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THE STUDY OF PHONETICALLY BALANCED STORY BOOKS FOR CHILDREN: IMPACT ON PHONEME ACQUISITION

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Abstract: *Adults vocalize, storybooks for preschool to increase their vocabulary to develop their phonological awareness to help them acquire consonant sounds to increase child-adult interaction, etc. Reading storybooks is one of the most basic educational materials that boosts development. Early childhood is a critical period for language and speech development. It is thought that storybook writers do not pay attention to what linguistic consonants their boks should include. In Turkey, the researches regarding the effect of story books on phonological skills are limited. The aim of the present study is the study of the story books in terms of phonetical balance. The study was performed using the general survey model. The purposive sampling technique was used via book review criteria, 36 books were found suitable for 3-4 year old children and formed the study group. Consonants of all words in each book were listed and examined in regarding position of word initial, word medial and word final. Each books word was recorded one by one according to the consonant letters and the place of the consonants in the word. The analysis showed that there were statistically significant difference in consonants of /ç, m, n, r, s, ş, t, y, z/ at the initial, medial and final of words; in consonants of /b, d, g/ as the initial and medial; in consonant of /ğ/ in the medial and at the final of the word ($p<.05$). Inadequate exposure to consonant phoneme affected the development of children's phonemic acquisition skills negatively. Phonetically unbalanced storybooks seen as the lowest level consonants as they were phonetically unbalanced. Moreover they were not also found supportive for children with hearing hearing loss.*

Keywords: Hearing Loss; Phoneme Acquisition; Phonetically Balanced; Story Books.

1. Introduction

Books prepared for preschool children are generally called picture books. These are the books in which there are pictures rather than text, and the picture-text relationship is given clearly. Children's books are visual materials that support their development areas such as cognitive, language, speech, motor and social-emotional. It is considered to be the critical period for the language and speech development of children between the ages of 0-6 (Gönen & Arı, 1989; Serafini, 2014; Strouse et al., 2018). In order to support children's language and speech skills during preschool period, interactions with adults and regular book reading sessions are among the most recommended activities (Tetik & Işıkoğlu Erdoğan, 2017).

From very young ages listening to stories, producing sounds, experiencing that letters from sounds are vital in language development (Isbell et al., 2004; Rodríguez et al., 2009; Elangovan, 2013). Telling stories is also used in the assessment of children's speech development. It gives important information about the child's vocabulary and sound production (Işıtan & Turan, 2014).

McLeod and Crowe (2018) compared the age of consonant acquisition in 27 languages, in result they found that five years old children produced consonants at least 93% accuracy. The results of a study on the acquisition of consonants in standard Turkish speaking children showed that in the age of 3;6, all sounds were acquired at the initial and final of the syllable positions (Topbaş, 2006). Morgan (2006) stated that children acquire the basic phonological sound system of language by listening to the conversations around them. In order for children to listen to stories told or read by adults, their hearing function must be normal.

Hearing loss is defined as dysfunction of various degrees and types in the sense of hearing. Congenital hearing loss causes for individuals to constraint significant limi-

tations in accessing to the sound systems of the language (Karasu et al., 2015). In the audiological assessment of the hearing function, phonetically balanced word lists are used to evaluate the individual's ability to recognize words, speech reception, and distinguish (Martin et al., 2000). While preparing these lists, it is necessary to include all phonemes of the spoken language and to preserve the phonetic distribution (Villaseñor-Pineda et al., 2004).

Story reading activities are also used frequently in educational practices of children with special needs. Story books are one of the educational materials that is used frequently in the education of hearing-impaired children to support language and speech skills and acquisition of early literacy skills (Gerek et al., 2019). Johnston et al. (2008) in the story reading activities to be carried out children with hearing loss conducted a study to support the development of early literacy skills.

The results of the research shows that children with hearing loss have difficulties even if their phonological skills are supported in the early period. In order to minimize these difficulties, it is important to know the effects of story books on phonological skills. However, in the literature no studies were found in which reading texts and stories were examined phonologically. It was thought that the inability of children with hearing loss to access phonological information was not only due to their auditory sensory deprivation, but also due to the inadequacy of storybooks in developing children's phonological skills. Based on this view, the study of the consonants of the words in the story books was thouth to be necessary. The purpose of this study is to determine whether the phonetically balanced story books are supportive for 3-4 years old phoneme acquasition during normal phonological development and to determine the availability of language and speech skills for development of language and speech skills in the re-

habilitation of these children with hearing loss. The results of the study are expected to raise awareness that the text content in the story books should contain all sounds of the spoken language. The frequencies of the consonants used in word initial (WI), word medial (WM) and word final (WF) position the proficiency of 3-4 years old childrens' development of their acquisition of consonant phonemes were examined. In this context, the research questions were determined as follows:

1. Are the story books phonetically balanced regarding the frequency of the consonants used in the texts at WI, WM and WF?

2. Which consonants are used most frequently in storybooks regarding their place in the word?

3. Are the consonants in the words in the story books sufficient for the phoneme acquisition skills of 3-4 years old hearing and hearing impaired children?

In this study, story books in which 21 consonants of Turkish are used once in the positions of the WI, WM and WF have been considered phonetically balanced. In our study, consonant phoneme acquisition was explained by the age of children acquiring consonants. According to the results of the studies in the literature, the ages at which standard Turkish speaking children produced 21 Turkish consonants at the mastery level were taken into account.

2. Methods

2.1. Research Method

In this study, which was conducted to determine whether the storybooks are phonetically balanced and whether they support the phoneme acquisition skills of children with normal development and hearing loss the "general survey" model was used as a descriptive quantitative research method (Gürbüz & Şahin, 2017, p. 105-109).

2.2. Subjects

In this research, the 150 best-selling story books in the bookstore for preschool children formed the population of the research. The suitability of these storybooks for 3-4 years old children, internal and external structure features were examined separately by the researchers and 75 books were found to meet the criteria. In order to minimize the limitations caused by the researchers and to collect the data objectively, three experts evaluated the books independently of each other. Among these books, 36 books that were found in the checklist of three in detail in terms of phonetically balanced via "purposive sampling" technique (Gürbüz & Şahin, 2017, p. 105-109).

2.3. Data Collection Tools

2.3.1. Book Analysing Form

In this study, the selection of story books was made using the "Book Review Form" which was developed by the researchers. This form consists of three parts: general information about the book, external structure characteristics and internal structure characteristics (Sever, 1995; Er, 2016; Kırkgöz & Diken, 2019).

2.3.2. Word-consonant Table by Word Position

The listing of the consonants in the content of the words in the storybooks according to their positions was made via "Word-Consonant Table by Word Position" which was developed by the researchers. All the words in each book are listed according to the WI, WM and WF positions of the 21 consonant letters of Turkish and including word repetitions.

2.4. Data Collection and Analysis

In this study, in the content of each book, 21 consonants of Turkish in initial, medial and final positions of each consonant using it once is considered sufficient for that storybook to be considered phonetically balanced. A total of 13928 words were obtained from 36 books to prepare the data for statistical analysis. Data were evaluated in SPSS 25.0 package program. In the analysis of the data, firstly, descriptive statistics of continuous values are given. Descriptive statistics are expressed as means and frequency. The significance level was taken as $\alpha = 0.05$.

3. Results and Discussion

3.1. Results

The findings of our study are presented in three sections: The averages and comparison of the positions of consonants in words and the findings on the frequency of use of consonants at the the WI, WM and WF.

3.1.1. Findings of Consonants According to Their Position in the Word

The distribution of the consonants in the stories in the WI, WM and WF positions in each word is presented in Tables 1, 2 and 3. Table 1 is from the most common consonant to the least common consonant. It has been determined that 19 consonants are used most frequently in the WI. The mean of consonants ranged between 1.43±1.13 and 20.63±15.70.

Table 1. Distribution of the mean of the consonants in WI.

Sequence number of the consonant	Consonants in WI position	N	$\bar{x}$	SS
1	/b/	35	20.63	15.70
2	/k/	35	13.80	12.66
3	/d/	35	12.20	11.29
4	/s/	36	10.28	9.17
5	/y/	35	9.31	8.82
6	/g/	35	9.26	6.76
7	/h/	32	7.16	5.95
8	/ç/	33	6.42	4.15
9	/t/	34	6.24	6.62
10	/m/	30	5.20	4.58
11	/v/	28	4.50	3.58
12	/p/	28	3.96	4.21
13	/ş/	29	3.10	4.00
14	/c/	12	2.83	3.90
15	/f/	21	2.81	2.52
16	/z/	22	2.55	4.09
17	/n/	29	2.48	1.33
18	/r/	19	1.68	1.53
19	/l/	7	1.43	1.13

Table 2. Distribution of the consonants in WM.

Sequence number of the consonant	Consonants in WM position	N	$\bar{x}$	SD
1	/r/	36	39,14	26,08
2	/l/	36	38,92	29,33
3	/n/	36	35,33	28,43
4	/d/	36	25,17	19,13
5	/y/	35	22,83	15,23
6	/m/	36	20,17	18,60
7	/k/	36	17,47	13,11
8	/t/	36	15,92	14,07
9	/s/	34	13,24	11,85
10	/c/	33	9,73	9,65
11	/ğ/	34	9,47	8,53
12	/ş/	34	9,18	6,28
13	/z/	35	9,17	9,32
14	/ç/	32	7,31	7,32
15	/b/	28	6,89	6,24
16	/p/	27	5,74	6,06
17	/v/	32	5,59	6,34
18	/f/	23	4,52	5,70
19	/h/	28	4,50	3,58
20	/g/	24	3,67	2,87
21	/j/	1	1,00	1

Table 2 is from the most common consonant to the least common consonant, taking into account the averages of the consonants. It has been determined that 21 con-

sonants are used most frequently in the WM. The mean incidence ranged from 1.00±1 to 39.14±26.08. Table 3 is arranged in order from the most common consonant to the least common consonant according to the averages of the consonants. It has been determined that 18 consonants are used most frequently at the WF. The mean incidence of consonants ranged from 1.00±1 to 19.56±15.92.

Table 3. Distribution of consonants in WF.

Sequence number of the consonant	Consonants in WF position	N	$\bar{x}$	SD
1	/n/	36	19.56	15.92
2	/r/	36	17.14	13.00
3	/k/	35	12.74	11.17
4	/m/	32	7.41	6.86
5	/z/	24	6.04	7.12
6	/ş/	22	4.64	5.50
7	/l/	23	3.83	3.63
8	/t/	23	2.96	2.18
9	/y/	16	2.88	2.70
10	/s/	15	2.73	2.91
11	/p/	23	2.70	2.99
12	/ç/	17	2.65	2.64
13	/h/	11	1.73	1.42
14	/v/	4	1.25	0.50
15	/f/	4	1.25	0.50
16	/ğ/	1	1.00	1
17	/g/	1	1.00	1
18	/j/	1	1.00	1

3.1.2. Comparison Findings According to the Averages of the Word Positions of the Consonants

The data on the comparison of the consonants in all the storybooks according to the mean of the words in the WI, WM and WF positions. are presented in Table 4. According to this;

/b/ it was determined that there was a statistically significant difference between the mean of use of the WI and WM positions [t(28) = 6.972, p = .001].

/c/ it was determined that there was a statistically significant difference between the mean of use of the WI and WM positions [t(11) = 2.369, p = .039].

/ç/ it was determined that there was a statistically significant difference [t(15) = 10.706, p = .001] between the mean of WI, WM and WF.

/d/ it was determined that there was a statistically significant difference between the mean of use of WI and WM [t(358) = -6.736, p = .001].

/f/ it was determined that there was no statistically significant difference between the mean of use of WI and WM [t(23) = 1.755, p = .100].

/g/ it was determined that there was a statistically significant difference between the mean of use of the WI and the WM [t(24) = 4.999, p = .001].

/ğ/ it was determined that there was a statistically significant difference between the mean of WM and WF position usage [t(1) = 4.425, p = .001].

/h/ a statistically significant difference was found between the mean usage of WI, WM and WF [t(8) = 6.920, p =.008].

/j/ since it is a single value, the mean and standard deviation were not taken.

/k/ a statistically significant difference was found between the mean usage of WI, WM and WF [t(34) = 5.843, p = .005].

/l/ a statistically significant difference was found between the mean usage of WI, WM and WF [t(4) = 14,773, p = .005].

/m/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(28) = 6.972, p = .001].

/n/ it was determined that there was a statistically significant difference between the mean of use at the WI, WM and WF [t(29) = 41.318, p = .001].

/p/ it was found that there was a statistically significant difference between the mean usage of WI, WM and WF [t(14) = 3,578, p = .042].

/r/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(19) = 42.281, p = .001].

/s/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(15) = 29,094, p = .001].

/ş/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(20) = 16.07, p = .001].

/t/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(23) = 24.55, p = .001].

/v/ there was no statistically significant difference between the mean usage of WI, WM and WF [t(4) = 1.446, p = .307].

/y/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(16) = 456,555, p = .001].

/z/ it was determined that there was a statistically significant difference between the mean usage of WI, WM and WF [t(17) = 11.965, p = .001].

When findings of the comparison are examined according to the position of the consonants in the word; it was determined that there was a statistically significant difference (p <.05) at the WM and WF for /ğ/ consonant; at the WI, WM and WF for the consonants /ç h k l m n p r s ş t y z/; at the WI and WM for the consonants /b c d g/. Consonants with no statistically significant difference (p> .05); /v/ in the WI, WM and WF of the word, and /f/ in the WI and WM. Since there is only one value in the /j/ consonant, carrying out comparison analyzes were not possible.

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Table 4. Comparison findings of consonants according to their position in the word.

Consonants	WI	WM	WF	t	P
	x̄± SD	x̄± SD	x̄± SD		
/b/	21.75±15.61	6.88±6.24		6.972	0.001
/c/	3.00±4,04	13.45±14.37		-2.369	0.039
/ç/	8.53±4.32	9.86±9.32	2.80±2.78	10.706	0.001
/d/	12.20±11.28	25.80±19.02		-6.736	0.001
/f/	2.81±2.52	4.52±5.70	1.25±0.50	-1.755	0.100
/g/	10.75 ±7.26	3.00±3.33		4.999	0.001
/ğ/		9.47±8.53	1	4.425	0.001
/h/	12.00±9.44	3.37±3.29	1.50±1.06	6.920	0.008
/j/	-	-	-	-	-
/k/	14.14±12.68	18.17±13.15	13.00±11.23	5.843	0.005
/l/	1.00±0.00	80.25±41.20	4.50±1.91	14.773	0.005
/m/	5.14±4.67	22.39±20.21	8.00±7.09	19.870	0.001
/n/	2.48±1.32	38.96±29.75	21.96±15.99	41.318	0.001
/p/	5.28±5.15	7.14±7.48	2.14±0.77	3.578	0.042
/r/	1.68±1.52	44.68±27.35	19.10±14.49	42.281	0.001
/s/	13.73±9.31	22.13±12.38	2.73±2.91	29.094	0.001
/ş/	3.75±4.66	11.70±6.06	4.95±5.67	16.07	0.001
/t/	7,60±7,24	20.04±15.46	2.95±2.18	24.55	0.001
/v/	3.75±3.09	9.25±13.27	1.25±0.50	1.446	0.307
/y/	11.75±8.53	28.50±16.53	2.87±2.70	45.555	0.001
/z/	2.82±4.62	12.29±10.86	5.64±5.08	11.965	0.001

3.2. Discussion

In this study, the status of the story books in terms of phonetical balance and its contributions to increase the phoneme acquisition skills of 3-4 years old childrens were examined via evaluating its usability for speech and phonological development of normally developing and hearing-impaired children. There were no studies in the literature that we could reach to support or compare the results of the present study so from this aspect we believe that this study will add literature.

According to our findings, consonants in the WI position from the highest mean to the lowest mean are listed as /b k d s y g h ç t m v p ş c f z n r l/. It was seen that the /b/ consonant took place at the WI with the highest mean. Looking at the word list, it is

thought that this high mean is due to the widespread use of the word "bir" (one) in books. According to the literature, the /b/ consonant is expertly produced before the age of two during the phoneme development process of children (Şan, 2004; Topbaş, 2007; Ege, 2010). Despite the low mean of the /s/ consonant, it is in the WI position in all books and since it is a consonant acquired by children at the mastery level at the age of four. It is thought that the books are supportive in terms of phoneme acquisition. The consonant /l/, which has the lowest mean at the WI, can be produced skillfully at the age of 5;6-6;0 years (Şan, 2004; Ege, 2010). It is thought that story books are not supportive for children in terms of phoneme acquisition for consonants /l j/ at the WI.

In the analyzed story books, consonants are in the medial position from the highest mean to the lowest mean are listed as /r l n d y m k t s c ğ ş z ç b p v f h g y/. Accordingly, it was seen that the /r/ consonant has the highest mean in the WM and the /j/ consonant is placed at the end of the table with the lowest mean. On the other hand, the /r/ consonant is acquired at the age of 5;6-6;0 on average (Şan, 2004; Ege, 2010), while the /j/ consonant is acquired at the mastery level at the age of nine (Şan, 2004). In the analyzed story books, it was determined that the most common consonants in the WM were /r l n d m k t/. Storybooks were found to be supportive for the consonants of /r l n d m k t/ in the WM for preschool children to realize phoneme acquisition at the mastery level, but not for /j/ consonant.

Consonants in storybooks, from the highest mean to the lowest mean at the WF are listed as /n r k m z ş l t y s p ç h v f g ğ j/. In addition, it has been determined that there are /n r/ consonants at the WF in all books. Accordingly, it was determined that the consonant /n/ with the highest mean in the WF position and it is produced by children at the mastery level at the age of 4. The /r/ consonant is produced by children at the

age of 6 at the mastery level. At the lowest mean, the consonants /g ğ j/ are produced at the mastery level at the age of three, five and nine, respectively (Şan, 2004). It is thought that /n r/ consonants in the WF position are supportive for children's phoneme acquisition, and not supportive for /ğ j/ consonants.

In the analyzed story books, it was determined that the consonants /ğ j/ in the WM and at the WF were used only once in a book, and never at the WI (except for the /ğ/ consonant). The consonant /j/ is produced at the mastery level at the age of nine, and the consonant /ğ/ is produced at the mastery level at the average age of five (Şan, 2004). Researchers state that since the sound /j/ is seen in a very small number of words of foreign origin such as "ruj" (lipstick), "garaj" (garage) in Turkish and it is often pronounced as /c/ even by adults, because of this /j/ consonant was not included in phonological evaluation tests (Acarlar, 1995; Ege, 2010). In addition, the consonant /ğ/ is still a controversial sound, which experimental phonetic authority argue that it is not removed in the articulation of many words, and that it causes vowel lengthening by lengthening the vowel before it (Aksan, 2000). Similarly, the /ğ/ consonant is not used by researchers in phonological evaluations of children (Acarlar, 1995; Ege, 2010). It was also seen that the story books did not have any supporting characteristic for children in terms of the acquisition of /ğ j/ consonants. However, this issue is considered by the researchers of this study as an indication that children will have difficulties in their later years when they have to produce these consonants and this may affect their foreign language learning.

In the phonological development process, consonant production is seen in the consonant-vowel (CV) syllable form in the earliest period in children. In the second six-month period, CV forms are repeated (Goodluck, 1991, p. 19; Smiley & Goldstein,

1998, p. 50). This information shows that children produce consonants first at the WI, then in the WM, and last at the WF, regarding phonological development process. However, children do not master many consonants before the age of four (Reich, 1986). In the study of Morrow et al. (2014), a significant relationship was found between the age of exposure to consonants, one of the sociolinguistic variables, and phonological skills. In the results of the present study, 36 story books with internal and external structure characteristics suitable for 3-4 years old children were not phonetically balanced. In each book, 21 consonants were not used in the WI, WM and WF in accordance with the phonetic rules of Turkish.

When the results of the study and the age of consonant acquisition of standard Turkish speaking children are examined in terms of exposure; the consonants /b g h/, which are seen at the highest level at the WI in story books, are produced by children at the level of mastery between the ages of 3-4. The consonants /ç f k p s t v y/, which are seen at the WI in the books at an average level, are produced by children at the level of mastery between the ages of 3-4. The consonants /c d l m n r ş z/, which are seen at the lowest level at the WI in storybooks are produced at the mastery level by children between the ages of 4-6 (Şan, 2004; Ege 2010). In story reading activities, children prefer to read their favorite stories more than once. The literature has shown that children exposed to new words through repeated reading of storybooks affect their vocabulary learning. Additionally, it shows that preparing words in context in accordance with adults can accelerate vocabulary and facilitate children's learning (Justice et al., 2005). In the storybooks suitable for children aged 3-4 years, which were examined in recent study, it was interesting to find that the consonants that were seen at the lowest level in the WI position were among the consonants acquired at the mastery level between the

ages of 4-6. We suggested that children can produce these consonants at a mastery level at an earlier age.

The quantitative findings showed that /c ç d f ğ k l m n p r s ş t v y z/ consonants were seen at the highest level in the WM, /h/ consonant at the average level, /b g/ consonants at the lowest level. In this position, the age at which /ğ h l r/ consonants are acquired at the mastery level is between 4;6-5;0 years according to Ege (2010) and 5;0-6;0 years old for consonants except consonant /h/ (three years old) according to Şan (2004). Whereas in the story books, were found to support consonant acquisition for children because they were exposed to other consonants at the highest level, except for the consonant /j/, in the WM position.

Additionally, no consonant supporting the highest level in terms of acquisition of consonants and phonological awareness was found in the WF position. In the WF position, the consonants /l m n r ş z/ were acquired at the middle level between the ages of 3-4 and at the lowest level the consonants /ç f ğ h k p s t v y/ acquired between the ages of 3-5 were determined (Şan, 2004; Ege, 2010). Since the children's exposure to the consonants and /j/ at the lowest level in the WF position and /j/ consonant in the storybooks examined in the study was not sufficient, they did not seem to support children's production at the mastery level in terms of phonological awareness and consonant acquisition. It is predicted that when high level exposure to the consonants with the lowest WF position in storybooks is provided the production of these consonants at the mastery level can be acquired at an earlier age.

Studies promoting literacy in hearing children have focused on reading storybooks (Aram et al., 2006). Story reading is an effective method for learning vocabulary (Storkel et al., 2016) and related to linguistic skills (Aram et al., 2006). Bishop and Ed-

mundson (1987) found that language level can be predicted with a high degree of accuracy with a four years old language assessment and that the best indicator of language outcomes is story retelling (Wellman et al., 2011). The results of our research are the story books, while it was found to be supportive in terms of ′exposure‵ for the consonants acquired at early ages at the WI and WM, it was not supportive for some of the consonants acquired in the late period. Justice et al. (2005) stated that if words occur more than once in a single storybook, it makes it easier for children to learn new words.

Children with hearing loss experience varying degrees of hearing loss. Children with moderate to profound sensorineural hearing loss are faced serious difficulties in distinguishing and understanding the speech around them (Yoshinaga-Itano et al., 1998). Hargrave and Sénéchal (2000) stated that as a result of their study in children with learning disabilities, shared story reading activities increased their vocabulary. Aram et al. (2006) concluded in their study that the activity of reading a story book provides benefits in the development of alphabetic and linguistic skills of hearing children, while it is beneficial only in linguistic skills of children with hearing loss. Brown and Watson (2017) stated that literacy skills, begin to develop in children with hearing loss at a very young age, but continue to be a problem for many of them during school period. They stated that parents' making additional explanations in the picture story reading activity is a more effective method in improving their vocabulary (Dennis & Horn, 2011). Gerek et al. (2019) stated that the quality of the stories to be used in story-reading activities that provide a rich language experience to children with hearing loss is important, and that the content of the story, its suitability for age, language structures, readability levels and physical characteristics should be considered while selecting the stories. Considering the literature results given above; interestingly the story books ex-

amined in this study were not found to support the exposure, phoneme acquisition skills of children with hearing and hearing loss. Especially, for the consonants that are seen at the lowest level in the initial and final of the word positions, even if the works are carried out to read and tell the story repeatedly.

4. Conclusion and Recommendations

This study was carried out to analyze the phonetic balance of 36 story books and to examine their suitability for phonological awareness and phoneme acquisition of 3-4 years old children. Thus, our results of this study are important in terms of revealing the need for supportive texts/stories, taking into account their phonological developments in the content of language development in the selection of stories for children with hearing loss and with normal development.

When a general evaluation is made for the research results; it can be said that the storybooks examined were not phonetically balanced, they did not contain all of the consonants of Turkish in the initial and the final positions of the words, they were in the WM (except /j/). The examined books were found to be high and supportive on average in terms of consonants masterfully acquired at the age of three at the WI and WF. Also, the books did not support the /j ğ/ consonants in any part of the word. For these reasons, the books were not considered sufficient for the exposure to phoneme acquisition of hearing and hearing-impaired children.

Composing and using story books with short but phonetically balanced text and pictures, which are related to the content, shall support their consonant acquisition skills as a study material in the education of children with hearing loss.

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