

Research on writing skills through the test of rewriting

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Abstract

The research analyzes writing skills through rewriting tests of 50 pupils of third and fourth grade of a primary school in Prishtina. To assess the writing skills, four tests have been chosen: the test of rewriting numbers, the test of rewriting sentences, the questionnaire for parents and the questionnaire for pupils. Statistical analysis of the results obtained through the t-test confirms that there are significant statistical differences only for the rewriting test of sentences in favor of third grade pupils, as well as in the variable questionnaire for parents in favor of fourth grade pupils. On the other hand, there are no significant differences in the variable of the rewriting test of numbers and the questionnaire for pupils as far as the tested pupils of third and fourth grade of primary school are concerned. By comparing differences between boys and girls of third and fourth grade, a conclusion was drawn that the girls are better than boys only in the variable rewriting test of numbers. Results obtained also show that the questionnaire for parents compared to the questionnaire for pupils are the best indicators for identifying writing disorders in pupils of third and fourth grade of primary school. Further research on writing skills aimed at identifying as early as possible children with writing disorders would be more than desirable.

Key terms: writing disorders, rewriting tests, questionnaire for parents, questionnaire for pupils.

Introduction

Writing has an extraordinary importance for the life of a contemporary person. Whereby, the general human culture of inheritance is transmitted, protected, recorded and today's values are archived and information is transmitted in different places worldwide. Writing does not interlock in itself only the formation of letters and exercised motor activity of the hand. It is the most complex activity of human being because it integrates almost all brain systems; therefore, many years are needed for its full development. Related to this, Bryce et al. state that: "many processes of the brain affect the development of these skills, respectively: attention – plan and general execution of the project of writing; spatial production – planning of page for writing; memorisation of – words, spelling and rules; language – fluency, expression; high knowledge on – analysis and processing the

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impressions of the audience and purpose; as well as, graphic-motor activity – manuscript, legibility”² Whereas, Bowen et al. provide this definition: “Writing is a complex motor behaviour in which linguistic elaborations, psycho-motor, biologic, as well as mechanic, closely cooperate with maturity, development and learning processes.”³

According to Karande et al.: “writing disorders are related to a heterogenic group of neuro-behavioural damages that are manifested via many unexpected, specific, and resistant difficulties in acquiring and using the effective writing skill despite the conventional instructions, unimpaired senses, normal intelligence, perfect motivation, as well as adequate social and cultural opportunities.”⁴ According to Dyslexia Association of Croatia, usually there is a combination of difficulties that a person has, and which are expressed through these *specific mistakes* in writing: disability in connecting grapheme with phoneme; change of similar graphical and phonetic letters (depending if one writes with upper case letters or hand written letters); reflective writing of letters and numbers (because of spatial orientation disorders); structural mistakes (additions, substitutes and absence of letters or syllables); as well as difficulties in following the direction of writing. Despite the abovementioned difficulties, people with writing disorders or dysgraphia have also some other *non-specific difficulties* which can occur in other people too, such as grammatical and spelling mistakes; delay, disorder, illegibility, as well as inequality of handwriting as per size and inflexion of letters.⁵

Otherwise, writing disorders may be classified in four groups:

- The first subtype is phonological dysgraphia, that is “writing and spelling disorders in which the spelling of unfamiliar words, non-words, and phonetically irregular words are impaired” These pupils tend to have trouble spelling the sounds and rely on the visual aspect of letters;
- The second subtype is surface dysgraphia where pupils have trouble with orthographic representations of words, which makes the student rely too heavily on sound patterns; phonological dysgraphia.
- Mixed dysgraphia is the third subtype of dysgraphia. This type refers to students having trouble with mixing up letter formations and having trouble with spelling tasks. Otherwise, this dysgraphia is a combination of the first two types. Recalling letter formations is hard for these students to do because there are so many instructions or rules that they get confused and; therefore, have inconsistent spellings of words;
- Finally, semantic/syntactic dysgraphia is a grammatical problem in which pupils have difficulty with how words can be joined to make complete and comprehensive sentences.⁶

During the research of space and time in writing, Wann et al. stated that: “in the early stages of writing acquisition, there are no differences between pupils with good

2. Bryce, B., Cammeron, J., Donovan, S., Hartman, J., Helmlth, J., Lynch, B., Mittelman, L., Munt, J.: *Writing disorders (Dysgraphia)*, *Academic Support Center*, vol. 7, nr. 3, 2006, f. 7.

3. Bonvini C. M., Smits – Engelsman, Gerard P. Van Galen: *Dysgraphia in Children: Lasting Psychomotor Deficiency or Transient Developmental Delay?* *Journal of Experimental Child Psychology*, 67, 1997, f. 164.

4. Karande, S., Kulkarni, M.: *Specific Learning Disability - The Invisible Handicap*. *Indian Pediatrics*, vol. 42, 2005, f. 315.

5. Hrvatska Udruga za Disleksiju: *Disgrafija – Teškoće Pisanja*, *Bilten broj 4*, Zagreb, 1999, f. 4.

6. Fejfer, S. G.: *Subtypes of language based dysgraphias*, *Public Information Resources*, Boston, Massachusetts, 2001, f. 1.

handwriting and poor handwriting in the speed of writing letters and words. Also, there are no differences found in the task of writing sentences. Whereas, tasks of writing letters were more effective in bringing up differences of readability of the writing between poor writers and the good ones, thus, they may be considered as meaningful measures for assessing early stages of writing”.⁷

Pupils with writing disorders are able to be good writers through appropriate support. Pupils, especially those with writing disorders, must be: provided with a consistent, positive and emotional environment for writing; create authentic attributes of writing that are related to familiar or comprehensive subjects for the pupils; given the possibilities during assigning tasks; provided with explicit instructions during the writing process; provided with clear instructions during specific styles of writing; as well as, promote the writing through guided drafts and feedback.⁸

Purpose of this research is the analysis of expression in writing through rewriting tests and questionnaires for school age pupils, respectively, for pupils of the third and fourth grade of primary school.

Research and methods

Sample of the researched

This research covered 50 pupils of two classes of the primary school “Hasan Prishtina”, in Prishtina. 20 of them are in the third grade and 30 of them are in the fourth grade. With respect to the gender, 23 of them are girls and 27 boys.

Otherwise, the samples of the pupils of the third and fourth grade were chosen because in this age the necessary skills become automated for reading and writing.

The sample of variables

As a measuring instrument for the research of expression in writing of children of school age, respectively, pupils of the third and fourth grade of the primary school the following tests were used: the test of rewriting numbers (TRN), the test of rewriting sentences (TRS), the questionnaire for parents (QFP), as well as the questionnaire for pupils (QFP).

The test of rewriting numbers (TRN) consists of 10 combinations of different numbers, such as: 1001, 19487, 325601, 589, 123449, 020341, 23798, 5596, 49 and 5456969. The task of research is to rewrite them correctly. Maximum number of points in this test is 10.

The test of rewriting sentences (TRS), consists of seven written sentences with capital letter and consisting mainly of words that begin with same vowels. Words applied in this test were:

1. AI IKU ME AEROPLAN.
2. ËMA BËN ËMBËLSIRË.
3. EJANI EDHE JU EDHA.
4. IZRAELITI I ÌZOLUAR.
5. OFIQARI TE OXHAKU.
6. UDHËTARE ME UISKI.
7. YNDYRAT E YLBERIT.

7. Wann, J. P., Jones, J. G.: *Space-time invariance in handwriting: Contrasts between primary school children displaying advanced or retarded handwriting acquisition. Human Movement Science, 5, 1986, f. 276.*

8. Bruning, R., Horn, C.: *Developing motivation to write, Educational Psychology, 35, 2000, f. 37.*

Each written word that has a mistake is assessed with 0 points. Therefore, theoretically the scoring is from 0 – 7 points.

Questionnaire for parents (QFP) consists of 20 questions or tasks the parents have to answer by circling words “yes” respectively “no”, on the right side of test:

1. You have tried to teach your child to read before he went to primary school, but you did not succeed.
2. You remember if he had any difficulties in learning to read in the first grade of primary school.
3. The child ranks among the weakest readers in class.
4. Your child makes many mistakes while reading.
5. Because of poor reading he achieves less success at school.
6. Reads aloud because in that way he learns easier and understands better.
7. While learning he moves his lips and pronounces words in silence.
8. Some long and difficult words he barely reads even after several attempts.
9. He often gets tired while reading and he needs to interrupt reading.
10. During his free time, after finishing his school assignments, he never reads.
11. You push him to read during his free time.
12. While reading he often misses a line or he reads the same line again.
13. He is afraid to read aloud in class and thus avoids it.
14. He often does not understand what he reads.
15. At school the others laugh at him when he makes mistakes.
16. Besides mistakes in reading he also makes mistakes in writing.
17. Handwriting of your child is illegible.
18. He himself sometimes cannot read what he has written.
19. While writing he often displaces letters.
20. He often makes mistakes while writing long words.

In this questionnaire only the answers with “yes” have been taken into consideration. The difference of results in this questionnaire is from 0 – 20 points.

Questionnaire for Pupils (QFP) consists of these ten questions, respectively assignments that have to do with writing and reading skills:

1. I remember that it was difficult for me to learn reading at the first grade of primary school.
2. I barely understand and learn if I do not read aloud.
3. I cannot read some long and difficult words even after several attempts.
4. I have experienced others laughing at me because of my reading mistakes.
5. Besides mistakes in reading, I also make mistakes in writing.
6. It sometimes happens that I cannot read what I have written.
7. When I read it often happens that I miss out a line or read again the same line that I have already read.
8. I am a bit afraid to read aloud in class.
9. I usually do not enjoy reading. I read because I have to.
10. Frankly speaking, I do not like reading.

The duty of a pupil is to read these tasks carefully and to circle them with “yes” or

“no”. Only positive answers have been taken into consideration in this questionnaire, thus the maximum number of points is ten.

Statistical analysis of results

Elaboration of quantitative results is realised with the help of mathematical, statistical and contemporary methods. For the four variables applied in this research basic statistical parameters are calculated: arithmetic average (\bar{x}), standard deviation (σ), standard mistake of arithmetic average ($\sigma\bar{x}$), as well as minimum results (Min) and maximum ones (Max). Differences between pupils of the third grade and the fourth grade, and also between girls and boys of the third and fourth grade, have been calculated through t-test.

Results and discussion

Results of the analysis of differences in writing between pupils of the third and fourth grade.

The results of the differences obtained through t-test, respectively “2-Tail Sig” or “validity of t-test” in writing variables: the test of rewriting numbers (TRN), the test of rewriting sentences (TRS), the questionnaire for parents (QFP), as well as the questionnaire for pupils (QFP), between pupils of the third and fourth grade are shown in table no. 1.

Table no. 1. Basic statistical parameters for writing variables and results of t-test of pupils of the third and fourth grade.

Variable	Third grade pupils					Fourth grade pupils					t-test	2 Tail Sig
	\bar{x}	σ	$\sigma\bar{x}$	Min	Max	\bar{x}	σ	$\sigma\bar{x}$	Min	Max		
TWP	5.25	2.00	0.45	0	7	2.71	2.64	0.50	0	7	3.62	0.001
TWN	9.60	1.57	0.35	3	10	9.29	1.51	0.29	4	10	0.70	0.488
QFP	2.42	1.74	0.40	0	6	5.67	4.57	0.83	0	18	- 2.96	0.005
QFP	4.20	2.48	0.56	0	9	3.10	2.28	0.42	0	9	1.61	0.113

In the variable the test of rewriting sentences (TRS), important differences were recorded since the value of t-test is 3.62, respectively, 0.001. Fourth grade pupils have averagely written much less sentences compared to those of the third grade. These data show that third grade pupils have been more attentive in writing sentences in the mentioned test.

Calculated t-test for the variable of the test of rewriting numbers (TRN), does not represent significant differences between pupils of third and fourth grade who were subject to the research. Differences in the results between two researched grades can be noticed only between minimum results (III grade – 2, and IV grade – 4)

In the variable, the questionnaire for parents (QFP), value of t-test is - 2.96, respectively, its validity is 0.005, which presents that significant changes are in favour of the pupils of the fourth grade.

Averagely, parents of the third grade pupils have given 2.42 positive answers, whereas those of the fourth grade pupils have given 5.67. It must be emphasised that differences between maximum results (III grade – 6, and IV grade – 18) are evident also.

Comparing all the realised parameters in the variable the questionnaire for pupils (QFP), it is noticed that there are no significant differences between pupils of the third and fourth grade. The average of positive answers in submitted tasks of this test is 4.20 for third grade pupils and 3.10 for fourth grade pupils.

Results of the analysis of distinctions in writing between girls and boys of the third and fourth grade.

In table number 2, results of the differences are presented which were provided through t-test in writing variable: test of rewriting sentences (TRS), test of rewriting numbers (TRN), questionnaire for parents (QFP), as well as questionnaire for pupils (QFP), between girls and boys of the third and fourth grade who were subject to testing.

Table no. 2. Basic statistical parameters of writing variable and results of t-test of girls and boys of the third and fourth grade.

Variable	Girls of the III and IV grade					Boys of the III and IV grade					t-test	2 Tail Sig
	\bar{x}	σ	$\sigma\bar{x}$	Min	Max	\bar{x}	σ	$\sigma\bar{x}$	Min	Max		
TWP	4.22	2.65	0.55	0	7	3.36	2.71	0.54	0	7	1.11	0.273
TWN	9.87	0.46	0.10	8	10	9.00	2.00	0.40	3	10	2.04	0.048
QFP	3.64	3.09	0.66	0	10	5.04	4.63	0.89	0	18	- 1.21	0.231
QFP	3.22	2.54	0.53	0	9	3.81	2.29	0.44	1	9	- 0.87	0.386

As it can be noticed from table no. 2, in the variable of the test of rewriting sentences (TRS), there were no significant differences notices between two genders, although third and fourth grade girls have averagely written more sentences compared to boys of corresponding grades.

Whereas, in the variable of the test of rewriting numbers (TRN), there were significant differences recorded in favour of girls who were subject to testing, the value of t-test is 2.04, respectively 0.048. Girls of the third and fourth grade have averagely written more numbers (9.87), compared to boys of corresponding grades (9.00).

In the variable of the questionnaire for parents (QFP), there were no significant differences noticed between the genders, despite the fact that parents of girls have averagely given 3.64 positive answers, whereas those of boys have given 5.04 positive answers. It must be stated that differences between maximum results (girls' parents – 10, and boys' parents – 18) are also evident.

Comparing all the realised parameters in the variable of the questionnaire for pupils (QFP), it is noticed that there are no significant differences between the pupils of the both genders, respectively, girls and boys of the third and fourth grade. The general average of positive answers in submitted assignments of this testing is 3.22 for girls, respectively, 3.81 for boys of the third and fourth grade of primary school.

Conclusion

This research has been carried out through a sample of 50 pupils who attend classes in two separate classrooms of a primary school in Prishtina.

The aim of this research is to analyze the written expression through rewriting tests

and questionnaires of children of school age, respectively of pupils of third and fourth grades of primary school.

To assess the writing skills of pupils covered in this research a test of rewriting sentences, a test of rewriting numbers and a questionnaire for parents and pupils have been used.

Through statistical analysis of results, respectively the t-test, it has been proven that there exist significant statistical differences in the variable the test of rewriting sentences in favor of pupils of the third grade, as well as in the variable the questionnaire for parents in favor of pupils of fourth grade. However, no important statistical differences were identified in the variable the test of rewriting numbers, as well as in the questionnaire for pupils when it comes to pupils in the classes covered by this research.

As for comparing differences between genders, respectively the tested girls and the boys of third and fourth grades, a conclusion could be drawn that girls did better compared to boys only in the variable the test of rewriting numbers, whereas in three other variables applied in the research there are no statistical differences between them.

In general, the results of this research also show that the questionnaire for parents compared to the questionnaire for pupils is the best indicator for the identification of writing disorders among pupils of third and fourth grade of primary school. In other words, parents of children with writing disorders are the best identifiers of problems of their children.

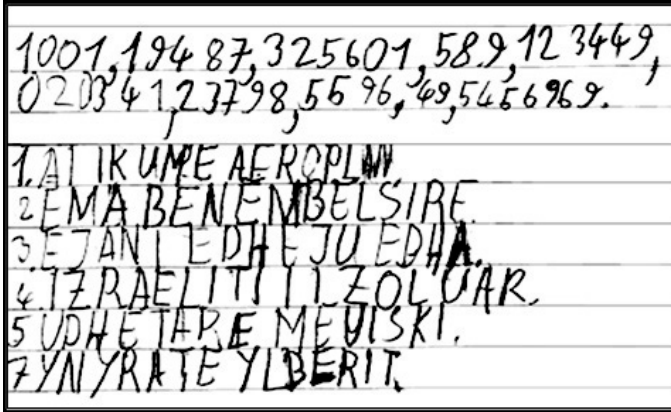
To conclude, we recommend carrying out further research in writing skills in order to identify as early as possible children with writing disorders.

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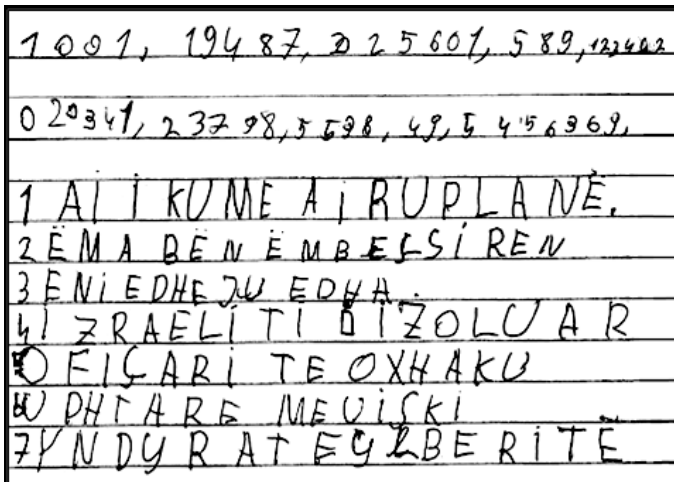
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ANNEX

Examples of the tested pupils' handwriting:



V. H., third grade pupil.



E. H., fourth grade pupil