



# CHILDREN'S ABILITY IN AWARENESS OF THE INITIAL AND THE FINAL SOUND IN A WORD

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## **Abstract**

*The findings from the PISA studies in 2009 and 2012 reveal the results of the reading achievements of 15-year-olds which are not satisfying. The fact is, the reading is influenced by several factors. One of the factors is the ability of phonological awareness, since the early teaching of phonological awareness has a major influence on the development and achievements of the reading abilities of children.*

*Studies have found that the strategies for the development of phonological awareness in kindergarten are crucial for a child's success in literacy (Tafa, 2008). Nevertheless, in Slovenia, there is not enough emphasis on the early development of phonological awareness, even though we have good chances, because many children in the preschool period are included in kindergarten.*

*This study has detected the impact of the exercise of phonological awareness in kindergarten which is accurately presented in this article. In the entire model, a certain proportion of children who detect neither the initial nor the final sound before entering the school is included. With children who have lower levels of phonological abilities, there is a greater risk that they will have reading difficulties. Therefore, it is no wonder that we draw the attention to the urgent changes in the activities and tasks in kindergarten.*

**Key words:** *exercise, kindergarten, phonological awareness, the final vote, the initial vote.*

## **Introduction**

In recent years, there has been a frequent observation of phonological awareness as the central subject of research.

The term phonological awareness regards the ability to recognize and use the phonological parts of the spoken word. Basically, words can be broken down and coupled into syllables, initial / final syllables as well as sounds (Chard and Dickson, 1999). Levels or classes of phonological awareness develop in order; from less complex to more complex activities (Graaff, Hasselman, Bosman & Verhoeven, 2007).

Examining the performance in isolation of phonemes in the word suggests that children first detect the initial, then the final sound in the words and last, the sounds within words. Studies performed on preschool children show that the performance is influenced by word length. Monosyllable or non-syllable words indicate better results (Levin, 2007). Children are more successful in reproducing the initial consonants than final consonants (Ashby, Dix, Bontrager, Dey & Archer, 2013). The higher level of development of phonological awareness includes the promotion of appropriately selected and applied exercises, namely exercises should take into account the appropriate sequence and teachers should

ensure the diversity of exercises at the implementation (Mesmer & Griffith, 2005, Strickland, 2011). Strickland also points to the importance of the inclusion of initiatives based on research in the education of children. Studies point to differences among children in phonological awareness, as there are deviations in abilities despite the promotion of children's phonological awareness in kindergarten. At the same time the studies emphasize the effects of guided, long-lasting promotion of phonological awareness in kindergarten or in the early years of primary school (Cardoso-Martins, Mesquita & Ehri, 2010; Piasta & Wagner, Manyak, 2008). Children who have received intensive promotion of phonological awareness for a shorter period of time (six weeks) did not show significant progress (Castles, Coltheart, Wilson, Valpied & Wedgwood, 2012).

Prior to the launch of nine-year primary school in Slovenia the children have received before entering the first grade the so-called "small school" where they have acquired the basics of reading and writing, including phonological awareness. The fact is the "small school" was abolished with the introduction of the nine-year primary school. The nine-year primary school has promoted phonological awareness and phonemic awareness throughout the 1st grade since the start of September 2011. The curriculum for Slovene language (1998) has clearly outlined the activities in the area of phonological awareness in its 1<sup>st</sup> functional goal.

In the curriculum for kindergarten (1999), which is still topical for kindergartens in Slovenia, we do not find the term phonological awareness. Among the objectives, however, is written: "The child identifies, enjoys and has fun in pointless stories, rhymes, different sounds and word plays, jokes and experiences the sonority and rhythm" (The Curriculum for kindergarten, 1999, page 20). In a following part we read: "the child develops pre-reading and pre-writing abilities and skills" (The Curriculum for kindergarten, 1999, page 20). In the cases of activities from 3 to 6 years we only find: "by listening to and their own storytelling the child experiences rhythm of words, music and songs and plays with sounds and letters" (The Curriculum for kindergarten, 1999, p. 21 and 22).

The fact is that after the last renovation in primary school children in first grade undergo systematic literacy. There are major changes in systematic literacy compared to the previous nine-year primary school. Teachers of the first class believe that there should also be a necessary renovation of the kindergarten because children have less developed phonological awareness, which makes the initial reading and writing very difficult.

### *Problem of Research*

*Research shows* that phonological awareness influences children's success in reading and writing. The last reform of 2011 in primary schools and which has brought great changes in the systematic literacy was conducted in the first class. For this reason, a research was carried out that will show the ability of phonological awareness of children, namely the detection of the initial and the final sound.

To this end, a survey was conducted, which would show how children perceive the initial and the final sound in a word in the last year of inclusion in kindergarten. At the same time, the survey determines how many children can progress in a longer or shorter time period of promoting phonological awareness in kindergarten.



## *Research Focus*

This study has investigated the perception of the initial and the final sound in two kindergartens. The children of the group “G 1” have been developing phonological awareness prior to the first assessment. The children in the group “G 2” have undergone the activities of this program after the first assessment.

## **Methodology of Research**

### *General Background of Research*

The research examined the ability to identify the initial and the final sound in a word in the last year of inclusion in kindergarten. The study included children who attended kindergarten and were half a year before entering the first grade of primary school.

In February, an individual test of children’s ability in awareness of the initial and the final sound in a word was carried out in two kindergartens. The next four months the children have been following the kindergarten program. A re-test with the same instrumentation followed after that. To this end, the individual progress of children within each kindergarten was identified. The study was guided by a theory, which emphasizes the positive effects of a long-lasting, guided promotion of phonological awareness in kindergarten or the less successful effects in children who were enrolled in the intensive promotion of phonological awareness a shorter period of time.

### *Sample of Research*

The sample included 171 children of two kindergartens who formed two groups, which were tested individually. Only 127 children who have obtained all the data needed from 1<sup>st</sup> and 2<sup>nd</sup> test, were taken into final processing of the data (“G 1” included 71 children, 32 boys and 39 girls, and the “G 2” included 56 children, 32 boys and 24 girls).

### *Instrument and Procedures*

The study includes two assessments of the children’s ability in awareness of the initial and final sound in the word. Children were first tested in February and then again in June 2012. The study includes two sets of phonological awareness; the first set includes the initial sound and the second set the final sound in a word. Each set contained twelve small pictures. Each child had to name the picture, and the initial or the final sound of the word. Each correctly named initial (final) sound was scored a single point. For all correctly named initial (final) sounds the individual received 12 points.

### *Data Analysis*

Data were analysed with SPSS. To analyze the differences in the distributions of variables (initial, final sound) between the compared groups, the analysis of a chi square ( $\chi^2$ ) statistic was chosen.

## Results of Research

In February, data on the perception of initial sounds were obtained.

**Table1. Results of the  $\chi^2$ -test between the two groups of children in the perception of the initial sound in the initial state.**

Score	No. of child	Group		Total
		G 1	G 2	
0	f	7	8	15
	f%	9.9	14.3	11.8
1	f	2	8	10
	f%	2.8	14.3	7.9
2	f	1	4	5
	f%	1.4	7.1	3.9
3	f	2	1	3
	f%	2.8	1.8	2.4
4	f	0	1	1
	f%	0	1.8	0.8
5	f	0	2	2
	f%	0	3.6	1.6
6	f	3	0	3
	f%	4.2	0	2.4
7	f	3	0	3
	f%	4.2	0	2.4
8	f	1	0	1
	f%	1.4	0	0.8
9	f	3	0	3
	f%	4.2	0	2.4
10	f	4	6	10
	f%	5.6	10.7	7.9
11	f	10	5	15
	f%	14.1	8.9	11.8
12	f	35	21	56
	f%	49.3	37.5	44.1
Total	f	71	56	127
	f%	100	100	100
Result of $\chi^2$ -test	$\chi^2 = 22.915$ p = 0.028			



The compared groups differ statistically significantly ( $p = 0.028$ ) in the perception of the initial sound in a word. Almost half of the children in the “G 1” (49.3%) detected the initial sound in all twelve words. In the “G 2” nobody detects six to nine initial sounds in words. Children of this group are distributed in the results from nine to twelve, or zero to five, whereby we must not overlook the 21.4% of children in this group who experience one or two of the twelve samples. In the “G 2” 37.5% of children detect the initial sound in words. The concern is the fact that there are 24.2% of children (“G 1” and 9.9% in “G 2” 14.3%) in both groups, which cannot detect the initial sound in the word. Before the assessment in February, exercises in phonological awareness were conducted in “G 1”, while in the “G 2” they have not yet implemented these exercises. According to the annual work plan, these exercises followed in “G 2” in the following months.

**Table2. Results of the  $\chi^2$ -test between the two groups of children in the perception of the initial sound in the final state.**

Score	No. of child	Group		Total
		G 1	G 2	
0	f	12	10	22
	f%	16.9	17.9	17.3
1	f	0	7	7
	f%	0	12.5	5.5
2	f	0	2	2
	f%	0	3.6	1.6
6	f	1	1	2
	f%	1.4	1.8	1.6
7	f	1	0	1
	f%	1.4	0	0.8
8	f	3	0	3
	f%	4.2	0	2.4
9	f	3	1	4
	f%	4.2	1.8	3.1
10	f	2	2	4
	f%	2.8	3.6	3.1
11	f	7	9	16
	f%	9.9	16.1	12.6
12	f	42	24	66
	f%	59.2	42.9	52
Total	f	71	56	127
	f%	100	100	100
Result of $\chi^2$ -test	$\chi^2 = 17.818$ $p = 0.037$			

Re-examination in June still shows a statistically significant difference between the both groups. In the “G 1”, almost 60% of children perceived the initial sound in all twelve words. The children in the “G 2” carried out exercises for voice awareness in the period between the 1st and 2nd assessment, which resulted in improvement in phonological awareness of children in this group. The teachers of “G 1” told us that in the period from February to June they rarely promoted children’s phonological awareness, as they do not have these activities in the program during this period. It is worrying that the proportion of children who do not detect the initial sound in a word increased, namely in the “G 1” from 9.9% to 16.9%, and in the “G 2” from 14.3% at 17.9%.

**Table 3. Results of the  $\chi^2$ -test between the two groups of children in the perception of the final sound in the initial state.**

Score	No. of child	Group		Total
		G 1	G 2	
0	f	15	22	37
	f%	21.1	39.3	29.1
1	f	13	8	21
	f%	18.3	14.3	16.5
2	f	8	5	13
	f%	11.3	8.9	10.2
3	f	3	0	3
	f%	4.2	0	2.4
4	f	5	7	12
	f%	7.0	12.5	9.4
5	f	1	2	3
	f%	1.4	3.6	2.4
6	f	2	2	4
	f%	2.8	3.6	3.1
7	f	5	2	7
	f%	7	3.6	5.5
8	f	4	0	4
	f%	5.6	0	3.1
9	f	2	0	2
	f%	2.8	0	1.6
10	f	8	6	14
	f%	11.3	10.7	11
11	f	4	2	6
	f%	5.6	3.6	4.7



12	f	1	0	1
	f %	1.4	0	0.8
Total	f			127
	f %			100
Result of $\chi^2$ -test	$\chi^2 = 14.543$ p = 0.267			

There is no statistically significant difference in the perception of the final sound in a word between the compared groups of children. Since there are no major deviations between “G1” and “G2” let us pay attention to the overall result of the sample. 29.1% of the children in the sample do not detect the final sound in a word and in 26.7% of the children detect the final sound in one or two of the twelve words. The perception of the final sound is more difficult for children compared to the perception of the initial sound. 21.1% of children in the “G 1” and 39, 3% of children in the “G 2” do not detect the final sound in a word. It is believed that there was a lack of exercises for promoting phonological awareness.

**Table4. Results of the  $\chi^2$ -test between the two groups of children in the perception of the final sound in the final state.**

Score	No. of child	Group		Total
		G 1	G 2	
0	f	17	25	42
	f %	23.9	44.6	33.1
1	f	10	6	16
	f %	14.1	10.7	12.6
2	f	3	3	6
	f %	4.2	5.4	4.7
3	f	3	4	7
	f %	4.2	7.1	5.5
4	f	2	1	3
	f %	2.8	1.8	2.4
5	f	2	2	4
	f %	2.8	3.6	3.1
6	f	7	2	9
	f %	9.9	3.6	7.1
7	f	2	3	5
	f %	2.8	5.4	3.9
8	f	3	0	3
	f %	4.2	0	2.4

9	f	3	1	4
	f %	4.2	1.8	3.1
10	f	8	4	12
	f %	11.3	7.1	9.4
11	f	10	3	13
	f %	14.1	5.4	10.2
12	f	1	2	3
	f %	1.4	3.6	2.4
Total	f	71	56	127
	f %	100	100	100
Result of $\chi^2$ -test	$\chi^2 = 13.835$ p = 0.311			

The difference between “G1” and “G2” is not statistically significant in the perception of the final sound in a word. When comparing the results of the second assessment with the first one, we observe a very small improvement in children’s abilities to detect the final sound within a four month period. In the entire sample of children only 10.2% detect the final sound in eleven of the twelve words. Only 2.4% of children detect the final sound in the word in all twelve samples. In the “G 2” they performed exercises for phonological awareness in the period from February to June, but the results show that there was a lack of exercises. The results in the table also point to this fact, as we see that the ability to detect the final sound decreased in both groups, because the proportion of children who do not detect the final sound in any sample, rose.

## Discussion

Distribution variables of this study confirm the findings of studies that have been conducted abroad and have examined phonological awareness. Despite of the promotion of phonological awareness (in this case, the initial sound), there are differences among children, as there are deviations in children’s abilities. The effect of guided and intensive promotion of phonological awareness is also more effective in the group of children, where the promotion lasted longer. This is also confirmed by foreign studies (Cardoso-Martins, Mesquita & Ehri, 2010; Piasta & Wagner, Manyak, 2008).

Children of the group, where the phonological awareness was shorter (five weeks) showed less progress. Foreign studies show similar findings (Castles, Coltheart, Wilson, Valpied & Wedgwood, 2012).

The performance of awareness of the final sound in a word overlaps with foreign studies, which show that children first detect the initial sound and then the final sound in a word, or that the levels of phonological awareness develop in a sequence (Graaff, Hasselman, Bosman & Verhoeven, 2007).

It is necessary to systematically develop phonological awareness, which includes the scope of work performed, systematic exercises and a variety of exercises (Mesmer & Griffith, 2005 Strickland, 2011; Newlands, 2011).





## Conclusions

Slovenian preschool children in the kindergarten experience the promotion of phonological awareness. This study reveals that in this area among children in kindergarten there are differences despite the systematic promotion of sound awareness. It also shows that the longer lasting promotion is more effective.

Given that children learn to read and write in 1<sup>st</sup> class, in kindergarten, they should get as close as possible to develop phonological awareness. In order to achieve that, the kindergarten should immediately increase phonological awareness exercises and perform them intensively with diverse exercises. It would be good to supplement or partially modify the work program in accordance with this.

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