

Characteristics of reading and understanding of hearing impaired students in classes VI-VIII

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Abstract

Good reading has a very important role in the development of children with hearing impaired; also reading in explicit way is one of the crucial factors which affect the oral language development of children with hearing impaired. The best form and possibility of improvement, development of oral language, development of communicating, receipt of information, knowledge, and ideas over the world, is reading. When the auditory perception is damaged reading is poor. Hearing impairment causes a lot of problems in the development of personality of children with hearing impairment in these fields: poor development of vocabulary, poor quality of lexica, poor quality of sentences, and disorder in articulation. The purpose of this research is to verify the following: 1-Speed of reading of hearing impaired children, 2-The number of errors, 3-The kind of errors, 4-To understand the text in the context of the degree of hearing impairment, age (class), success in school and gender. This theoretical-experimental study was made with students from two schools; special school "Mother Teresa" in Prizren and Primary School "Elena Gjika" in Prishtina (class attached). The research included a total of 32 students (respondent) 27 students (respondent) from special schools "Mother Teresa" in Prizren and 5 elementary school students "Elena Gjika" Prishtina, all these students are with hearing impairment. From 32 students involved in the research, 23 were male and 9 female. The research was done by applying a text fables "The fox and the raven" watched and analyzed in terms of three dimensions. The research results have shown that students with hearing impairments have considerable problems in many aspects; in terms of speed of reading, students with hearing impairment have stagnated compared with their peers in the ratio 8/1. In terms of reading errors have stagnated considered being incomparable. In terms of understanding the text students with hearing impairment have stagnated compared with their peers in 8/1. Significant differences exist even within the group of deaf students in the three aspects of the study based on three dimensions of text, the terms of the speed of reading, significant differences exist also in the manifestation of errors and understanding of the text. Differences are also evident in terms of the degree of the hearing impairment, in terms of age and gender within the group of the deaf; this means that individual characteristics of students represent important facts.

Keywords: *Disabled hearing, hearing impairment, age damage, period of deterioration.*

Introduction

Reading is one of most important forms of learning, and communicating in contemporary world. Meanwhile for the children with hearing impairment, reading is even more important because through reading, students with hearing impairment receive basic (fundamental) knowledge about the world, society, science, culture. Through reading unvoiced children come with the best possible way in contact with the world. Reading for children with hearing impairment constitutes a crucial issue, in the aspect of development of understanding language concepts skills, and development of ability of speech.

Reading process, characteristics, forms, coding and decoding of letters, sounds, syllables, words, sentences and periods are only some of the difficulties that every child with hearing impairment is faced during learning and reading process. According to Woodworth (1950, 29), "Good reading is conditioned from good hearing than from good sighting". Visual aspect show low positive correlation of essence of reading, acoustic element in reading process is more significant in rhythm, accent, melody and articulation.

Reading, definition and elements

Reading in the simplest sense of the word means recognition of characters in printed and written form, correct pronunciation of letters, understanding the coherence of letters, syllables, words, sentence and periods, understanding and articulating (linguistic meaning).

Reading is also awareness of the meaning of the relation of any symbol or entire system of linguistic symbols as well as understanding of meaning, message (psychological meaning). Reading as a process entails textual understanding and in this way creates the meaning of letters, signs, symbols, rhythm, melodies, syllables, intonations, words and sentences (pedagogical meaning). According to (Goodman & Niles, 1971, 11), "Reading is a psycholinguistic process that greatly influences the interaction between language comprehension and expression". Reading is a dynamic psycho-linguistic process through which the reader takes the message from the characters written in graphical form." (Goodman, 1971, 12). The reading process for hearing impairment students is a more complicated process that requires a different approach, dedication and intense activity in feedback.

Visual perception of characters (grapheme), auditory perception of characters (phoneme), emphasizing letters (articulation) are only some of the challenges, problems that a student with hearing impairment is faced with. Naturally reading process is a very complex process, while for student with hearing impairment, reading is not only difficult because of the impossibility of communication with the social environment, but also because of unformed cognitive and linguistic base. The Basic elements that affect in the reading process are: Visual analyzer (form, size, clarity, depth, colour, similarity of letter, symbol), Auditory analyzer (emphasis, intonation, melody, auditory colour of letter, phenomena, syllables, words and sentences, development of understanding and phonemic and phonological awareness), Speech and language (phoneme and grapheme).

Developing articulation in students with hearing impairment mostly depends on the techniques of visual perception (using mirror, hand under chin, lip reading etc) than

cognitive or auditory technique, because those bases are not developed, especially psycho-linguistic basis is low developed. Therefore we can fairly conclude that reading is an integration process between visual perceptions of letters, speaking organs (auditory perception, under the auditory analyzer control).

Reading of students with hearing impairment

The ways of linguistic developments and reading of children with hearing impairment are different from the ways of development of reading of children with normal development. Development of reading and language of children with hearing impairment is specific, transversal (indirect) from the normal and natural development. Irregular development in the childhood phase makes impossible the creation of linguistic base for children with hearing impairment. As a result of hearing damage this category of children has a deficit in the development of cognitive abilities, linguistic, learning and reading. From a very large number of researches who have contributed with the researches of reading of children with hearing impairment, we will highlight, (Pinter & Patterson, 1916, 21), in researching with children with hearing impairment of age 14 to 16 years old. They reached to the conclusion that children of this category reached results at the same level as a normal 7 years old child in normal school.

National rate of reading speed of children with hearing impairment in USA was given by (Wrightston, Arnow & Moskowitz, 1963, 46). They tested 5307 students with hearing impairment of age 10 to 16 years, and came to the result, that children with hearing impairment need up to 5 years to improve, to upgrade reading according to their peers with normal development. This means that the difference between children with normal development and children with hearing impairment is 5/1.

One more explicit research was made by (Di Francesca, 1972, 51), with 17000 students of age 6 to 21 years old, with a chosen subtext (Stanford Achievement Test). She came to the conclusion, that children with hearing impairment for one academic year have managed to internalize 20% compared to their peers with normal hearing. In some researches done by the Sector for Demographic Studies (Trybus & Karchmer, 1977, 73), it was concluded that the equivalent success of reading for persons with hearing impairment reaches the level of a student of IV and V grade (class) of regular elementary school.

In a research done from (Brimerit, 1972, 23), who underwent a research with 467 students of England and Wales of age 15 – 16 years old, which was quoted by (Konrad, 1979, 33), ascertained that students with hearing impairment of age 15-16 old had reading capabilities of a 9 year old student of normal schools. But better results have shown researches done in Denmark, Sweden and New Zealand. Equivalence was that 16 year old children with hearing impairment have reading capabilities of 10 years old normal children.

According to (Mykelbust, 1960, 31), children with hearing impairment have stagnated compared with their peers, the difference is evident in the statistical records for all age groups and both sexes. The degree of stagnation according to (Mykelbust, 1960, 20), increases from year to year, whereas to their peers with hearing capabilities there is an opposite tendency. Students with hearing impairment at the age of 9 year old have reached the standard scale 3.21, whereas their peers without hearing impairment have reached

21.37. Students at the age of 15 with hearing impairment have reached the average 11.32, whereas their peers without hearing impairment have reached 63.30. The overall improvement for deaf students was 8.11 meanwhile for students who can hear 41.93. Based in researches that we refer we can conclude that students with hearing impairment have a very slow progress in the reading process.

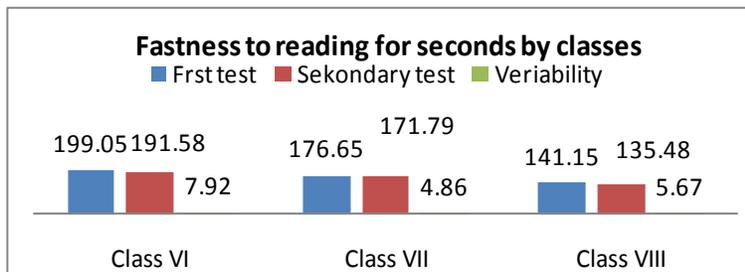
The basic aim of this research is to define the ratio between reading, speed of reading, errors in reading and understanding of reading of students with hearing impairment.

3. Scientific Finding

3.1. Speed of reading

Essential stagnation of children with hearing impairment, comes as a result of hearing damage, then traditional education system, fragmentary curriculum (unmodified according to the needs and acceptance opportunities), inadequate methods, old strategies, the absence of visual aids, the absence of technical auxiliary tools and many other factors. The structure of hearing damage of 32 students (Respondents) gave these results: With total hearing damage 15.62% (or 5 students), with serious hearing damage 31.25% (or 10 students), with medium hearing damage 25% (or 8 students) while with slight hearing damage 28.12 % (or 9 students).

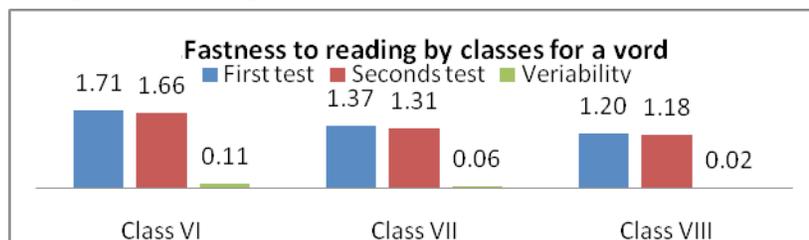
The speed of reading in seconds



Graph 1. Arithmetic Presentation for speed of reading by classes

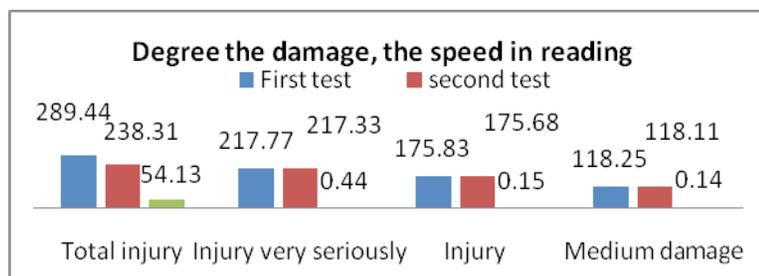
Students who participated in the research about reading speed, on reading tests have given these results in reading speed. Students of VI grade, 103 words in the first test they read in an average of 199.05 seconds, meanwhile in the second test 6 months later, they read 103 words with an average of 191.58 seconds. The difference in advancement in reading from the first test to the second one is of an average of 7.92 seconds. Students of VII grade read in the first test 103 words with an average time of 176.65 seconds, meanwhile in the second one they read 103 words and spent 171.79 seconds. The difference in the advancement of reading from the first test to the second one is of an average of 4.86 seconds. Students of VIII grade in first test read 103 words with an average of 141.15 seconds; meanwhile in the second one they read 103 words for 135.48 seconds. The difference in advancement in reading speed from the first test to the second one is of an average of 5.67 seconds.

The speed of reading in seconds



Graph. No. 2 reading speed for a word-by classes

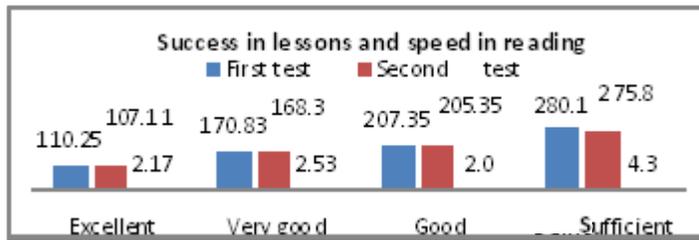
The average of reading one word for the students of VI grade in the first test is 1.71 seconds; meanwhile in the second test is 1.66 seconds. Students of VII grade read one word in the first test read for 1.37 seconds, meanwhile in the second one, they read one word in 1.31 seconds. Students of VIII grade in the first test read one word for an average of 1.20 seconds, meanwhile in the second one they read one word for 1.18 seconds. The best individual result was 103 words for 60.91 seconds.



Graph 3. Graphical Presentation of reading speed arithmetic space under disability in hearing

In the graphic No. 3 we ascertain that hearing damage is one of main causes of slowly progress in reading, respectively on the speed of reading. We have split the respondents in 4 groups, based on the level of disability of hearing. In the first group there are students with a total disability of hearing over 120 dB. In this group there are 5 students. The speed of reading in this category is at an average as follows: In the first test 103 words this group read in 289.44 seconds, meanwhile in the second one 103 words were read at 238.31 seconds. Progress in the second test is of 51.15 second. In the second group there are students with hearing damage from 71 to 91 dB. In this group 10 students were tested, with the results of 217.77 seconds for 103 words, meanwhile in the second one 103 words were read in 217.33 seconds in average. In the third group there were children with medium hearing impairment up to 56-70 dB, in this group 8 students were tested. The speed of reading of this group in the first test was of an average of 175.83 seconds for 103 words, meanwhile in the second one after six months, 103 words were read in 175.68 seconds. In the fourth group with 9 students there were students with a slight hearing damage between 41-55 dB. The speed of reading in the first test was 103 words for 118.25 seconds, meanwhile in the second one 103 words were read for 118.11 seconds.

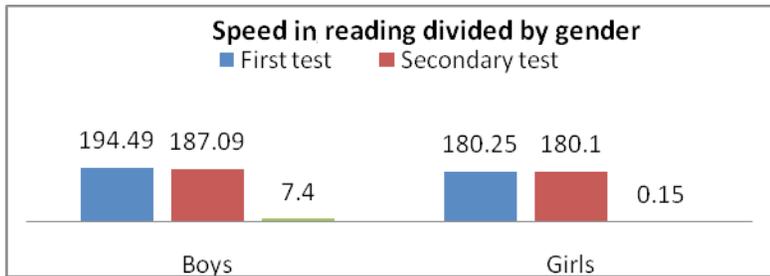
The speed of reading in seconds



Graph No. 4 Success of students in school and reading speed

In Graph No. 4 is presented the success of students in the language subject, and speed of reading based in success at school. Students were separated in 4 groups. In the first group there were students with excellent success (six students), in the second group there were students with very good success (seven students), in the third group there were students with good success (ten students) and in the fourth group there were students with sufficient success (nine students). Students with an excellent success in the first test read 103 words with an average of 110.25 seconds; meanwhile in the second test 103 words were read with an average of 107.11 seconds. Students of the second group read 103 words and an average of 170.83 seconds; meanwhile in the second one they read 103 word with an average of 168.30 seconds. Students of the third group read 103 words in 207.35 seconds in the first test; meanwhile in the second one they read 103 words with an average of 205.10 seconds. Students of the fourth group read 103 words in the first test for 280.10 seconds; meanwhile in the second one they read 103 words for 275.80 seconds. The differences in the speed of reading from the first test to the second one, held six months later is as follows: excellent students have progressed in the speed of reading from the first test to the second one by 6.86 seconds. Whereas students with sufficient success have progressed in the speed of reading from the first one with 4.03 seconds. The average reading rate of students with good hearing is 3-4 words per second. Whereas excellent students with hearing impairment read one word for 1.038 seconds, meanwhile students with sufficient success read one word for 2.67 seconds. This shows the stagnation between students with hearing impairment compared to students with good hearing. Students with hearing impairment with excellent success in school have stagnated in reading compared to the students with good hearing by 5.52 seconds per word; meanwhile students with hearing impairment with sufficient success at school have stagnated in reading compared to the students with good hearing by 10.68 seconds per word.

Number of errors in 30 words



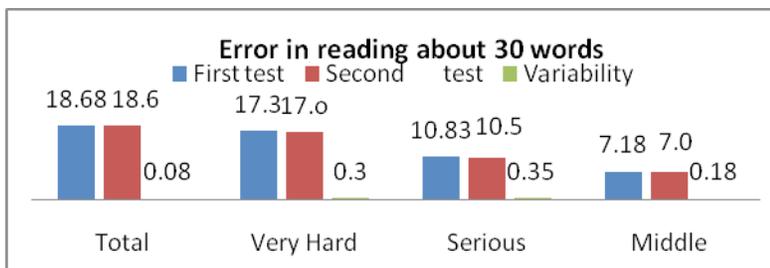
Graph No 5- graphic indicator (speed in reading by gender)

In graph No. 5 are shown the results of the speed of reading separated by sexes. 23 Male students and 9 female students were tested. In the first test, male students read 103 words with an average of 194.49 seconds; meanwhile in the second one they read 103 words with an average of 187.09 seconds. The difference between the first and second test is 7.40 seconds. Whereas female students read 103 words in the first test in 180.25 seconds, meanwhile in the second test they read 103 words with an average of 180.10 seconds. Female students have reached better results than male students.

Errors during reading

Hearing damage causes many obstacles in the development of reading, speaking, vocabulary, sentence structure, language semantic and phonologic developments.

Number of errors in 30 words



Graph 6. The environmental graphic indicator arithmetic (damage to hearing and reading errors)

In graphic No. 6 are presented errors in the reading of students with hearing impairment. The number of errors in reading increases, depending from the degree of hearing disability, correlation with the level of disability of hearing and number of errors. In the first test the number of errors is 18.68 in 30 words, meanwhile the number of errors in the second test is 18.60 errors in 30 words. Students with serious hearing impairment in the first test made 17.30 errors, meanwhile in the second test they made 17.00 errors per 30 words. Students of the third group with medium hearing impairment made 10.83 errors in the first test,

meanwhile in the second 10.50 errors and the fourth group of students with the slight hearing impairment made 7.18 errors in the first test, meanwhile in the second 7.00 errors.

Types of errors

During the reading of tests, we found these types of errors:

No.	Types of errors before testing second test	First test	Second test
1.	Difficulty in connection font	2.52	2.10
2.	Reading the letters separately	0.60	1.18
3.	Repetition of letters read	2.77	2.05
4.	Loss of line in text	1.18	0.90

1. Difficulties in linking more characters to words - number of errors was expressed in 23 words. Most errors were found in these 5 words: fox-10.26%; good morning-14.58%; singing-11.88%; laudatory-13.5%; at once-12.96 %.
2. During the reading of digraphs, a small number of students did not know that these digraphs represented a single letter.
3. The repeat of characters was almost insensitive; in 10 words they repeated only the first character of a word.
4. From 32 students, only 2 of them lost the row during reading.
5. With difficulties during reading were faced 10.92% of students.

The Understanding of text

The process of understanding the text is more complicated for children with hearing impairment, because of two components of analysis and syntheses. Three factors are connected with this process, namely: similar content of text with knowledge and experience, relatedness and understanding of words in the text as well as the composition of the text.

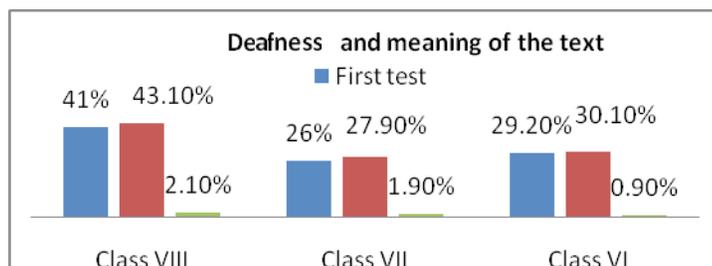


Chart No. 7 Understanding the text according to classes in %

The best results in the understanding of text have shown students of VIII grade, reaching 41% of understood text; meanwhile in the second test of reading they understood 43.10%. The students of VI grade arrived at 29.20% of understood text in the first test and 30.10% in the second one. Students of VII grade have reached 26% of understood text, and 27.9% in the second one.

Conclusions

This paper proved that hearing impairment affects the speed of reading. Good Listening is a good precondition for success in school and affects the speed of reading. In this context, this paper confirmed also that there are differences in the speed of reading between sexes. On the other hand the difference between children with hearing impairment and normal ranges in a proportion of 5 to 8. No substantial differences exist regarding the number of errors in reading during the first and second testing. Substantial differences exist regarding errors in reading between the sexes. There are no essential differences regarding the understanding of text between the first and second testing.

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