;0.01$</td>
<td>.57, $p&lt;0.01$</td>
</tr>
<tr>
<td>Native language marks</td>
<td>.28, $p&lt;0.05$</td>
<td>.63, $p&lt;0.01$</td>
<td>.57, $p&lt;0.01$</td>
<td>.63, $p&lt;0.01$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.4. The results of the reading comprehension worksheet

The reading comprehension worksheets were completed by 63 pupils. The average of their results is 69.4, which means that this is the number of points they scored out of the maximum of 100. The lowest score was 14, the highest was 94. According to our observations there are great differences between the pupils. The pupils who remain behind at this age, will have even less chances in the high-school education, and there is an ever growing gap between them and the ones with high scores, and they will have even greater drawbacks in other domains as well.
The surveyed groups had difficulties in retrieving implicit information. During this operation the reader needs to use previous knowledge, find cause and effect relations and recognize the chronological order of events. More than 50% of the pupils made at least one mistake in answering these questions. Implicit information concerns every text the pupils read for the first time. If the application of this operation is not efficient, the pupils will have difficulties in the filtering of global comprehension, but also in filtering information which are the most important in understanding a certain text. The pupils need to learn the lexical and grammatical elements with the help of which they can draw conclusions on the context. It is important to consider the fact that delivering these kinds of information does not necessarily mean that the child recognizes and uses them, that is why we should use methods with the help of which knowledge becomes part of the child’s capabilities.

The operations of emphasizing and drafting also cause difficulties even though taking notes is taught beginning with the fifth grade in the native languages classes. 47.8% of the pupils did not know how to perform the assignment on drafting using keywords. They had even worse results in 5–6 sentence drafting, which assignment was performed correctly by only 23.1% of the pupils. The average of the group was 6.4 out of the maximum 10 points. The applied text comprehension procedure was emphasis and synthesis. In the case of both of the tasks it was important for the pupils to be capable of rephrasing the text, emphasizing the essence, and synthesizing the message. The common errors lead us to the conclusion that the pupils are not capable of grasping the essence, they have problems in rephrasing the text, they do not really know what editing rules are needed to make a shorter draft of a longer text, and thus they do not know for example, that in a sketch there is no need for adjectives, that it is better to use collective nouns instead of enumerations, and that there is no need to include all data from the text in the draft, even if rephrased. These are some basic mistakes, which should have been eliminated during the V–VII grades.

During the assessment the pupils needed to show the extent to which they can interpret unknown words using the context they can be found in. The pupils solved this task using synonyms and longer descriptions. In the interpretation of the 5 words 78.5% of the pupils made mistakes in connection with at least one of them. If the pupils cannot operate with this procedure, they might have difficulties in understanding the text. All new texts can contain unknown words. Consequently it is important for the pupils to have previous knowledge, a developed vocabulary, as there is a smaller chance to be unable to interpret the remaining unknown words from the context.

The pupils did well in the explicit information retrieval and global text comprehension operations, and this was measured by asking the pupils to give titles for the texts. We did not get any creative answers, but the task was completed by almost everyone. In a similar way they were successful in retrieving explicit information.

The second part of the worksheet examined the reading comprehension strategies, which facilitate the understanding, the organization, the rethinking of information, as well as the forming of opinions. Taking into consideration the results we can state that the pupils have difficulties in this area as well. In connection with personal opinions 13.8% of the pupils was capable of meet the requirements of the exercise even though the curriculum specifies the development of personal opinion formation skills for seventh graders. It is typical that the pupils do not realize the fact that they do not understand the text, and one reason for this could be that they do not think it through, they read mechanically, and do not try to activate other skills than the technical side of reading. In many cases they answered that they understood everything, even though in the assessment part it became obvious that there were parts the understanding of which caused difficulties.

It is of a great importance for the reader to be capable of asking questions in connection with the text he/she has read, on the one hand this is the evidence of the fact that he/she really understood it, and on the other hand it foreshadows further thinking on the topic. We cannot examine what happens when the pupils read a text on their own, when they are not in an exam situation. In this case we only found out, that based on the instructions of the worksheet there were some pupils, who managed to ask questions. Still, almost 17% could not meet the requirements of the exercise and in the context of the other results we can assume, that there is an even smaller number of pupils who activate this strategy in other situations. 67.7% of the pupils were capable of emphasizing the part in the text they thought
was the most interesting. The last question referred to whether they were capable of identifying situations where the information in the text could be used. It is typical that the pupils cannot abstract from school, that they do not try to use the texts they read in everyday life, but only in school. Of course by information usage we do not necessarily mean for them to transpose every detail in the everyday life, but the fact that they discover in connection with the text that it is interesting, that it confers some new information on people who had lived in the past, on their way of thinking, and that these can be useful for them in other situations as well. In the case of this question we gave maximum points to those who could mention one place or situation other than the school, where they could use the text they had read. Only 7.7% of pupils were capable of performing this task correctly.

The scores of the worksheets were compared to the previous semester’s average and the Hungarian language marks as well. The correlation between the result of the worksheet and the Hungarian language mark is high: $r=0.62$, $p<0.01$. There is a strong correlation between the worksheet and the average as well, $r=0.57$, $p<0.01$ (see table 7.). These results support the hypothesis that it is important to concentrate on text comprehension skills, as these serve the increase in school performance, and they are the conditions to get special knowledge as well. (see table 7. the correlation between learning average and reading comprehension).

Summing up we can state that based on our research there is a strong correlation between the social background, school performance and text comprehension. The social background constitutes the base the pupils can rely in, which helps them stay motivated and which supports them in being successful in learning. Learning styles can influence pupils in the effectiveness of processing, organizing and retaining new information, and including them into their existing structure of knowledge. The less the pupils favour the mechanical and impulsive styles, the more efficient their achievement is. The results of the worksheets present the difficulties the students face, and draw the attention to the fact that they do not use reading and text comprehension skills, and that this has an effect on their average. Thus, from the point of view of successful education, the examination of all three components and the discovery of connections is equally important.

### 2.5. Class monitoring and the evaluation of the teacher questionnaires

With the help of class monitoring we tried to reveal the emphasis the explicit development of text comprehension skills gets during classes. We presume that the majority of the teachers relies mostly on the textbooks and uses the exercises in them to develop text comprehension. At the same time – as a fixation of the previous educational model – there is still a tendency to separate grammar and literature classes, the usage of the information-centred methods, the mechanical fixation and exercising of grammar and language use knowledge and rules. Besides class monitoring we compiled a teacher questionnaire in order to examine the way teachers interpret the curriculum requirements on text comprehension skills, what they think of the current curricula, what difficulties they face, what experiences they have on the possibilities of developing the pupils’ text comprehension skills. In this chapter we examine and compare the results of these two surveys in order to explore new areas of our research on text comprehension.

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4 Obtaining and using the necessary text comprehension skills is indispensable in learning, this is the medium through which information is processed. Good language skills are needed not only in native language education, but also in the case of other school subjects, as well as the everyday life. In Nagy József’s opinion (Nagy 2000. 118.) language skills are in a close relationship with communication skills. The function of this skill is the communication and receiving of information through symbols. The communicational process stands in the cross-section of thinking and learning. Cognitive communication has three sub-systems: visual communication, verbal communication and formal communication. Visual communication is the ability to read diagrams and to represent, which is much needed by today’s people. Verbal communication is the learning of speaking and speaking comprehension, the ability to learn and to compose. Formal communication helps us know our way around the accumulation of knowledge through the fact that it simplifies a lot of information with the help of a given system of rules. Formal or partly formal information are the following: charts, dictionaries, lexicons and printed papers.
We had the opportunity to visit 45 classes. The distribution of schools was similar to that in the case of the questionnaires. We tried to examine the classes which we already had visited, but this was not possible in all of the cases. We faced these difficulties in the alternative schools as well, where we had the opportunity to monitor classes, but some external circumstances prevented us from assessing the pupils as well. During class monitoring we applied the following observation aspects: in what classes does the teacher develop text comprehension skills, what methods and tools does he/she use to achieve this, what types of texts does he/she use in developing text comprehension, which external circumstances facilitate and which make the teacher’s task easier.

During our observations we noticed that in the traditional schools language and literature classes are completely separated from one another. The teachers develop text comprehension mainly based on literary texts. The main task is vocabulary building through the explanation of unknown words in the literary texts, as well as through the explanation of poetic expressions. Based on conversations with several teachers we found out that they themselves doubt that literary texts could help the text comprehension of the pupils, mainly because they think that these texts are so far from the interests of today’s pupils that they cannot even concentrate on them, and that is why they are not motivated in reading and learning new words. Based on the experiences of the grammar classes, the majority of the teachers remain information and knowledge-centred in presenting the different grammatical topics, and they use exercises in teaching them to the children. Thus the pupils are forced to apply mechanical learning styles, in many cases lacking any reasoning, and they complete the tasks through respecting certain algorithms. The alternative schools were the only places where we saw an attempt to teach the curriculum using other concepts, mainly focusing on skills. In these schools there are favourable conditions as well, as the number of pupils frequenting each class is not higher than 15, the classes are longer, the teacher can decide to take a break when noticing that the pupils are tired, but it assures a longer time frame for the easier concentration on the curriculum. There is room for longer digressions, for more circumspect explanations, for the more detailed discussion of problems.

After having analysed the methods we can conclude that text comprehension is addressed mainly through frontal explanations, and in the case of literary texts through questioning-explaining. The method of discussions is also popular, but mainly during literature classes. During grammar classes the exercises are dominant, and in connection with class organization techniques we noticed group-work in only 4-5 cases. Group-work in the Montessori school is very frequent. Besides these methods we noticed the method of discovery-based learning, projects and problem-based learning. It is important to emphasize that there is no significant difference concerning the methods applied and classroom organization between urban and rural schools, but there are some relevant differences between traditional and alternative schools.

There is a similar situation in connection with teaching instruments as well. In the case of traditional schools the teachers work with the textbooks and the workbooks, while the alternative schools utilize different kinds of worksheets, schemes, pictures and instruments like computers, lexicons and dictionaries. These last two, as well as the application of worksheets sometimes appear in the case of traditional schools as well.

In the case of the classes we visited, text comprehension developing was exclusively performed using literary texts. In the fifth grade we also observed the developing of text comprehension through the analysis of sayings and proverbs, but everyday texts were not used, nor were documentary texts. Of course, the number of classes we visited is very low, and we cannot make any solid conclusions based on our experiences, but it can be an important finding, that for some reason the classes lack the discussion of texts other than literary writings. Even in the case of grammar classes the teachers prefer to choose mainly literary texts.

The teacher questionnaire was spread on the internet, on the group email of the Hungarian language teachers. The members were guaranteed on total anonymity and were asked to take part in filling a 20 minute long questionnaire. As out of the 317 members only 13 sent the questionnaire back, the conclusions need to be drawn very carefully.

The majority of the respondents were between 30–40 years old (38.5%), 30.8% was younger. 7.7% was between 40–50, 15.4% between 50–60 and 7.7% older than 60. One respondent was male, which
is 7.7%. The distribution of the answers to the question of how long they had been teaching is the following: 30.8% 0–5 years, 15.4% 5–10 years, 23.1% 10–20, and 30.8% more than 20 years. Each of the respondents had a college degree on Hungarian language and literature teaching. 53.8% taught in downtown schools, 30.8% in urban neighbourhood schools, and 15.4% in rural schools. We asked the teachers about the number of postgraduate courses they participated in during the last three years. 23.1% took part in at least one, 7.7% in more than five. Among these they listed the following postgraduate courses: Bolyai Summer University, AEL, Masters and PhD studies, drama pedagogy, project-methods and the pedagogical program of the Dalton-plan, native language education in the 21st century and so on. The majority of the teachers uses the Tulit Ilona textbooks, but some mentioned the textbooks written by Zalány Virág, Szász Mihálykó and Máthé András, Székelyné Cseh Katalin. In addition to these, 53.8% of the teachers uses different alternative books and workbooks or textbooks from Hungary. The most frequent Hungarian textbooks mentioned are the ones published by the Nemzeti Tankönyvkiadó and Mozaik Kiadó.5

We asked them about the contexts in which they develop the text comprehension of the pupils. The majority of the teachers by their own admission develop this basic skill in each class. 76.9% gave this answer. 53.8% used the variety of textbooks, personally prepared worksheets and workbooks as text comprehension instruments. 7.7%, that is one person answered that he/she uses worksheets prepared in Hungary for the developing of text comprehension.

From the point of view of types of texts used in developing text comprehension 61.5% said to use various text types. 15.4% uses only literary, 15.4% only documentary texts during text comprehension developing.

The following question is: Which are the areas within text comprehension, in which the teens have throwbacks? The possible answers were the following:

- Grasping the topic and theme of the text
- Explicit information retrieval
- Implicit information retrieval
- Emphasizing
- Drafting
- Explaining words
- Others, for example...

The first option was the implicit information retrieval and emphasizing, scoring 46.2%. As a second option we found drafting to score 38.5%, but here we also found the previously mentioned two activities, as a third option there was the grasping of the theme (30.8%), explaining words (23.1%) and drafting (15.4%). We asked: If you feel that the pupils have some throwbacks in text comprehension, what could be a possible explanation for this? In this case they could also choose three from the eight options below:

- In grades I–IV this basic skill was not developed
- The curriculum is too dense, there is no time for this
- The teachers of other subjects do not pay any attention to this
- Pupils have a difficulty in realizing the text comprehension strategies
- The pupils realize the text comprehension strategies but they do not apply them in the case of other subjects
- The students swot and lack any learning methods
- They are not interested in reading
- Teachers do not exactly know how to develop this skill.

In the opinion of 30.8% of the respondents the skill was not developed in grades I–IV. 15.4% identified swotting as a first option, and the fact that the pupils are not interested in reading. As a

5 The textbooks of Antalné Szabó Ágnes–Ráczi Judit, Alföldy Jenő, Lechény Egri Zsuzsa, Szmolyán Gabriella are the most common. They mentioned K. Nagy Olga’s internally published books as well.
second option 38.5% chose the unconscious use of text comprehension strategies. Here they also chose swotting and the lack of interest as a possible explanation. As a third possible answer they chose swotting, the lack of strategies and the fact that teachers do not exactly know how to develop text comprehension skills.

The next question was the following: **Out of the factors below which cause difficulties in the development of basic skills (text comprehension, speaking, reading, writing)?** We listed ten factors and the task of the respondents was to grade them from 1 to 5 according to the difficulties they cause in the development of basic skills. Based on the results the three most important factors that cause difficulties are: the overburdening of teachers, the density of the curriculum and the theoretical/abstract character of the textbooks. In connection with this we can analyze what the people surveyed think about textbooks and curricula. 38.5% of the teachers think that the textbooks do not contain enough exercises for the development of text comprehension, but this deficiency can be corrected. Only 7.7% considers that there are enough exercises and tasks for this purpose in the textbooks. 92.3% believes that some more effective exercises should be introduced to the textbooks, and according to 7.7% some should be even taken out as the textbooks are already too dense. 61.5% think that the curriculum should be simplified as well, while 30.8% believes that the system of requirements should be made more transparent.

84.6% of the teachers does not hold aloof of the introduction of textual assessments, with the use of which the teachers could evaluate all the sub-skills of the pupils. 76.9% does already assess text comprehension skills separately. All of the teachers included in the research said that it would be very important to develop text comprehension during other classes as well. Many of them could not choose one in particular, still most of them mentioned history.

The question **In your opinion why is developing text comprehension important from the point of view of other subject?** generated the following answers: “Because this is a basic skill, one of the most important parts of the pupils’ learning abilities” ; “Because everything depends on this skill: this determines whether the pupils are capable of learning the lessons, whether they can use what they learn in everyday situations, whether they are capable of being active in the given domain, whether the knowledge is learnt or only temporary” ; “Because text comprehension is in fact the base for learning other subjects as well. Due to the fact that today’s school system is information-centred, 90% of the classes (except for the science classes) rely on the comprehension of different texts. If text comprehension does not function properly, learning will not either. At least not in the individual work of the pupils”; “Pupils would not swot as much as they do now”; “Reading is the only learning method, which can be used by the pupils themselves, and thus they do not have to conform to the teacher’s methods”; “The lack of text comprehension generates a sense of failure in the pupils.”

We can state that the teachers who took part in the research realize exactly the importance of text comprehension in the case of other subjects as well. They know that the students face a sense of failure due to text comprehension difficulties, the fact that lacking this skill the pupils will start using some inappropriate learning methods. In one of the answers the Hungarian language teacher considered today’s school system information-centred, and it would be interesting to find out that after all the curricular changes why do they consider the educational system being information-centred, and which are the factors (administrative, organizational, mentality factors) that hinder the movement towards skill-centeredness.

The teachers taking part in the study had the opportunity to express their experiences in connection with text comprehension without any restraints. Here are some of the opinions: “I believe that even though the importance of books has drastically decreased, they face text comprehension situations much more frequently, than in any other period of history. The amount of knowledge they have to learn to get by in the everyday life tends to move from the verbal domain to the written and unquestionable domains (e.g. the internet, movies, shows, song-lyrics).” This teacher has realized the fact that text comprehension is important not only during Hungarian classes, as the students need to use this skill outside of schools as well, in order to find their place in the professional domains and not to be easily manipulated. The following opinion implies that in addition to international surveys, teachers can notice and observe during their teaching careers visible differences from one generation
to the other. In this opinion the teacher states that the factors which have the greatest negative effect on text comprehension (and probably text production as well) is the personal activity and personal assessment. Pupils will not learn how to cooperate and work together with others, and lack the satisfaction of group achievements, the fact that they as a team managed to settle their values, that each one of them used their personal skills in order to achieve the common goal: “Their vocabulary is very poor, they do not know and do not use synonyms. In my school I am shocked to see the differences (decline) between the different four-year promotions in the field of native language knowledge, may it be the case of writing, expressions, text comprehension, and so on. It is a further problem that in the case of other subjects the majority of tests are multiple-choice, one-word answer tests. We can achieve any results only if the pupils are asked to answer in full, correct sentences in the case of other subjects as well. Unfortunately this requirement is perceived by the pupils as the >>perks of the Hungarian teachers<<. The production of the different types of texts should have a much higher role in the curriculum, and the concepts of the theory of literature could be dealt with in high-school.”

The following two opinions consider text comprehension to be highly influenced by vocabulary, and this can be best developed through reading, but only if the pupils understand what they read. In order to achieve this one needs good texts, some which stir up the interest of the pupils towards reading, and they should be texts, which offer real reading experiences and not a task to perform: “The lack of reading makes their vocabulary to be very poor, their ways of expressions difficult, and their orthography gets worse because of internet surfing.” “My experience is that the secondary school pupils (mainly fifth and sixth graders) have problems in understanding much more words in a given text that the ones which are explained at the end of the lesson. On the other hand they understand several words which are explained. There is need to re-evaluate which words to explain. The really revolutionary change should be made on the level of literary texts, as the texts offered for literary readings are not close to the pupils. We need a re-thinking of compulsory texts, and this means that we, teachers should be more informed on the newest publications.” The following experience is shared by a diaspora Hungarian language teacher: “Teaching in the diaspora my experience is that there are a lot of difficulties on text comprehension that the children with “linguistic disabilities” need to face. Bilingualism, which in some cases is degraded to semi-lingualism, had a decisive effect on the text comprehension abilities of the pupils. School education is not enough to counterweight it, the help of the families is desperately needed, but this is offered to only a fraction of the children. The language use of the parents is usually also bad, the children’s as well, and this affects text comprehension in a negative way.” There is need to rethink the possibilities we can offer in the areas, where language contacts are the strongest, what methods are at hand in order for the children to gladly learn and value their language, whether there is need for separate curricula, a differentiated preparation of the teachers, so that they are capable of handling these differences. The last opinion shows that there is a strong connection between cognitive processes and text comprehension. The teacher realized at the same time that text comprehension happens on several levels, and if the pupils do not reach the level of text comprehension, they lack any motivation to read, but they will experience difficulties in their thinking processes as well: “Very few fifth graders are capable of reading texts, they only read sentences. The understanding of paragraphs is hard for them. The basic thinking operations are not exercised enough, on one hand they do not understand what they read, on the other hand it is hard for them to think. If they do not read (and speak) enough, it will hinder understanding. It is a vicious circle.”

The experiences presented above prove that these teachers realize exactly the difficulties we can identify in connection with text comprehension. It is still hard to grasp what they can do in order to make text comprehension developing more effective, do they know any methods the help of which this can be achieved, and if they do, do they have opportunities to apply them, or because of the lack of time and the constant need to perform, these possibilities are neglected, and do they receive any help from their colleagues teaching other subjects. It is possible that there is need for some changes in elementary education, which could facilitate the better development of text comprehension skills and thinking operations.

The experiences we gained from the class monitoring and worksheet result are partly congruent. During our class monitoring we noticed that most of the teachers favour information-centeredness. This is of course influenced by a high number of factors, the teachers as pupils might have faced the
methods they use now, because they did not have the opportunity to learn other alternatives, the curriculum might be too dense, the topics are hard for the pupils, and the teachers’ work is made impossible by the fact that the literary texts do not address the pupils. Another factor could be the fact that the pupils do not receive any motivation from their parents, knowledge is not really important for them, or they might be incapable of learning higher-level skills, because they are trapped on a lower level, which they cannot overcome without help. These factors are identified by the teachers as well, this we can find out from their experiences they shared. In this respect one may ask the question how we can take all these factors into consideration and make education more effective, and within this, developing text comprehension as well, so that the pupils have better performance, and their text comprehension skills be of an appropriate level for them to attain future goals.

3. Conclusions

Our research has proven that the text comprehension skills of the pupils do not meet the requirements of the native language curriculum. This could be explained by the fact that the changes in curriculum in the nineties did not trigger automatic changes in approaches, moving from information-centeredness towards skill-centeredness. The pupils scored 69.4 points in the worksheet. This result proves that they had several difficulties in performing these tasks. There are throwbacks mainly in the processes of emphasis, drafting – considered important by the curriculum as well as in expressing personal opinion.

The effects the curriculum changes had on the classes themselves were dealt with only indirectly, based on the task performance of the pupils and the questionnaires, but in the second half of our research, with class monitoring and a deeper analysis of textbooks, we tried to examine this area from several points of view. We can conclude that the movement from information-centeredness in the curriculum did not have a direct effect on the approach of the classes themselves. The teachers use frontal class management techniques, methods with the use of which pupils can only mechanically learn. We encountered cooperative learning techniques in only one of the cases, in the alternative school.

The pupils’ objective data (for example the parents’ education, the size of the family library) is connected to their text comprehension skills. Similar to the international surveys, in the case of our research we discovered that there is a connection between social background and school performances. Although the sample was rather small, the parents’ education, the school the pupil goes to as well as the number of the books at home is in correlation with learning averages, Hungarian language and literature marks and the results of the worksheets, that is why it is important to concentrate on the development of the socio-culturally disadvantaged pupils so that they become less discriminated because of this situation. A broader sociological survey could lead to understanding the ways to help these children more effectively.

The Hungarian language marks and the semester average of these pupils correlates with their text comprehension results, the ones who scored high in the text comprehension tasks had higher marks and averages. The learning strategies and styles also correlate with the text comprehension results. During the evaluation of the questionnaires we found that the mechanical and impulsive learning styles had a negative effect on performance. In the group in our research visual and auditory styles are not connected to the levels of text comprehension. At the same time auditory style can be connected to the impersonal style, while visual learning style to the intrapersonal style. We also discovered that Hungarian language marks can be correlated to intrapersonal learning styles, in the case of pupils using intrapersonal styles the Hungarian language and literature marks were higher. The questionnaire on learning styles showed that there are some seventh graders who favour the mechanical style in learning. This learning style has only short term results, and it would be important to teach the children how to use techniques and strategies with the help of which learning becomes more effective. This way the information can be learnt logically, seen as parts of a well-defined system.

In connection with our research on text comprehension we can state the following: the pupils have good results in the global understanding of texts and retrieving explicit information, but have difficulties in implicit information retrieval, although this is of a major importance in the case of unknown texts, as without this the readers do not understand the connections, the chronological order,
the structure of the text, they cannot deduce the meaning of unknown words. They have difficulties in emphasizing important parts as well. In addition to the fact that they get lost in the details in these exercises, they have difficulties in rephrasing the given text so that it meets the requirements. The pupils do not reach the level to think the text through; they cannot ask questions and form an opinion in connection with it.

The change in the approach towards knowledge has produced changes in education as well. According to the present approach school should develop skills and capabilities, which help the pupils in permanent learning, and education should present the pupils with knowledge and skills to help them in everyday life, and in acquiring further information. The main purpose of school education is to teach the pupils learn. One of the most important parts of learning is the reading skill, which helps pupils acquire further knowledge.

Further research could focus on some broader aspects of the pupils’ text comprehension skills, so that we get more precise knowledge on this topic. There is need for a thorough examination of the factors that help or hinder the teaching of text comprehension and that of other skills. We could be effective in teaching if – according to the curriculum – we would facilitate skill-centeredness, and the teachers would develop text comprehension operations not only during native language classes, but in the case of other subjects as well. This can only be achieved if we realize the difficulties the pupils have in text comprehension, and try to find answers to these problems.

**Literature**


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