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CORRELATIONS AND REGRESSION OF THE INITIAL AND FINAL SOUND ON READING WORDS IN THE SLOVENIAN LANGUAGE

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Abstract/Izvleček The level of pupils' acquired phonological awareness at the beginning of the 1st grade of primary school presupposes a high probability of ability to perform initial reading. The purpose of the study was to check the correlation and regression between the initial and the final sound and reading words in the Slovenian language. Accordingly, 192 first-grade pupils were included in the sample. The purpose of the study was to check the correlation and regression between the initial and the final sound and reading of the words. The importance of the findings highlights the promotion of voice awareness in kindergarten.

Keywords:
phonological awareness, initial/final sound, word reading, kindergarten, 1st grade

Korelacije in regresija začetnega in končnega glasu na branje besed v slovenskem jeziku

Usvojena raven glasovnega zavedanja učencev na začetku 1. razreda osnovne šole predpostavlja veliko verjetnost zmožnosti začetnega branja. Namen raziskave je bil preveriti korelacijo in regresijo med začetnim in končnim glasom ter branjem besed v slovenskem jeziku. V vzorec je bilo vključenih 192 učencev 1. razreda. Rezultati izvedene raziskave kažejo, da obstaja korelacija in regresija med zaznavanjem začetnih ter končnih glasov in branjem besed. Pomen izsledkov poudarja spodbujanje glasovnega zavedanja v vrtcu.

Ključne besede:
fonološko zavedanje, začetni/končni glas, branje besed, vrtec, 1. razred

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Introduction

Adults promote the understanding of the concept of writing in block letters among children in preschool, namely, how to move the hand from left to right, enable the reading of familiar words, phrases, and sentences, connect speaking and writing or writing and reading, etc. Children are quick to perceive that what is said can be written down and then read. Children are surrounded daily by the familiar concept of writing. Children are provided with a source of satisfaction, which refers to the promotion of a positive attitude towards reading, expectations in reading and motivation of children in the desire to learn to read.

Numerous definitions of phonological awareness have been offered, each with relatively well-developed theoretical underpinnings and some empirical support. Alternative definitions vary in generality from highly exclusive to highly inclusive of different phonological awareness skills. Phonological awareness skills are distinguished by the task performed and size of the unit of sound that is the focus of the task. Examples of different phonological awareness skills that are distinguished by the type of task performed include blending sounds together, separating (segmenting) words into their constituent sounds, recombining sounds of words, and judging whether two words have some sounds in common. Distinctions among phonological awareness skills based on unit of *word structure* include whether syllables are the focus of the task or whether smaller intrasyllabic units, like onsets, rimes, or phonemes, are the focus (Anthony and Francis, 2005, p. 255).

Early learning of phonological awareness is highly recommended. Most levels of phonological awareness are introduced in a playful way in the preschool period or in kindergarten and are continued in primary school (McGee and Ukrainetz, 2009; Mesmer and Griffith, 2005; Zorman, 2005; Manyak, 2008; Lonigan, Anthony, Phillips, Purpura, Wilson and McQueen, 2009; Strickland, 2011). Phonological awareness was found to be the best predictor of children's ability to distinguish alphabetic text from nonalphabetic text (Anthony, Williams, McDonald, Corbitt-Shindler, Carlson and Francis, 2006).

The least demanding activity is rhyme, then the division of sentences into words, the articulation and merging of syllables, the articulation and merging of initial and final sounds, and the articulation and merging of individual sounds in a word, which represents the most demanding level (Chard and Dickson, 1999; Ropič, 2017). The study (Burns, Maki, Helman, McComas and Young, 2018) investigated the relationships between the phonological awareness levels of children from high-poverty areas. The results of the measure of letter-sound knowledge and phonological awareness (initial phoneme isolation, blending, and segmenting) showed a strong connection, while rhyming did not.

Phonological awareness skills develop in a child according to his age and mental development. Learning should include the promotion of phonological awareness in kindergarten, including wide experience with a diverse collection of exercises, including the systematic nature of exercises that promote the child's dominant skills and include phonological awareness exercises. All the above contribute to reading and writing. Even in the preschool period, we find large individual differences in the ability to perceive the initial and final sounds (Ropič, 2014; Ropič, 2016). Many children easily grasp the instruction for phonological awareness, but some find it more difficult to understand, so they need additional explanation. It is important to teach children the process (e.g., breaking down words into sounds) so that children can help themselves in critical cases. Educators should strive to ensure that children reach appropriate levels. Certain research (McGee and Ukrainetz, 2009; Manyak, 2008) shows that performing a sequence of exercises, as well as the variety and appropriateness of words can be beneficial in developing phonological awareness. Planned and systematic learning of phonological awareness, namely the implementation of a sequence of exercises, a variety of tasks and appropriateness of words, is causally related to the level of development of sounds in children or students (Mesmer and Griffith, 2005).

It is important that in the preschool period, parents and educators assist by reading various types of books (e.g., fairy tales, encyclopaedias, poetry) and provide a pleasant reading experience (Strickland, 2011). Preschool educators need to be good observers and lesson planners as well as well-trained early childhood education professionals (Venn and Jahn, 2004).

Emerging literacy in the preschool period is often reflected in the fact that children, according to their writing abilities, write down spoken sounds with written symbols – letters, or connect individual sounds into words (Grginič, 2005).

A longitudinal study conducted in the late preschool period found that letter knowledge and phonological sensitivity are the only predictors of decoding (Lonigan, Burgess and Anthony, 2000). Similarly, research (Hogan, Catts and Little, 2005) suggests supporting the promotion of phonological awareness in the preschool period.

The authors of the study Lonigan and others (Lonigan et al., 2009) also believe that mastery of phonological awareness is an important milestone in the process of learning to read. The authors have studied the structure of phonological learning in preschool children. Phonological awareness and phonological memory are both important when reading words. At the same time, it is important that the structure of these skills exists unchanged in both test groups of preschool children (3.3 years and 4.8 years). The authors of the study find a correlation between phonological awareness and reading words at the end of kindergarten. Early-grade reading is also predicted by longitudinal research (Nithart, Demont, Metz-Lutz, Majerus, Poncelet and Leybaert, 2011; Gellert and Elbro, 2017) confirming that phonological awareness makes an important contribution to predicting children's reading development in kindergarten and in the first half of 1st grade. It also noted the reduced impact of phonological awareness on reading at the end of 1st grade. Promoting the knowledge of sounds in young children has an effect that increases over time, as confirmed by a survey of nearly 1000 children (Piasta, Farley, Philips, Anthony and Bowles, 2018).

An experimental study (Jones, Reutzel and Fargo, 2010), which compared the effects of two different forms of kindergarten work, confirmed the importance of systematic work in promoting the acquisition of early reading skills. The study does not show greater effectiveness for one type of teaching in phonological awareness, knowledge of the alphabet and in reading words.

Any prior knowledge in the field of phonological awareness, reading and writing that pupils bring to the 1st grade of primary school is a treasured advantage, so we must appreciate and upgrade it (Ropič, 2014; Ropič, 2016; Ropič Kop, 2020). A study of spontaneous reading ability at the beginning of the1st grade before the beginning of systematic literacy training (Ropič Kop and Klar Zadravec, 2021) on a specific population of pupils in Slovenian primary schools showed a statistically significant difference between groups of pupils in reading words, reading text, and reading comprehension.

Greater prior knowledge in reading abilities was shown by pupils in the group where there were significantly fewer pupils with linguistic and cultural differences.

For several decades, researchers have been recognizing the important role of phonological awareness in the development of initial reading. Therefore, it is extremely important to continue teaching phonological awareness, even in the first years of school. Strickland (2011) believes that learning phonological awareness is a key component in the overall development of reading.

Teachers should use specific strategies in which students carefully observe spoken words (e.g., by naming the picture), at individual levels of phonological awareness, namely the initial sound, final sound, number of sounds in the word, and word division into individual sounds. In this phase, the role of the teacher is crucial, as he provides appropriate assignments, gives real-time feedback and, if necessary, helps pupils.

Research (Paratore and Jordan, 2007) reports on the positive effects of a home-kindergarten and home-school partnership. The joint support of all participants affects cognitive development and linguistic skills. Homework takes care of certain areas such as vocabulary, comprehension of storytelling, phonological awareness and conversation with texts or interpretation of texts.

The purpose of the research was to find the connection between the variables, namely the perception of the initial/final sound and the reading of words of varying difficulty, which we categorised into four groups.

Research questions

We set the following research questions: What is the connection between the perception of the initial/final sound in a word? What is the connection between the perception of the initial sound in a word and reading words of varying difficulty (group 1: two-letter words; group 2: three-letter words; group 3: four-letter words; and group 4: five- to seven-letter words) and the connection between the perception of the final sound in a word and reading words of varying difficulty (groups 1, 2, 3, and 4)? And what is the influence of predictors on certain criteria.

Methodology

Sample

The research was conducted on a specific population, on a random sample of 192 first graders.

Pupils attended four different primary schools in north-eastern Slovenia, in the Styria region.

The sample was gender-balanced, with 100 boys and 92 girls participating. The research is based on a descriptive and non-experimental method of empirical pedagogical research.

The study took place in September 2019, at the beginning of the 1st grade and presented the prior knowledge of pupils in the field of phonological awareness and reading before systematic literacy instruction.

It was carried out with each pupil individually, as we obtained the necessary data exclusively through individual examination of pupils.

Instrument

Pupils named sixteen selected pictures and perceived and said the initial and the final sound of the words. We carefully recorded data during this activity. Pupils could get a maximum of 16 points for a properly perceived initial sound, as well as 16 points for a properly perceived final sound. Pupils who had already been reading tested themselves by reading sixteen words. These followed each other in difficulty level, so we divided them into four difficulty groups: the reading of word group 1, where all words had two letters each; the reading of word group 2, where all words had three letters; the reading of word group 3, where all words had four letters each; and the reading of word group 4 where three words had five letters each and two of them one consonant set and one seven-letter word and two consonant sets. Reading the words in the first group required pupils to decode two-letter sounds or establishing a letter-voice relationship and merging sounds into words. This means that the difficulty of reading increased from group to group. For correctly read words, they received a maximum of four points in each group of words.

Data processing

The data were then computer-processed with the SPSS statistical data processing program. The most basic way to determine the correlation of variables is to calculate the correlation, which is a measure of the relationship. We measured it with the Pearson correlation coefficient, which has values from -1 to 1.

Using this, we determined whether the variables were independent of each other or if there was a relationship between them.

There can be very weak connectivity (0 to ±0.20, weak connectivity (±0.20 to ±0.40), moderate connectivity (±0.40 to ±0.70), strong connectivity (±0.70 to ±0.90), or very strong connectivity (±0.90 to ±1) between these variables. We were interested in whether the perception of the initial sound is related to the perception of the final sound and whether the successfully developed perception of the initial/final sound is related to reading words. We were also interested in whether there is a correlation between the perception of the initial sound and the perception of the final sound, and whether the perception of the initial/final sound affects the reading of words.

After the established correlation between the given variables, we also determined the regression. Since there is a statistically significant correlation between all variables, we also calculated regression. This determined the regression of predictors on the criterion. We predicted the value of the criterion with the value of the predictor.

Research results

Correlation results for independent variables

By calculating the correlation, we found the correlation of two variables: the initial and the final sound. There is a moderate correlation between these two variables (±0.40 to ±0.70). The correlation between the initial and final sound is positive ($r = 0.657$) and statistically significant ($p < 0.000$). Pupils who perceived the final sound well were also more successful at perceiving the initial sound.

Table 1: Pearson's correlation coefficient (r, p) between dependent variables (initial sound, final sound) in 1st grade pupils

		Initial sound	**Final sound**
Initial sound	r	1	0.657
	p		0.000
Final sound	r	0.657	1
	p	0.000	

We examined the influence of the correlation between the initial sound and reading the words in group 1, which is shown in Table 2. We were also interested in the influence of the initial sound on reading words with differing degrees of difficulty.

We divided the reading of words into four difficulty groups. The first group of words (group 1) contained the easiest words, which in reading represented only the connection of two letters in a single word.

The correlation between the initial sound and the reading of group 1 words is positive ($r = 0.487$) and statistically significant ($p < 0.000$). A well-developed ability to perceive the initial sound made it easier to read the easiest set of words. There is a moderate correlation (± 0.40 to ± 0.70) between the variables. Pupils reading word group 1 had a well-developed ability to perceive the initial sound.

The correlation between the initial sound and the reading of words in group 2 is also positive ($r = 0.476$) and statistically significant ($p < 0.000$). Word group 2 contained words with three letters. The ability to perceive the initial sound was also reflected in reading slightly more demanding words.

There is a moderate association (± 0.40 to ± 0.70) between the initial sound and the reading of words in group 2.

The correlation between the initial sound and the reading of group 3 words is positive ($r = 0.439$) and statistically significant ($p < 0.000$). Slightly harder words, where each word had four letters, comprised group 3. Because these were even more complex words compared to previous words, pupils were slightly less successful at reading this group of words, despite having successfully perceived the initial sound. There is a moderate correlation (± 0.40 to ± 0.70) between these two variables.

The correlation between the initial sound and the reading of group 4 words is positive ($r = 0.386$) and statistically significant ($p < 0.000$). The reading of words in group 4 required reading the hardest words, three of which had five letters each and one seven letters. In the most demanding group, consonant clusters increased the difficulty of reading: one consonant cluster in each of two words and two consonant clusters in one word. As expected, it turned out that the effectiveness of the perception of the initial sound alone would not allow reading the most difficult words. There is a weak correlation (± 0.20 to ± 0.40) between these two variables.

The correlation between the reading of group 1 words and the reading of words from group 2 is positive ($r = 0.916$) and statistically significant ($p < 0.000$). Most pupils who successfully read word group 1 were successful at reading word group 2. There is a very strong connection (± 0.90 to ± 1) between these two variables.

The correlation between the reading of group 1 words and the reading of group 3 words is positive ($r = 0.848$) and statistically significant ($p < 0.000$). Not all pupils who successfully read word group 1 were successful at reading word group 3. There is a strong correlation (± 0.70 to ± 0.90) between the variables.

The correlation between the reading of group 1 words and the reading of group 4 words is positive ($r = 0.781$) and statistically significant ($p < 0.000$). The result confirms that not all pupils who read word group 1 successfully could read word group 4, which contains the most difficult words in the whole selection. There is a strong correlation (± 0.70 to ± 0.90) between the variables.

The correlation between the reading of group 2 words and the reading of group 3 words is positive ($r = 0.900$) and statistically significant ($p < 0.000$). Most pupils who were successful at reading group 3 words were also successful at reading the group 2 words. There is a very strong connection (± 0.90 to ± 1) between these two variables.

The correlation between the reading of group 2 words and the reading of group 4 words is positive ($r = 0.840$) and statistically significant ($p < 0.000$).

As expected, it turned out that pupils had significantly more difficulty reading the most difficult group of words than reading the words in group 2. These variables are strongly related (± 0.70 to ± 0.90).

The correlation between the reading of group 3 words and the reading of group 4 words is positive ($r = 0.886$) and statistically significant ($p < 0.000$). Not all the pupils who successfully read the group 3 words managed to read all the words of group 4. There is a strong connection (± 0.70 to ± 0.90) between these two variables.

Table 2: Pearson's correlation coefficient (r, p) between dependent variables (initial sound, reading the words) of 1st grade pupils

		Initial sound	**Reading the words 1**	**Reading the words 2**	**Reading the words 3**	**Reading the words 4**
Initial	r	1				
sound	p					
Reading	r	0.487	1			
the words 1	p	0.000				
Reading	r	0.476	0.916	1		
the words 2	p	0.000	0.000			
Reading	r	0.439	0.848	0.900	1	
the words 3	p	0.000	0.000	0.000		
Reading	r	0.386	0.781	0.840	0.886	1
the words 4	p	0.000	0.000	0.000	0.000	

The correlation between the final sound and the reading of group 1 words is positive ($r = 0.649$) and statistically significant ($p < 0.000$). The more pupils developed the ability to perceive the final sound, the more successful they were at reading the least difficult words. There is a moderate correlation (± 0.40 to ± 0.70) between the variables.

The correlation between the final sound and the reading of words from group 2 is positive ($r = 0.666$) and statistically significant ($p < 0.000$). The ability to perceive the final sound successfully influences the reading of simple words, each of which contains three letters. There is a moderate correlation (± 0.40 to ± 0.70) between the final sound and the reading of words from group 2.

The correlation between the final sound and the reading of group 3 words is positive ($r = 0.668$) and statistically significant ($p < 0.000$).

Pupils who had a well-developed ability to perceive the final sound were also successful at reading slightly more demanding words. There is a moderate correlation (± 0.40 to ± 0.70) between these two variables.

The correlation between the final sound and the reading of words in group 4 is positive ($r = 0.620$) and statistically significant ($p < 0.000$).

There is a moderate correlation (± 0.40 to ± 0.70) between the variables. Pupils who successfully developed the ability to perceive the final sound are more successful in reading. Nevertheless, we find that success in reading the most difficult words or word group 4 is influenced by factors other than the ability to perceive the final sound.

The correlation between the reading of group 1 words and the reading of group 2 words is positive ($r = 0.916$) and statistically significant ($p < 0.000$). Pupils who read word group 1 could mostly also read word group 2. There is a very strong correlation (± 0.90 to ± 1) between these two variables.

The correlation between the reading of words in group 1 and the reading of words in group 3 is positive ($r = 0.848$) and statistically significant ($p < 0.000$). These variables are strongly related. Pupils who successfully read the easiest words could also read the much harder words that had four letters each.

The correlation between the reading of group 1 words and the reading of group 4 words is also positive ($r = 0.781$) and statistically significant ($p < 0.000$). There is a strong correlation (± 0.70 to ± 0.90) between the variables.

Pupils who read word group 1 were not equally successful in all cases of reading the words from group 4. As expected, it turned out that some pupils could not read the most demanding word group successfully.

The correlation between the reading of group 2 words and the reading of words in group 3 is positive ($r = 0.900$) and statistically significant ($p < 0.000$). These variables are very strongly related (± 0.90 to ± 1). Pupils who successfully read word group 3 were also successful at reading word group 2.

The correlation between the reading of group 2 words and the reading of group 4 words is positive ($r = 0.840$) and statistically significant ($p < 0.000$). Pupils who successfully read the words from group 4 also read the words in group 2. There is a strong correlation (± 0.70 to ± 0.90) between the variables.

The correlation between the reading of group 3 words and the reading of group 4 words is positive ($r = 0.886$) and statistically significant ($p < 0.000$). There is a strong correlation (± 0.70 to ± 0.90) between these two variables.

Pupils who were successful in reading group 3 words were mostly also successful in reading the more difficult words in group 4.

Table 3: Pearson's correlation coefficient (r, p) between dependent variables (initial sound, reading the words) of 1st grade pupils

		Final sound	**Reading the words 1**	**Reading the words 2**	**Reading the words 3**	**Reading the words 4**
Final sound	r	1				
	p					
Reading the words 1	r	0.649	1			
	p	0.000				
Reading the words 2	r	0.666	0.916	1		
	p	0.000	0.000			
Reading the words 3	r	0.668	0.848	0.900	1	
	p	0.000	0.000	0.000		
Reading the words 4	r	0.620	0.781	0.840	0.886	1
	p	0.000	0.000	0.000	0.000	

The results of regression analysis

Table 4 shows that there is a statistically significant correlation between the variables, so regression is justified. 43.2% of the variance in the ability to perceive the final sound explains the ability to perceive the initial sound. Pupils who successfully perceive the final sound are also successful at perceiving the initial sound.

Table 4: The result of the regression analysis for the influence of the ability to perceive the initial sound on the final sound in the 1st grade

	β	p	R2	p
Initial sound				
Final sound	0.657	0.000	0.432	0.000

Table 5 presents the influence of the initial sound on the reading of word group 1, for which regression analysis was used. The initial sound has a statistically significant effect (Beta = 0.487, $p < 0.000$) on the reading of word group 1. Thus, 23.7% of word group 1 reading variance is explained by the ability to perceive the initial sound. In reading the words from group 1, those pupils were more successful who could successfully recognize the initial sound.

Table 5: The result of regression analysis for the influence of the ability to perceive the initial sound on reading word group 1 in the 1st grade

	β	p	R2	p
Initial sound				
The reading of word group 1	0.487	0.000	0.237	0.000

The ability to perceive the initial sound is statistically significant in explaining (Beta = 0.476, $p < 0.000$) the ability to read the word in group 2, with 22.6% of the variance of the criterion being explained.

Pupils who showed significantly less ability to perceive the initial sound in the test, also showed lower ability at reading the words in group 2, or they did not read these successfully.

Table 6: The result of regression analysis for the influence of the ability to perceive the initial sound on reading word group 2 in 1st grade

	β	p	R2	p
Initial sound				
Reading words 2	0.476	0.000	0.226	0.000

Initial sound perception does have a statistically significant effect on achievement in the reading of word group 3. Pupils with better developed phonological awareness in initial sound perception are also more successful at reading more complex words that consist of four letters. The results in Table 7 show that there are 19.2 variances in the criterion of reading group 3 words. Pupils with a successful ability to perceive the initial sound are more successful in reading the words in group 3.

Table 7: The result of regression analysis for the influence of the ability to perceive the initial sound on reading group 3 words in the 1st grade

	β	p	R2	p
Initial sound The reading of words 3	0.439	0.000	0.192	0.000

The results in Table 8 show that in the criterion of reading group 4 words, there are 14.9 variances. Pupils with good prior knowledge of phonological awareness in the ability to perceive the initial sound are more successful even when reading the most demanding words.

Table 8: The result of regression analysis for the influence of the ability to perceive the initial sound on reading group 4 words in the 1st grade

	β	p	R2	p
Initial sound The reading of words 4	0.386	0.000	0.149	0.000

Table 9 shows the existence of correlation and the ability to perceive the final sound at the beginning of the 1st grade in the reading of word group 1, with 42.1% variance. Pupils with effective final sound perception were also more successful at reading the words in group 1.

Table 9: The result of regression analysis for the influence of final phonological perception ability on reading group 1 words in 1st grade

	β	p	R2	p
Final sound The reading of words 1	0.649	0.000	0.421	0.000

Table 10 shows the statistically significant effect of final sound perception on reading the words in group 2 (Beta = 0.666, $p < 0.000$), representing 44.3% of the variance of this criterion. The reading of word group 2 is more challenging and therefore challenges reading ability. The power of the predictor increases in the reading of word group 2. Pupils who have successfully developed the ability to perceive the final sound are also more successful in reading.

Table 10: The result of the regression analysis for the influence of the ability to perceive the final sound on reading group 2 words in the 1st grade

	β	p	R2	p
Final sound The reading of words 2	0.666	0.000	0.443	0.000

We also find a statistically significant effect of final sound perception on the reading of words in group 3 (Beta = 0.668, $p < 0.000$). Regression analysis shows that 44.6% of the variance in reading word group 3 is explained by the ability to perceive the final sound. Reading words in this group is even more challenging. Reading ability is affected by the ability to perceive the final sound as well as by other factors that we did not control in our study.

Table 11: The result of the regression analysis for the influence of the ability to perceive the final sound on reading group 3 words in the 1st grade

	β	p	R2	p
Final sound The reading of words 3	0.668	0.000	0.446	0.000

The regression coefficients in Table 12 show that they are statistically significant. Thus, 38.5% of the variance in the reading of group 4 words is explained by the ability to perceive the final sound. Pupils with good final sound perception are more successful even whenn reading the most difficult words.

Table 12: The result of regression analysis for the influence of final sound perception ability on reading group 4 words in 1st grade

	β	p	R2	p
Final sound The reading of words 4	0.620	0.000	0.385	0.000

We found that the selected levels of phonological awareness (initial/final sound) were statistically significantly related. Moreover, all predictors were statistically significant in explaining the selected criteria.

Discussion

The study showed the connection between two variables: the ability to perceive the initial and the final sound. Research (Ropič, 2014; Ropič 2016; Ropič, 2017; Ropič Kop, 2020) confirms that individual levels of phonological awareness develop in a certain order, depending on complexity. In our case, the research confirms that the ability to perceive the initial sound develops before the ability to perceive the final sound.

There is a moderate association between the ability to perceive the initial sound and the reading of word groups 1, 2, and 3.

In these reading cases, the words were two-, three-, or four-letter words. Pupils who successfully read these words also had a well-developed ability to perceive the initial sound. Pupils with a successfully developed ability to perceive the initial and final sound could read the individual words. There is only a weak correlation between the ability to perceive the initial sound and the reading of the most difficult words (group 4), and simultaneously, this represents the weakest link between the two variables in our study.

There is a very strong connection between the reading of word groups 1 and 2, which is reflected in the fact that pupils who could successfully read word group 2 also read word group 1. The reading of words succeeded according to difficulty level, so this result did not surprise us. There is a strong correlation between the reading of word group 1 (the easiest words) and the reading of word groups 3 and 4.

At the same time, the proportion of pupils who could not read the hardest and most difficult words is increasing. Those pupils who successfully read the hardest words had also read the easiest words. There is a very strong connection in the reading of word groups 2 and 3. Almost all pupils who could read word group 2 could also read the words in group 3. The difficulty level of reading word group 3 increases only slightly, extending the range of letters by one letter, with the final letter in all cases a vowel, which slightly increases the complexity (Lenin, 2007). We also note a strong correlation between the reading of word groups 2 and 4 and the reading of word groups 3 and 4. Pupils who could read the group with the most difficult words could also read the easier words.

Our study shows a moderate association between the ability to perceive the final sound and the reading of all four groups of words (1, 2, 3, 4). The ability to perceive the final sound involves a higher level of phonological awareness compared to the initial sound. Our prediction was borne out that the ability to perceive the final sound would be related to reading success. Pupils who could read the most difficult words could also successfully read easier words.

Since statistically significant correlations were found in all cases of correlation between variables, regression was also calculated. The announcer, namely the ability to perceive the initial sound, correlates with reading the words. The greatest correlation was on reading the easiest words; significantly lower correlation applied to reading the words that consisted of three or four letters; and the least correlation was found for reading the hardest words.

The greatest correlation of the ability to detect the initial sound on reading the easiest words is explained by the fact that pupils with successful perception of the initial sound have already been reading simple words to a large extent. The more demanding the reading, the less correlation with the ability to perceive the initial sound.

Regression analysis was used to determine regression of final sound perception ability on reading. The perception of the final sound has a strong regression on the reading of the easiest words and an even greater one on the reading of word groups 2 and 3. The smallest regression, although still high, involved the ability to perceive the final sound on the reading of the most difficult words. These words had five to seven letters and contained consonant clusters, which caused the regression in the ability to read.

Our findings accord with those of previous research (Nelson, Lindstrom, Lindstrom and Denis, 2012) and show that the skill of reading words in kindergarten and first grade is best predicted by phonological awareness.

Our research was conducted early in 1st grade, so it can be compared to the earlier study by (Hogan, Catts and Little, 2005). We also note the interrelationship between phonological awareness and reading. The study by the authors Gellert and Elbro (2017) cannot be fully compared with our research. Nevertheless, we notice a similarity. In our research, similarly, the influence of phonological awareness in reading is reduced in the case of reading more complex words.

To these findings we add findings of correlation and impact between variables. Unfortunately, these findings cannot be compared with other research, since there are significant differences (language, etc.).

The shortcoming of our research lies in its balanced consideration of initial and final sounds at the level of consonants and vowels in words; therefore, we would change this by reading word groups 1, 2, and 3 and thus check the findings of Levin (2007). This would increase the difficulty level of reading in these three reading groups, as well. Group 4 requires the reader to read more complex words and draws appropriate attention to successful readers, so no changes would be made to this group of words.

Conclusion

Pupils enter the 1st grade with diverse levels of prior knowledge in the field of phonological awareness, that is, with differently developed ability to perceive the initial and final sound and with a significant proportion of pupils who are already reading before systematic literacy instruction. The study fully answered our questions about the relationship between individual variables and the influence of the predictors on individual criteria. It is important to promote phonological awareness during the preschool period. The results of our research confirm that the ability to perceive the initial sound and, more importantly, the ability to perceive the final sound in a word mutually and causally influence reading. With appropriate and frequent exercises, we will be able to successfully develop the phonological awareness of the initial and final sounds. The effectiveness of phonological awareness could also be promoted in partnership with educators and teachers, engaging parents in homework that should take place through play.

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