

PROMOTION OF LISTENING SKILLS IN PRESCHOOL CHILDREN WITH PHONOLOGICAL INSUFFICIENCY

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ABSTRACT

This article is devoted to identifying the possibilities of promoting the development of listening skills in preschool children with phonological insufficiency. Underdeveloped listening skills and phonological insufficiency have a negative impact on speech development and language acquisition. During life, in interpersonal communication, people engage in four types of linguistic activity: listening, speaking, reading and writing. Listening is considered the most important skill, as it is through listening that an individual acquires most of their information and knowledge, including understanding the pronunciations of speech sounds, learning to distinguish them by hearing, and acquiring an understanding of words, sentences and texts. Children learn to perceive, comprehend and respond to hearing information by providing oral or written answers.

The aim of this study is to theoretically investigate and practically evaluate the possibilities of promoting listening skills in children with phonetic-phonemic deficiencies.

Methodology: The research was carried out using a literature review and speech therapy sessions to improve listening skills in preschool children with phonological insufficiency.

Results: 42 children aged 5–6 years with phonological insufficiency were involved in the study. The study was conducted in speech therapy sessions over a period of three months. Initial and repeated assessments of listening skills were carried out. The evaluation criteria were based on speech therapy and educational theories. The repeated assessment of listening skills showed dynamic growth in all children included in the study.

Keywords: *listening, listening skills, phonological insufficiency, preschool, children, speech therapy*

Introduction

Humans are social beings with a desire to communicate, and communicative interaction with other members of society is an important aspect of a child's development. Communication is based on specific knowledge and skills that are subject to the generally accepted principles of language (Tübele, 2019). Fully developed speech and a successfully learned language

are the 'keys' to success in later life. A precondition for successful communication is the ability to use the four types of linguistic activity in mutual communication: listening, speaking, reading and writing (Alzamil, 2021; Miltiņa & Skribanovska, 2019).

In Latvia, curriculum studies in all phases of education are based on the competence approach, i.e. learning by immersion, understanding of interrelationships and the ability to transfer acquired knowledge to new and unfamiliar situations. School 2030 [Skola 2030] documents and the preschool curriculum (Miesniece, n. d.) have developed methodological recommendations for teachers to implement curriculum content and approaches (Namsone & Oliņa, n. d.; Oliņa & Rolanda, n. d.) as well as clearly defined and achievable linguistic objectives for three content units: communication in context, text and text environments, and language structure. Each of these content areas is important in the development of speech and language acquisition, but one of the most important core linguistic skills is the ability to listen (Imhof, 2001; Nation & Newton, 2009; Yavuz & Celik, 2017). Through this skill, much of one's information and knowledge is acquired.

In most children aged 4–7 years, speech development is adequate for development in accordance with the rules of speech. However, there are children whose speech is affected by speech sound pronunciation deficiencies or mixing and replacing of sounds, and speech therapy is necessary in these cases because children are not able to correct these mistakes independently (Brosseau-Lapr ea & Roepke, 2019; Hempenstall, 2016; McLeod, 2015; T ubele & L use, 2012). Children have underdeveloped phonemic processes, i.e. it is difficult for them to perform activities such as distinguishing between different speech sounds (e. g., [S] – [Z]), recognising and identifying correctly and incorrectly pronounced words in a word line or reversing the rhythm of non-linguistic and/or speech sounds they hear (Dodd, 2011; Emelyushkina, 2015; McLeod, 2015). In the pedagogical process, including in speech therapy sessions, we often encounter situations where children ask us to repeat information again, saying 'I don't remember' or 'I didn't hear'. This may be a sign that their listening skills are underdeveloped.

Methodology

This study is based on a review and analysis of the theoretical literature, which allow us to reveal the problem and establish the relevance of the study. A review of the theoretical literature substantiates the importance of thoroughly developed listening skills in the speech development and language acquisition of preschool children. Furthermore, a practical study on improving listening skills in preschool children with phonological

insufficiency was carried out. Criteria, indicators and assessment levels for listening skill assessments were established by the research author. The study included 42 children aged 5–6 years old who were diagnosed with phonological insufficiency.

Results

Listening is the perception of different sounds and noises through hearing and is seen as a skill that can be learned and developed throughout life (Lüse et al., 2020). The primary linguistic skill (or receptive function) is listening, which ensures the perception, comprehension and interpretation of incoming (heard) information (Bransford et al., 2000; Brown, 2004; Imhof, 2001; Keyton, 2011; Saricoban, 1999).

Listening means receiving, processing and interpreting the information one hears. Listening is an active perception of information through hearing and preparedness to respond to it with understanding (Hendrawaty, 2019). Analysing Brown's (2004) explanation, it can be said that listening is an individual's oral or written response to information heard and that the response given reflects the accuracy of the listening skill. Brown points out that listening is a complex cognitive process that requires the individual to concentrate and think. Nation and Newton (2009) take a similar view, explaining that listening is a natural precursor to speech and... successive stages of language acquisition depend on listening.

Researchers such as Skujiņa (2008, p. 44) explain that listening is a speech activity (one of the language skills) in which the purposeful perception of information takes place through hearing. Meanwhile, Dzintere et al. (2014, p. 49) state that listening is the basis of language development.

"Listening is a process of perceiving information: information is received, decoded, comprehended and interpreted" (Anspoka, 2008, 141). This author's explanation shows that fully developed listening is important for an individual to be able to react to heard information when communicating with others as well as to be able to talk about their own experiences and feelings. Lanza and Flahiva (2008) also state that listening is an integral part of children's speech development and language acquisition as well as their social and academic development. Brown (2004) points out that listening skills are at the core of qualitative oral skills but that listening skills are often undervalued in comparison to speaking. A similar view is expressed by Sadiku (2015), who suggests that listening is a linguistic necessity: the more skilled the listener, the better the quality and success of their participation in communication.

Fully developed listening skills are a precondition for a correct perception and interpretation of the information heard. That is, the receiver (listener)

must focus on the content of what the giver (speaker) is saying and must contextually be able to distinguish and recognise the words they hear. Listening skills are essential in the learning process, as they allow for the acquisition of new information and provide the speaker with the feedback that the information has been heard and understood (Anderson & Pamela, 1986; Aytan, 2016; Tyagi, 2013; Walberg, 2004). Listening is a complex, interactive exchange between the information provider, the information receiver and the spoken text. This means that, to respond to information, the recipient must be able to perceive, listen attentively to and understand the content of the information.

The findings of the authors mentioned suggest that listening is the most important attribute in communication between individuals and is equivalent to the skill of speaking. When listening skills are underdeveloped, the message conveyed in a communication may be inaccurately perceived or misunderstood, which can have a negative impact on mutual communication as a whole.

From an early age, a children hear many different sounds and noises around them and unconsciously and gradually learns different levels of language – phonetics, morphology, vocabulary and syntax. The levels of language acquisition are subject to a certain hierarchy; each higher level builds on the sequentially lower one (Lüse et al., 2020, p. 349; Schulhauser, 2001; Quamili, 2015). This explanation is consistent with the view of Richards and Rodgers (2001) that listening skills are important in the language learning process.

Similarly, the insights of these authors suggest that listening and speaking go hand in hand. That is, the recipient of information, having correctly interpreted the information heard, is able to engage in mutual communication by expressing their thoughts and opinions about what they have heard, whereas if the information heard has been incorrectly interpreted, it is necessary to find out why this has happened.

Most children, in typical development, reach the norm in speech development and language acquisition at the age of 4–5 years (Markus, 2003), but there are children who, due to individual developmental characteristics, show incomplete speech development, which may manifest as phonetic-phonemic insufficiency (Briscoe et al., 2001). If phonological insufficiency is not corrected in time, its manifestations will be noticeable in both spoken and written communication and/or reading as sound omission, blending and substitution (Laua, 1997; Miltiņa, 2005, 2017; Tübele, 2019).

Phonological insufficiency is caused by functional neurodynamic deficiencies in the function of speech analysers; the child's physical hearing development is normal and there are no organic defects in the organ structure of the articulatory apparatus, but there is a functional insufficiency of

the speech hearing and speech motor analysers (Dalva et al., 2017; Ferraz et al., 2015; Miltiņa, 2005; Murphy et al., 2015). This means that children often speak but do not understand the sounds they have just pronounced because they do not analyse them. In isolation, the child pronounces all the sounds of their native language correctly, but they confuse the sounds when saying a word. For example, the child does not hear or understand the difference between the words 'big' and 'pig'.

One of the causes of phonetic-phonemic deficiency is underdeveloped hearing. However, not only anatomical hearing but also speech hearing must be fully developed, so it is important to focus on developing and improving speech hearing from an early age. Speech hearing provides the 'material' necessary for phonemic perception, and its development is linked to an individual's own phonetic pronunciation of speech sounds since a person primarily receives impressions of the sounds of speech from their sensory organs (Carroll et al., 2003; Tübele & Lüse, 2004). Speech perception development goes through several stages: responding to the intonation of speech (when the speaker addresses them), listening to the pace and rhythm of speech and learning to distinguish words by their sound structures. The development and improvement of speech hearing is directed towards the ability to perceive the nuances of the sounds of speech: the accuracy of sound pronunciation, the clear pronunciation of words, changes in the timbre of the voice and speeding up or slowing down the pace of speech (Filitcheva, 2019; Kasyanova et al., 2014; Okuneva, 2017).

Every language has its own phonemic system that is characterised by a particular set of phonemic features. This means that there are sounds in the language that possess the distinguishing features of each word's meaning. For example, for vowels, their phonemic nature is manifested in the changes in their lengths; for consonants, the distinguishing features of the meanings of words appear in oppositions: voiced-voiceless, soft-hard, etc. (Markus, 2012; Miltiņa, 2005; Tübele, 2008). In the Latvian language system, the most frequently replaced consonants are those whose pronunciations are similar in the manner of articulation but different in the position of articulation (e. g. [K] → [T]; [Š] → [S]), consonants whose pronunciation is similar by the position of their articulation but different in the manner of their articulation (e. g. [S] → [T]; [Dz] → [Z]), consonants whose pronunciation is similar by the manner of their articulation but different in the active organ of speech (e. g. [S] → [F]; [L] → [V]), consonants whose pronunciation is similar in the manner and position of their articulation but different in the involvement of the vocal cords (e. g. [B] → [P]; [Z] → [S]; [G] → [K]) and consonants whose pronunciation is similar in the manner of articulation and the active speech organ but different in the position of articulation (e. g. [K] → [Ķ]; [L] → [L]) (Laua, 1997; Miltiņa, 2005, 2017).

Assessing speech development and language learning requires looking at a child's listening skills, whether the message was received and whether the child can answer questions, explain, tell and retell. Attention must be paid to the correct pronunciations of sounds, whether the preschooler hears and differentiates all the sounds of the native language and the qualitative and quantitative study of the development of vocabulary (Emelyushkina, 2015; Filicheva, 2019; Karimova, 2016; Kashe et al., 1986; Rosal et al., 2013).

The linguistic knowledge and skills of the oldest preschool children for each type of linguistic activity have been explained in the scientific literature (Adams, 1990; Bransford et al., 2000; Brosseau-Lapr ea & Roepke, 2019; Courtenay, 2014; Dzintere et al., 2014; Keyton, 2011; Nation & Newton, 2009; Yavuz & Celik, 2017), as well as in the Latvian Preschool Education Guidelines and Programme (Miesniece, n. d.; School, 2030). In preschool education institutions in Latvia, speech development and language acquisition in the preschool education process are promoted in three language content units:

- Communication in context: listening, speaking, reading and writing are necessary to acquire and present information, form relationships and express emotions; every situation of communication has a context that both determines the content and form of the text and requires the choice of appropriate linguistic resources.
- Text and text production: verbal and written language help people to explore and understand themselves and the surrounding environment and culture; text production based on one's own and others' experiences in a planned activity creates new information and presents it.
- Language structure: language follows a certain system: sounds and characters form syllables, while words form sentences and expressions (Miesniece, n. d.; School, 2030).

The use of these units of language in communication builds and develops the child's understanding of language as a whole.

For a child to be able to participate in the learning process, acquire new knowledge and be able to express their attitude in a situation, as well as to be able to talk about it, it is of the utmost importance to understand what someone else is saying; in other words, a child needs fully developed listening skills as well as fully developed phonological awareness (Gutkina, 2000; Kaņep eja, 2012; Koneva, 2000; Lieģeniece & Nazarova, 1999; T ubele, 2015; T ubele & L use, 2012).

The language skills – listening, speaking, reading and writing – are seen as perceptual and productive skills, and there is a relationship between them. Listening and reading involve the reception and comprehension of

incoming information, while speaking and writing are processed responses to incoming information (Helgesen, 2003; Tavil, 2010; Yavuz & Celik, 2017; Zimnaja, 2001). Often, the process of listening is seen as a passive activity, but this is a misconception. The receiver processes information in the mind based on both phonological awareness (sounds, syllables, words, etc.) and prior knowledge and experience (Stephens, 2009), meaning that the combined actions result in a meaningful understanding of the information received. Subsequently, a logical verbal or written response that is subject to the laws of language is formed.

Fully developed phonological awareness is based on listening skills (Stephens, 2009), which can help children hear the different sounds of different languages. However, this process does not happen naturally for all children. It should be noted that, whether preschool children have phonological awareness difficulties or not, enhancing listening skills is beneficial for overall speech development and language acquisition.

This article focuses on promoting listening skills in preschool children with phonological deficiencies. In today's fast-paced daily life, a child hears many different sounds, but when asked during a walk, for example, 'Did you hear a crow caw?', the answer is often 'No! Where?'. These situations are becoming increasingly more common, and it makes one wonder – why is this? Perhaps the problem is that, in a world of so many noises and sounds, the child is not paying attention to different sounding noises if the activity is not brought to the child's attention. Stephen (2009) also explains that in mutual interaction, people listen to the whole word rather than to the different sounds of the spoken word.

Table 1. Criteria, indicators and assessment levels for listening skill assessments

Criteria	Criteria indicators	Evaluation indicators
Texts	Understanding and implementation of instructions	108–92 points: listening skills fully acquired
	Identifying the descriptive narrative image	91–72 points: sufficient acquired listening skills
	Arranging the images of the storylines according to the narrative	(minor errors are made) 71–52 points: partly acquired listening skills
Sentences	Sentence repetition	(major errors are made)
	Choosing the right illustration	48 points: insufficient acquired listening skills
	Creating the corresponding illustration	
Words	Repeating a line of words	
	Defining a name in a row of other words	
	Detecting words with a certain number of syllables	

Table 2. Activities to assess listening skills

Criteria	Activities	Evaluation indicators
Texts	1. Listen carefully and follow the steps in order! Tell me! (Three-step instruction, four-step instruction, five-step instruction)	Explanation of the grades used in the assessment, which are awarded for the task completed: 4 points: the child completes the task independently without help; 3 points: the child completes the task with one repeated sample; 2 points: the child can complete the task with two repeated samples; 1 point: the child cannot complete the task after three repeated samples.
	2. Listen carefully and find a picture that matches the description! Tell me! (Two-sentence descriptive explanation, three-sentence descriptive explanation, four-sentence descriptive explanation)	
	3. Listen carefully to the story and put the pictures in the correct order! Tell me! (4-picture storyboard, 6-picture storyboard, 8-picture storyboard)	
Sentences	1. Listen carefully and repeat the sentences exactly! (4-word sentences, 5-word sentences, 6-word sentences).	
	2. Listen and choose the illustration that best matches the sentence/text! Tell me! (Two sentences and one text.)	
	3. Listen and create an illustration that matches the sentence/text following the order of the words in the sentence! Tell me! (Two sentences and one text.)	
Words	1. Listen carefully and repeat the words in the order you hear them! (4-word lines, 5-word lines)	
	2. Listen carefully and say/show which name(s) were not named! Tell me! (4-word lines without supporting material; 5-word lines with supporting material)	
	3. Listen carefully, rhyming out the syllables and tell/show me which word has a certain number of syllables! (3-syllable words without supporting material, 4-syllable words without supporting material, 5-syllable words with supporting material)	

The empirical study of listening skills promotion in this study was implemented in successive stages: criteria, criteria indicators and evaluation indicators (defined by the author) were identified (Table 1); an initial assessment of listening skills was carried out and listening skills promotion was enacted; and a re-examination of listening skills and interpretation of results were carried out.

In the listening skill assessments, 27 activities were included (Table 2). The maximum obtainable score was 108 points, while the minimum was

48 points (four points were determined as the maximum obtainable and one point was determined as the minimum obtainable for each task). The maximum obtainable score for each criterion score was 36 points, and the minimum score was nine points.

To objectively evaluate the results of the retest, the activities included in the retest were only implemented in the test. The results of the test were recorded in the test protocol, leaving space for the results of the retest (due to the length of this paper, the test protocol is not included here).

During the empirical study, confidentiality based on data protection laws was respected by obtaining consent from the parents of the children included in the study. It was explained that the name of each child included in the study would be coded according to a certain formula – a letter of the alphabet and an ordinal number, e. g. A1 – and that the results would be used only in aggregate form. (The consent form is not included here due to the length of the article.)

The research included 42 children aged 5 to 6 with phonological insufficiency; all children in the study attended preschool and speech therapy sessions. The empirical study was organised in the speech therapist’s office in a preschool, and the study was conducted by the author of the thesis.

The empirical research was conducted over three months (January 2022–March 2022), with three speech therapy sessions a week (yielding ~38 speech therapy sessions). A single session was 40 minutes long, and the process included 18 activities (six activities for each criterion).

The organisation of the empirical study was as follows:

1. A listening skills test was held based on the developed criteria (individual work).
2. Speech and language therapy sessions were held to promote listening skills (via individual and/or pair work).
3. Retesting of listening skills was carried out with individual work.
4. Analysis of the dynamic growth of the results of the initial and repeated listening skills tests was conducted.

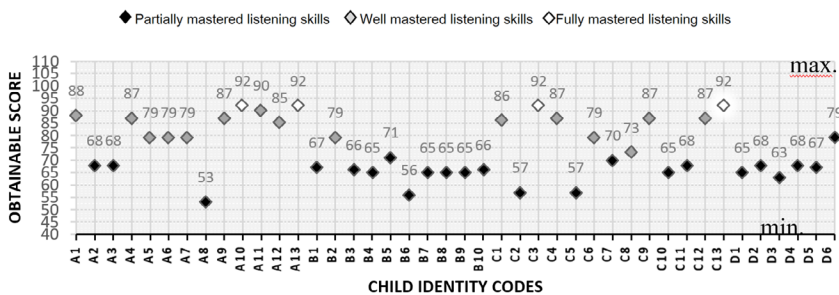


Figure 1. Initial listening skill assessment at the beginning of the study (January 2021)

The initial verification results (Table 1) of listening skills show that, for 23 children, the listening skills were partially mastered; for 15 children, they were mastered well; and the results for four children show that listening skills were mastered fully. However, in some specific tasks, there were inaccuracies in the testing indicators that ruled out the highest possible rating.

Figure 2 shows the results for each criterion, which were formulated to determine which criterion of the listening skills test was most frequently mistaken and to select and include the appropriate and effective activities in the speech therapy sessions.

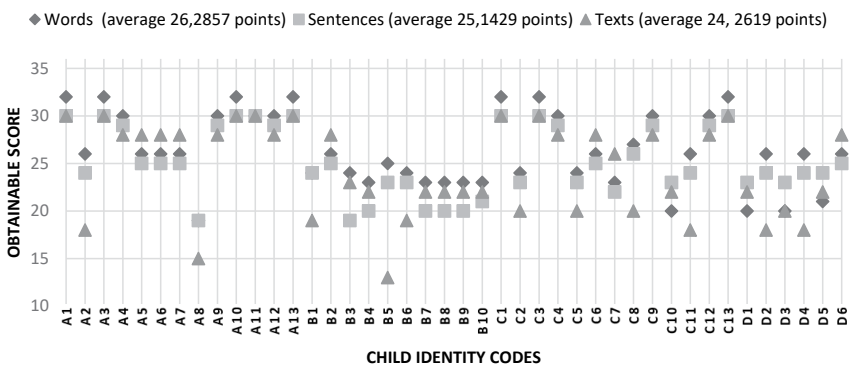


Figure 2. Average criteria scores for the listening assessment at the beginning of the study (January 2021)

Comparing the results of the first listening skill verification for each criterion, we must conclude that the average maximum of 36 points for every criterion was not reached by any of the children included in the research. The highest average points were scored on the criterion ‘words’, but the lowest were scored on ‘texts’.

To promote the development of listening skills and phonemic processes, the intervention included activities that activated observation skills, auditory attention and memory training without forgetting the improvement of control and self-control skills and the activation of thinking processes. Each activity selected had a goal and specific objectives that met the following criteria: age-appropriate development, interesting and enjoyable, developmental, educational and remedial (Vilka, 2021).

This article includes descriptions of three activities meant to ensure listening skills.

Activity 1 (Criterion: 'Words')

'Who gets what?'

The necessary materials were pictures of boys (e. g. Peter) and girls (e. g. Eva) as well as pictures of different objects.

Course of activity: The children put the pictures of Peter and Eva on the table in front of them; there were also boxes for different pictures.

The speech therapist said, I will give Peter a ball, a bag, skates, etc., while Eva was given a doll, a book, a ring, etc.

The children's task was to listen attentively and sequentially arrange the 'gifts' in the order the speech therapist conveyed to them and to name the 'gifts'.

Activity 2 (Criterion: 'Sentences')

'Create an image and describe it.'

The necessary materials were background images (e. g. plains) and small image cards with different objects (e. g. a horse, different flowers, a bee, a butterfly).

Course of activity: The speech therapist slowly said sentences, while the children followed the narration and rearranged the small image cards on the large background images in the order that they heard. When the picture was created, the child tried to describe it in terms as close to the narration as possible.

Activity 3 (Criterion: 'Text')

'Listen, sort and tell!'

The necessary materials were images of storylines.

The speech therapist created a narration, while the children rearranged the story series images in a certain order and created a narration.

Increased difficulty: The speech therapist would not include a single episode, and the picture remained as an extra. The children had to figure out where the picture should be put.

Discussion

In the intervention to promote listening skills, it must be observed that all offered words, sentences and texts should have been known to the children. This means that a child should have 'seen' the image of the spoken word. To be able to hear the important information, the child must have been able to perceive, understand and analyse the meaning of the text heard and estimate the truthfulness of the information heard. This allowed the child to create and express their own opinion about what was heard and create discussion.

The reassessment of listening skills was organised after three months (~38 sessions) and used the criteria, indicators and activities initially defined. The results were recorded using a test protocol.

After analysing the comparative results for every criterion (Figure 3), one must conclude that the largest dynamic growth was in the criterion ‘sentences’, but the smallest growth was in the criterion ‘text’.

The results of the listening skills re-examination are displayed in Figure 3.

Figure 4, which represents the repeated verification results of listening skills, shows that for one child, the listening skills were partially mastered; for 18 children, they were mastered well; and the results of 23 children showed that listening skills were mastered fully. However, in some specific verification tasks, minor errors were made, which ruled out the attribution of the highest possible rating. However, the overall results suggest that, for all children involved in the research, listening skills improved.

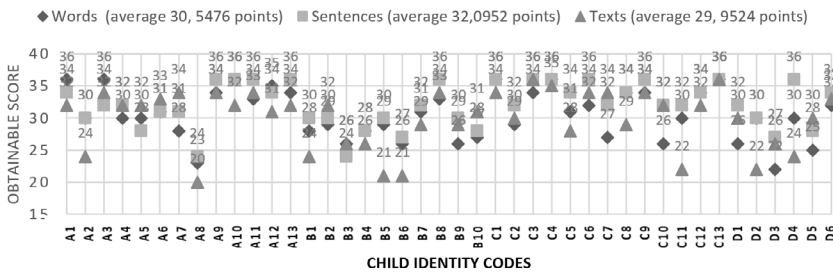


Figure 3. Each criterion’s average scores for the listening assessment at the end of the study (March 2021)

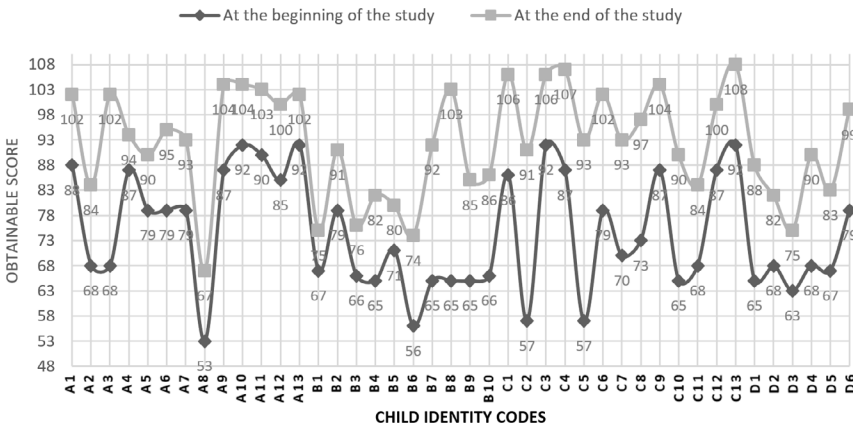


Figure 4. Comparative results assessment of listening skills at the end of the study (January 2021 and March 2021)

Conclusion

The theoretical literature review in this study confirmed the assumption of the author that fully developed speech and a successfully learned language are important communication preconditions. In mutual communication, humans use four language activities: listening, speaking, reading and writing. At preschool age, the primary communication type is verbal, which cannot exist without an important skill – namely, listening. For children with phonological insufficiencies, to ensure listening skill development, specific activities are needed (tasks, exercises, etc.) that are based on repeating the given information, the diversity of activities and differentiating between levels of difficulty – from easiest to hardest – while offering different support materials if needed.

Activities such as attentive listening, memorisation, and thinking and observation exercises are used to promote the development of listening skills. The conditions used are interrelated and have a positive impact on the development of the phonetic, lexical and grammatical areas of language, which means language learning in general.

Before beginning the process of promoting listening skills according to the criteria developed by the author of the study, the levels of development of children's listening skills were identified and determined.

The results of the initial listening skills survey in March 2021 showed that 23 children were assessed as partially proficient in listening skills due to significant errors, 15 children were assessed as proficient in listening skills with frequent minor errors and four children were assessed as fully proficient in listening skills with some minor errors in some tasks. The results of the listening skills retest in March 2021 showed that all the children in the study improved their listening skills, thus confirming the author's view that appropriately chosen activities are an effective means of promoting listening skills.

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