GENDER DIFFERENCES IN READING COMPREHENSION SKILL AND SUCCESS AT SCHOOL

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Abstract

The aim of this research is to analyze the differences between girls and boys of third and fourth grades of primary school in the skill of understanding a reading text, as well as, the link between this skill and the success of pupils in the subject of Albanian language, math and general success at school. To implement this goal, a text containing adequate questions was selected, and the analysis of the success at school of 141 tested pupils has been conducted. Differences between girls and boys of third and fourth grades have been obtained through the analysis of canonical discrimination and t-test, whereas the link of four applied variables was conducted through Spearman's correlation coefficient and multiple regressive analyses. Statistical data obtained through the canonical discrimination analysis show that there are significant statistical differences between the two genders, while the results of t-test prove that the tested girls are more successful compared to the tested boys only in the variable: correct answers in a reading text, while there are no significant differences in the variables of success at school. The degree of inter-relation between the applied variables in this research is extremely high for the two tested groups. By means of the multiple regressive analyses it has been proved that inter-relation between the reading comprehension skill and success at school is highly influenced by the variables of success in math and in Albanian language. However, based on the obtained results through this research it can be concluded that girls are more skilled in understanding a reading text compared to boys, and that the higher the grades in math and Albanian language the greater the skills of pupils in reading comprehension will be. Further research in reading comprehension skill is recommended in order to identify children with reading disorders as early as possible.

Key Words: Reading Skill, Reading Disorders, Success at School.

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INTRODUCTION

These days life is indeed exciting but demanding for researchers studying reading skills. There is great interest in scientific studies on reading processes and instruction, and many educators are seeking evidence as the basis for decisions about reading instructions, (Ehri, 2005). Acording to Stopar (2003, p. 39), '*reading* is a complex process, which, on the elementary level of learning, demands from young readers to focus on its many aspects. Particular components gradually become automatic, which enables the reader to focus on the meaning of what is read. Sometimes readers still have to apply the strategies they used at the lower levels of reading, for instance, to correct the mistakes made when reading or when they come across the discrepancy between what they have read and their expectations; or when they are faced with an unknown word. An experienced reader can, however, fully place his/her attention to the reading comprehension.'

The National Accessible Reading Assessment Projects (cited in Cline at al 2006, p. 2) has drafted three *kinds of reading definitions*:

- Reading is decoding and understanding a written text. Decoding requires the translation of the symbols of writing systems (including Braille) into the spoken words they represent. Understanding is determined by the purpose of reading, the context, the nature of the text, and the readers' strategies and knowledge.
- Reading is decoding and understanding a text for particular purposes of a reader. Readers decode written text by translating text to speech, and translating directly to meaning. To understand a written text, readers engage in constructive processes to make the text meaningful, which is the end goal or product.
- Reading is a process of deriving meaning from the text. For the majority of readers, this process involves decoding a written text. Some individuals require adaptations such as Braille or auditorization to support the decoding process. Understanding the text is determined by the purpose of reading, the context, the nature of the text, and the readers' strategies and knowledge.

According to Beech (2005, p. 54), *phases of reading development* for teachers are:

(1) It is important for the beginners to learn all the letters and to use this information to relate to their own speech processes. This includes learning graphemes such as 'ch', 'sh' and 'th'.

(2) Children need to develop awareness of phonemes and relate this to their graphemic knowledge.

(3) In the first grade, teachers should help all children to achieve the complete alphabetic phase. The major grapheme-phoneme inter-relations, particularly those involving vowels, need to be learned.

(4) Children need practice learning unfamiliar words both by breaking down their graphemes to form sounds and by using analogy. This will be easier for students in the complete alphabetic phase.

(5) Learning spelling is an important part of reading development. The initial phase is important in order to be able to create appropriate graphemes from the constituent sounds. Memorizing word lists should not started until this is mastered because it will make learning such lists easier.

(6) Later work should expand to learning morphemes, affixes and families of related words.

For good readers, *gaining meaning* from print quickly and effortlessly, like breathing and speaking is a natural part of life. For these men and women, it is almost unimaginable how something that seems to come so naturally could be difficult for others (Shaywitz et al, 2008, p. 451). In their study of assessing *motivation for reading*, Baker and Wigfield (1999, p. 453) stated: 'engaged readers are motivated to read for different *purposes*, utilizing knowledge gained from previous experience to generate new understandings, and participate in meaningful social interactions around reading.' As for the *knowledge* about the purpose of reading and knowledge about the information provided by conventional features of text, they are related to both age and reading comprehension. These have been summarized by Cain at al. (2004, p. 34): 'older readers and better comprehenders were able to better explain the sorts of information that may be provided by the introduction and ending of a text. Children with specific comprehension difficulties demonstrate impairments in their ability to structure stories and have impoverished knowledge about the information contained in certain features of the text. If knowledge about narrative structure is well learned and can be activated with little cost to processing capacity, it is plausible that efficient retrieval and use of such knowledge may reduce the adverse effects of limited processing capacity.' Linked to this, Wren (2001, p. 44) noted that the: '*teacher* can help the student develop an appreciation for the different types of reading comprehension (literal comprehension, inferential comprehension, and evaluative comprehension), and the different types of text (expository, narrative, formal, and informal) and can introduce the student to the differences in literary genres. The student can be encouraged to move from a mastery of oral reading to mastery of more efficient and mature silent reading, and along with teaching explicit strategies to improve comprehension; the teacher can help the student learn to monitor his/her own comprehension of text as he/she reads.' Kezar and Kinzie (2006, p.150) suggest that: 'teachers have some responsibility to provide a setting that facilitates students' engagement and learning and gets students to participate in activities that lead to success.'

Some children find it difficult to learn reading although they have normal intelligence, appropriate educational opportunities and absence of emotional disorders. These children have a reading age that is two or more years behind their chronological age and have *reading disorders*. The most common notion in the world for such disorders is Dyslexia – which derives from the Greek word "dys" ("δυς") – poor or inappropriate – and "lexis" ("λέξις") – word or language. Therefore, persons with reading disorders are called persons with dyslexia or dyslectic persons. Otherwise, the notion of dyslexia was first introduced in 1887, by the German ophthalmologist Berlin from the city of Stuttgart, who used this notion to describe the case of an adult with

acquired dyslexia, respectively the loss of reading ability as a consequence of brain damage (Critchley, 1970).

According to Vellutino et al (2004, p. 2), such disorders have been estimated to *occur* in 'approximately 10% to 15% of school age children and tend to be accompanied by specific deficits in cognitive abilities related to reading and other literacy skills.' Well known researchers in the field of dyslexia Shaywitz and Shaywitz (2003, p. 147) highlighted that: 'dyslexia represents one of the most common problems affecting children and adults; the *prevalence* in the United States is estimated to be 5% to 17% of school-age children, with as many as 40% reading below grade level. Dyslexia (or specific reading disability) is the most common and most carefully studied of the learning disabilities, affecting at least 80% of all individuals identified as being learning disabled. Dyslexia is a persistent, chronic condition that stays with the individual his or her entire life.'

With regards to *gender*, results of the Connecticut longitudinal study (Shaywitz et al, 1990, p. 998), indicated no significant differences in the prevalence of reading disability in research-identified boys compared with research-identified girls in either second (17[8.7%] of 196 boys; 15[6.9%] of 216 girls) or third grade (18[9.0%] of 199 boys; 13[6.0%] of 215 girls). In contrast, school identification resulted in the classification of 27 (13.6%) out of 198 boys and seven (3.2%) out of 216 girls in second grade and 20 (10.0%) out of 199 boys and nine (4.2%) out of 215 girls in third grade. This data indicate that school-identified samples are almost unavoidably subject to a referral bias and that reports of an increased prevalence of reading disability in boys may reflect this bias in ascertainment. These findings caution against relying solely on schools for identification of reading-disabled children.'

In another study Shaywitz and Shaywitz (2005, p. 1301) summarized that: 'dyslexia is both familial and heritable. *Family history* is one of the most important risk factors, with 23 percent to as much as 65 percent of children who have a parent with dyslexia reported to have the disorder. A rate among siblings of affected persons of approximately 40 percent and among parents ranging from 27 to 49 percent provides opportunities for early identification of affected siblings and often for delayed but helpful identification of affected adults.'

There is a consensus about the *characteristics* and learning processes typical of pupils with learning difficulties. Watson and Boman (2005, p. 44) pointed that: 'generally, they are regarded as inactive and inefficient learners, often off-task, and easily distracted. They are often unable to integrate prior knowledge and their own experiences into what they are learning. These factors combined with learned helplessness and accompanying socio-emotional problems often result in the development of poor self-esteem and expectation of non-performance in academic areas.' Alvermann (2001, p. 679) stressed that: 'the literature identifies such under-performing students variously as reluctant, resistant, struggling, disaffected, disenchanted or at-risk individuals who for whatever reason, are not achieving their full potential'. Self-image, research such as that

conducted by Atkinson et al (2002, p.159) shows that: ‘up to seventy percent of eighth grade students think reading is boring; these are the same children who started their reading education with enthusiasm and interest in the first and the second grade.’ According to Allen (2000, p. 1): ‘the research is consistent in its assertion that only a small minority of struggling adolescent readers have problems attributable to a learning disability; weak reading comprehension, rather than an outright inability to read, is the main affliction of most struggling readers in middle and high schools.’

According to Taylor and Nesheim (2000/2001, p. 309): ‘*optimal learning* occurs in an environment of intrinsic purposeful engagement through supportive instructional methods.’ Without doubt, since ancient times when man learned to use printed symbols to convey words and ideas, there have been those who struggled to decipher the code. Just how many are affected, the basis of the difficulty, and most importantly, the most effective, evidence-based approaches to *educating dyslexic children* and young adults were questions that had to wait until quite recently for resolution (Shaywitz et al., 2008).

Brooks (2000, p. 19) suggested: ‘children should begin to perceive the world as a place where their strengths rather than their weaknesses are spotlighted. If this shift in perception occurs, then when they are expected to assume the tasks of adulthood, they will do so with increased comfort, confidence and success.’

Tested PUPILs and methods

The sample of tested pupils

To implement the goals of this research a sample of 64 girls and 77 boys from four elementary schools in Pristine has been used. Otherwise, the sample of third grade and fourth grade pupils was chosen because, at this age, the automatism of necessary skills in reading and writing comes into being. Linked to this, we are providing an excerpt from a well-known author on reading and writing disorders, Davis who himself had such problems: ‘sometime at the age of 9 (third grade) a dyslectic reaches the peak of frustration. If he cannot find ways how to overcome or to overpass his problem, he will remain in the third grade for the rest of his life. The school has already become a burden to him and he is desperate’ (Davis and Braun, 2001, p. 90). In other words, if at this age such disorders are not detected and avoided, then this problem will continue to linger for the rest of the life.

Sample of variables

Usually the comprehension of a reading text is verified through answers to given questions dealing with the content of the respective text. Thus, a suitable text has been chosen for the age of pupils included in the research, and 10 questions have been formulated linked to the text to be read. As the questions were only verbal, each pupil has been tested individually. Each correct

answer in the question test (QUES) has been given one point, therefore the possible scale of points is 0 – 10.

Owing to the support of teachers, it was possible to collect the data regarding the success of tested pupils in the subject of Albanian language (ALBA), math (MATH), and the overall success of pupils (OVSU) during the school year.

Statistical analysis of results

In order to achieve the aim of this research differences between girls and boys of third and fourth grades have been calculated through the analysis of canonical discrimination and t-test, then basic statistical parameters, respectively the arithmetic mean ($\overline{X}$), standard deviation (σ), standard error of arithmetic mean ($\sigma\overline{x}$), as well as, minimal results (Min) and maximum results (Max) for applied variables. Correlation between all the variables in this research for the group of tested girls and boys was assessed through Spearman's correlation coefficient and multiple regressive analyses.

RESULTS AND DISCUSSIONS

Analysis of the canonical discrimination of applied variables for girls and boys of third and fourth grades

In table 1, the results of the analysis of the canonical discrimination of the four used variables in this research have been presented for girls and boys of third and fourth grades. The table shows that there are significant statistical differences between the girls and boys in tested schools in the variables that deal with reading comprehension and the variables of success in school. The significance (Sig) of this space is 0.26.

Table 1 Results of the canonical discrimination analysis of applied variables for girls and boys of third and fourth grades

Discriminative Function	Canonical correlation	Wilks' Lambda	Df	Sig	C_G	C_B
1	.262	.931	4	0.26	.296	- .246

Basic statistical parameters for applied variables and the results of t-test for girls and boys of third and fourth grades

As shown in Table 2, basic statistical parameters have been calculated in this research: arithmetic mean ($\overline{x}$), standard deviation (σ), standard error of arithmetic mean ($\sigma\ \overline{x}$), as well as, minimal results (Min) and maximum results (Max) of the four variables dealing with reading comprehension and the variables of success in school. For the analysis of differences between the tested girls and boys, the t-test was used.

Table 2 Basic statistical parameters for applied variables and the results of t-test for girls and boys of third and fourth grades

Variable	Girls of 3rd and 4th grades					Boys of 3rd and 4th grades					t-test	2 Tail Sig
	$\overline{x}$	σ	$\sigma_{\overline{x}}$	Min	Max	$\overline{x}$	σ	$\sigma_{\overline{x}}$	Min	Max		
QUES		1.976	0.247	2	10	7.23	2.270	0.259	1	10	2.805	0.006
ALBA	4.61	0.884	0.111	1	5	4.31	0.977	0.111	2	5	1.880	0.062
MATH	4.41	1.080	0.135	1	5	4.18	1.167	0.133	1	5	1.176	0.242
OVSU	4.67	0.736	0.092	2	5	4.48	0.912	0.104	2	5	1.352	0.179

The table shows that the only differences in favor of tested girls were noted in the variable of the question test (QUES), where the validity of the t-test (2 Tail Sig) is 0.006. Girls of third and fourth grades have in average sequenced more words in the sentences (8.25), compared to boys of the same grades (7.23). Based on the variables of success at school (ALBA, MATH and OVSU), there are no significant differences between the tested boys and girls.

Correlation between the applied variables for the tested groups of girls and boys

Spearman's correlation coefficient was used to examine the scale of correlation between the four applied variables for the group of tested boys and girls of third and fourth grades. Results from Table 3, show that the level of correlation between the all applied variables in this research is high in regard to the tested boys and girls.

Table 3 Correlation between the applied variables for the group of girls and boys of third and fourth grades

Spearman's rho		QUES	ALBA	MATH	OSUC
QUES	Correlation Coefficient	1.000	.498**	.472**	.433**
	Sig. (2-tailed)	.	.000	.000	.000
	N	141	141	141	141
ALBA	Correlation Coefficient	.498**	1.000	.855**	.889**
	Sig. (2-tailed)	.000	.	.000	.000
	N	141	141	141	141
MATH	Correlation Coefficient	.472**	.855**	1.000	.888**
	Sig. (2-tailed)	.000	.000	.	.000
	N	141	141	141	141
OVSU	Correlation Coefficient	.433**	.889**	.888**	1.000
	Sig. (2-tailed)	.000	.000	.000	.
	N	141	141	141	141

**. Correlation is significant at the 0.01 level (2-tailed).

Multiple regression analysis of variables question test (QUES) with variables of success in Albanian (ALBA), success in math (MATH) and overall success (OVSU) for tested pupils

Table 3 shows the correlation between criteria variables of question test (QUES) and three predicative variables of success in Albanian language (ALBA), success in math (MATH) and the variable of overall success (OVSU) which is statistically valuable at the level of 0.000, with F-test 16.580 and the scale of freedom 3 and 137. The correlation criteria is high (R=0.516) between the criteria variable (QUES) and the system of predicators which consist of three variables, and is common at 27%. In regard to the correlation between the two systems, both MATH (Sig T=0.024) and ALBA (Sig T=0.025) variables have a significant impact, but not the variable OVSU (Sig T=0.103). Therefore, it can be concluded that through the test compiled specifically for this research (QUES), the success of pupils can be predicted in the subject of math and Albanian language, but not in the overall success.

Table 3 Multiple regression analysis of the variable question test (QUES) with variables of success in Albanian (ALBA), success in math (MATH) and overall success (OVSU) for the tested pupils

R	R^2	F	SIG F	DF1	DF2
0.516	0.266	16.580	0.000	3	137
Variable	**r**	**SE BETA**	**BETA**	**T-TESTI**	**SIG T**
MATH	0.488	0.357	0.419	2.279	0.024
ALBA	0.487	0.441	0.430	2.266	0.025
OVSU	0.428	0.548	-1.641	-1.641	0.103

CONCLUSION

Results of this research have proven that girls of third and fourth grades are more skillful in understanding the read text compared to boys of the same classes. However, there are no differences in gender as far as the success in Albanian language, math and overall success is concerned. As for the correlation between reading comprehension skill and the success in school, variables of success in math and Albanian language have a significant impact, therefore it can be concluded that the higher the marks in the subject of math and Albanian language, the greater the skills of children in reading comprehension will be. It can also be concluded that through proper test dealing with the research of reading comprehension, we can not only predict the success of pupils in the subjects of math and Albanian language, but we can also make an early identification of children with reading disorders. Due to this, it is recommended to apply as many tests of this nature by teachers as possible in order that all pupils conclude successfully their education.

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