



Group Activities for Literacy Preparation during the Pre-School Period of Hearing-Impaired Children *

H. Pelin Karasu ¹

Abstract

Activities aimed at literacy preparation in the pre-school period are an important factor in the creation of a basis for the teaching of formal reading. This study aims to define the characteristics of education programs that support the development of literacy skills in hearing-impaired children, and are applied in groups in the pre-school period. To this end, a qualitative case study was applied, during which research data was garnered through teacher interviews, participant observations, documentation, records of the validity and reliability committee, and a researcher journal. The study data was analyzed through a descriptive analysis and themes were determined. The research results show that the application of various in-group activities allows the relationship between oral language and print to be emphasized, and these activities can be organized in such a way that they support the use of such tools as sight words, phonological awareness, syntax and semantics.

Keywords

Hearing-impaired child
Pre-school period
Literacy activities
Group activities

Article Info

Received: 02.13.2013
Accepted: 07.03.2014
Online Published: 08.06.2014

DOI: 10.15390/EB.2014.2602

Introduction

In children, the development of literacy is based on skills that are acquired at an early age and that develop continuously through new experiences. There is a traditional belief that children acquire their literacy skills mainly through the systematic education received in elementary school; however, the emergent approach to literacy is based on the belief that literacy begins before elementary school, and continues long after as well. According to this approach, it is necessary to provide pre-school children with skills that prepare them for literacy education that include: a) the ability to notice the length of words and the shape of letters that form words (sight words); b) phonemic awareness; c) phonological awareness; d) semantic clues; and e) syntax clues. The development of such skills provides children with basic schemes regarding literacy, and also forms the basis of their formal reading education (Fields, Groth and Spangler, 2004).

The ability to recognize the length of words and the shape of letters that form words allows children to identify words more easily and to develop a visual awareness of the shape/form of written words. *Phonemic awareness* involves the understanding that different words in the spoken language involve different sounds (Fyke, 2007). The inability of hearing-impaired children to acquire information regarding the phonemes used in spoken languages reduces their ability to develop reading skills, although cochlear implants may enable these children to acquire phonemic awareness at an early age,

* This study was supported by the Anadolu University Scientific Research Projects Commission through grant no: 1210E154

¹ Anadolu University Faculty of Education, Department of Special Education, Program in Education of the Hearing-Impaired, Turkey, hpkarasu@anadolu.edu.tr

thus allowing them to develop their reading skills more rapidly during their school years (Geers, 2002). *Phonological awareness* represents the ability to distinguish phonemic elements, thus allowing an understanding of the organization of letter-sound relations within words (Girgin, 2012; Wright and Jacobs, 2003). Studies of children with cochlear implants have reported that phonological awareness and vocabulary are both important factors in the development of reading skills (Johnson and Goswami, 2010). *Semantic clues* are based on the fact that the main purpose of reading is “comprehension.” Regardless of how far advanced is a child’s phonological awareness, such an awareness will not contribute to the development of the child’s reading skills if it cannot be associated with “meaning”. The most important factors affecting adversely the use of semantic clues are a limited vocabulary and the ineffective use of strategies for guessing the meaning of words (Browne, 1996). Finally, *Syntax clues* – which are acquired gradually with the development of listening and speaking skills – represent information regarding the syntax and order of words within a sentence. In parallel to the development of their language skills, children begin to notice rules regarding syntax and make use of clues related to these rules. Due to the delays they experience in the development of language skills, hearing-impaired children are unable to acquire a sufficient understanding of syntax rules, and consequently, they experience greater difficulties in using semantic clues (Paul, 1998).

Activities organized within the school environment play an important role in the acquisition and development of literacy skills among pre-school children. The child-centered Whole Language Approach (WLA) aims to provide literacy experiences to children during their pre-school years (Harp and Brewer, 2005). Literacy preparation activities organized within the scope of the WLA should enable children to use their existing language and communication skills, while also helping them in the further development of these skills. Activities should also be organized that can help children understand the communicative purpose of reading (Miller, 2005). Practices that support the development of literacy skills among hearing-impaired pre-school children may be (a) carried out as a group activity, involving the sharing of a subject, event, knowledge or experience; or (b) performed as an individual activity, taking into account the individual needs of each student (Fields et al., 2004). The present study focuses upon group activities for the preparation of literacy that are implemented among hearing-impaired pre-school children.

A literature review shows that although there are a large number of studies evaluating the literacy skills of hearing-impaired school-age children, the number of studies evaluating the literacy skills of hearing-impaired pre-school age children is very limited, and those that do exist focus generally on the development (Easterbrooks, Lederberg and Connor, 2010; Rottenberg, 2001; Rottenberg and Searfoss, 1992; Ruiz, 1995; Williams and McLean, 1997; Williams, 1994; 1999) and evaluation (Conway, 1985; Ewoldt, 1985; Gillespie and Twardosz, 1997; Gioia, 2001; Kyle, 2011) of literacy skills among hearing-impaired pre-school age children. An evaluation of literature in Turkey reveals also that studies into the reading skills of hearing-impaired students have on the whole been performed with school-age children (e.g. Akçamete, 1999; Deretarla, 2000; Girgin, 1987; 1999; 2006; Tüfekçioğlu, 1992). Furthermore, these studies made no consideration or evaluation of educational environments that support the reading skills of hearing-impaired pre-school children. Reading is a skill that is structured on pre-existing spoken language skills; and consequently, the readiness of hearing-impaired children for their first literacy education depends on the preparatory literacy activities in which they engaged during their pre-school period, and on the characteristics of the auditory/verbal education they previously received. The fact that this study was performed at the Education and Research Center for Hearing-Impaired Children (*İşitme Engelli Çocuklar Eğitim Araştırma ve Uygulama Merkezi, İÇEM*), an institution that focuses heavily of hearing and verbal communication, is important, in that it can serve as an example for other educational environments that are organized to address the needs of hearing-impaired children. The ability of hearing-impaired children to identify the relationship between verbal and written language depends on the level of development of their phonological awareness, vocabulary, syntax and comprehension skills; on the diversity of literacy preparation activities they received; and on how these activities are implemented (Williams, 1999). The results of the present study may serve to emphasize the advantages of group activities for literacy preparation that are provided to hearing-impaired

children. The study may also assist in preventing and/or circumventing any limitations that may be encountered during the implementation of such activities. Accordingly, we believe that the results of the present study will contribute significantly to the planning and implementation of educational programs in institutions that provide education to hearing-impaired children. The main goal of this study is to define and describe the characteristics of educational programs that support the development of literacy skills among hearing-impaired pre-school children through group activities. To this end, answers were sought to the following questions: (1) Which activities were performed within the groups? (2) How were the literacy preparation activities implemented within the groups?

Method

Study Model

A qualitative case study model was employed to investigate, in detail, the types of group activities performed with hearing-impaired children, and how these activities were implemented. Case studies represent an effective means of examining comprehensively one or more cases, of observing these cases in a real world setting, of collecting and analyzing data in a systematic way and of demonstrating results (Davey, 2011).

Educational Environment in which the Study was Conducted

The study was conducted in the pre-school second grade of İÇEM, which is a private education institution that provides full-time education to hearing-impaired children through a Natural Auditory/Verbal Approach as part of Anadolu University. At İÇEM, children diagnosed with hearing loss at an early age in the audiology clinic are implanted with suitable hearing devices, after which they start to receive family education. Pre-school education at İÇEM encompasses the pre-school 1st grade (age 3), pre-school 2nd grade (age 4) and pre-school 3rd grade (age 5). Pre-school education is followed by elementary, middle-school and high-school education. In addition to the group activities performed for five hours a day during the 1st and 2nd grades, and for eight hours a day in the following grades, each student also takes part in individualized activities that teach them strategies that contribute to the development of their spoken language and literacy skills.

The pre-school 2nd grade at İÇEM consists of two adjacent classrooms, one of which is large, while the other is smaller. Group activities are performed in the larger classroom, while individual activities are hosted in the smaller classroom. Both classrooms have sound insulation, and the walls of the classrooms are covered with boards onto which materials relating to the activities conducted with the children are placed, and changed on a weekly basis. The materials that had been displayed in class are then transferred to boards along the school corridors.

Study Participants

In the 2012–2013 academic year, the pre-school 2nd grade of İÇEM had 10 hearing-impaired students between the ages of 4 years 1 month and 4 years 11 months. The study participants included the researcher and two teachers working at the pre-school 2nd grade of İÇEM during the 2012–2013 academic year. The teachers who participated in the study were graduates of the Department of Teaching for the Hearing-Impaired: Teacher A has been working with pre-school hearing-impaired children for nine years and conducts family education activities, while Teacher B has four years of experience working with hearing-impaired pre-school children. During the implementation of the class activities; one of the teachers performed group activities, while the other engaged in individualized activities with the children. The researcher has been studying the development of literacy skills in hearing-impaired children for 19 years.

Data Collection Tools

In order to increase the validity and reliability of case studies, multiple data collections methods were employed simultaneously whenever possible (Yıldırım and Şimşek, 2011). Data was collected using in-class observations, teacher interviews, archive records, documentation, records of the validity and reliability committee, and the researcher journal. The types of information obtained using each data collection tool are listed in Table 1.

Table 1. Data Collection Tools and Type of Information Obtained

Teacher Interviews	The pre-school 2 nd grade education program, the activities performed during the program, literacy preparation activities, used materials.
Archive records/Documents	Audiological information, materials for group and individualized activities; evaluations regarding individualized interviews and reading activities.
In-class observations	Literacy preparation activities: Story-telling, looking at sequenced pictures, preparation of big books, reading of the big book, daily notebooks, subject telling, pairing-sequencing-completing activities.
Records of the validity and reliability committee	Study design, data-collection process, data analysis.
Researcher journal	In-class observations, interviews, decisions of the validity and reliability committee, evaluations of individualized reading activities.

Data Collection and Analysis

Study data was collected during the first semester of the 2012–2013 academic year, between 17th September 2012 and 25th January 2013. In this period, the researcher observed the literacy preparation activities and pairing-sequencing-completing activities performed within the class, and personally carried out individualized reading activities with the students after the completion of group activities. For the in-class observations, the researcher recorded information regarding a) the subject of the activities, b) the materials used during the activities, c) the questions asked by the teacher, d) the techniques used during group interactions for the sharing of information and thoughts, and e) the children's participation. Video records of the class activities were also obtained, and the duration of the activities within the education programs was also recorded.

The collected data was analyzed with a descriptive analysis and for the determination of themes, which are common methods in qualitative case studies. The themes that were determined based on the data analysis were a) the group activities of the program, and the content and duration of these activities; b) the literacy preparation activities, the duration of these activities, and the materials used; and c) how literacy preparation activities were performed. The study design and the data collection and analysis processes were all approved by the validity and reliability committee.

Validity and Reliability Process

The validity and reliability aspects of the study process were monitored by two specialists experienced in the education of hearing-impaired students and the methods used in qualitative studies. During the study, these specialists reviewed and examined: a) the diversity of the data collection tools; b) the records of the teacher interviews; c) the relevant programs, activities and materials; d) the non-formal evaluations and records prepared by the teachers regarding the spoken language and reading skills of the students; e) the detailed observations regarding the in-class literacy preparation courses; f) the study diary; and g) the data collection and analysis processes, along with the themes that were determined based on these processes. In order to increase the structural validity of the study, the study report was provided to Teacher A, who read the document and passed on her views.

Results

The study results are presented below, together with the relevant study questions.

Which activities were performed within the groups? Within the scope of the reading/literacy preparation activities performed with hearing-impaired pre-school children, it was observed that group activities were conducted for certain subjects/areas, which are listed in Table 2.

Table 2. Group Activities in the Pre-school 2nd Grade of İÇEM, with Content and Duration

Group Activities	Content	Duration (days/minutes)
Calendar activities	Days, months, years, seasons, weather, daily events	Every day 10 minutes
Literacy preparation	Story-telling, looking at sequenced pictures, preparing/reading big books, daily notebooks, describing subjects	Every day 30 minutes
Free play	Plays among both hearing-impaired children and those with normal-hearing at different play/activity corners	Every Monday, Tuesday, Wednesday, Thursday 60 minutes
Pairing-Completing-Sequencing activity	Friend's names, colors, seasons, days, months, object names, completing shapes, subject posters	Every Friday 60 minutes
Mathematics preparation	Concepts, shapes, numbers, graphs, patterns	Every day 30 minutes
Music, rhyming, and plays based on sequences and rules	Singing, rhyming, drama, plays based on rules/order, dancing	Every day 30 minutes
Drawing	Painting, cutting, pasting, assembling, preparation of corner materials	Every day 30 minutes

As shown in Table 2, the children spend a total of 240 minutes a week at engaged in activities, of which 190 minutes were used for group activities, 10 minutes were used for device/implant control, 30 minutes were used for breakfast breaks and 10 minutes was spent preparing to go home. The length of the literacy preparation activities was 30 minutes in the first four days of the week; and, together with the pairing-completing-sequencing activities, 90 minutes on the last day of the week. The activities performed within the groups and the content of these activities are described below:

Calendar activities were performed every day between 08:50 and 09:00 AM. Calendars were prepared on a monthly basis using 50x70 cm pieces of paper, and included information relating to the current year, season and month. The calendars also contained a box for each day of the month, in which was written information indicating which day of the month and week they corresponded to. Special days of the month were also represented on the calendar with pictures (e.g. Republic Day on October 29th). Every morning, the current year, season and month were discussed with children, referencing the text and pictures on the calendar. After the current calendar day was discussed with the children, questions were asked on today's weather, and the children's answers were written in the relevant day/box. Following this, class attendance was controlled by calling the name of each child, and the names of children who were not in class on that day were recorded on the calendar. Every piece of information recorded on the calendar was read to the class by the teacher, and the children were asked to repeat everything that was read to them (e.g. Study diary, p. 7, 01st October 2012). In addition to allowing the repetition and learning of concepts such as the days, months and years of the calendar, the activity also served in the development of the awareness of the children to the shape of words and the communicative purpose of writing (Girgin, 2003).

Literacy preparation activities were performed between 09:00 and 09:30 AM, after the completion of the calendar activities. Depending on the day, literacy preparation activities involved the telling of stories, looking at sequenced pictures, activities with big books, diaries and speaking on different subjects. These activities were always related to the subjects covered in class as part of the curriculum. In accordance with the curriculum web, a particular subject would be covered for several weeks using various group activities (Beaty and Pratt, 2003). For example, the curriculum web applied for the subject of "Autumn" is provided in Figure 1:



Figure 1. The Curriculum Web Regarding the Subject "Autumn"

Suitable subjects for the age, as well as the level of language, knowledge and experience of the children were determined at the beginning of the academic year by a team of specialists experienced in the development and education of hearing-impaired children. The subjects covered during the first semester of the 2012–2013 academic year and the literacy preparation activities performed in this period are listed in Table 3.

Table 3. Subjects and Literacy Preparation Activities performed in the Pre-school 2nd Grade of İÇEM, along with the Date and Duration of these Subjects and Activities

Subject	Date/Duration	Story Book Telling	Looking at Sequenced Pictures	Reading/Preparing Big Books	Subject Telling
Our Vacation and School	17–21 September 1 week	- A Day at School	Class Rules	--	- ""What did we do during the holiday?" - Teacher's names - Friend's names - Departments of the School
Our Sense Organs	24 September–05 October 2 weeks	- Gülenay and the Little Dog - The Ear of Yumurcak	The Doctor Bee	Preparing Books: - The Head	- Parts of the Head: Eyes/Ears/ Nose/ Mouth/Tongue
Sounds	08–19 October 2 weeks	- Balcan Does Not Pick up His Toys - Utku Paints the Walls	- Serkan's Device - The Bird	Preparing Books: - Animals Reading Books: - The Head/Animals	- The Sounds of Toys - The Sounds of Animals - The Sounds of Vehicles
The Feast of Sacrifice Holiday and October 29 th	22–26 October 1 week	Vacation	The Feast of Sacrifice Holiday	Vacation	- The Feast of Sacrifice Holiday - The Republic Day
The Autumn	30 October–09 November 2 weeks	- Tobî's Autumn Adventure - The Nice Bear - The Autumn Has Arrived	- Sunday - Rain	Preparing Books: - The Autumn Reading Books: - Animals/The Autumn	- The Plants/Animals/ Vegetables/Fruits of Autumn; Preparation for Winter
Our Home and Rooms	12–30 November 3 weeks	- Ece is Having a Brother - Balcan is Drawing a Picture	- The Children's Room - Bedroom - Messy Room	Preparing Books: - Home Reading Books: - The Autumn/Home	- The different parts of our Home: Rooms/Kitchen/ Bathroom/Toilets - Who lives at Home?
Breakfast	03–07 December 1 week	- Four Small Little Bears	Breakfast	Preparing Books: - Breakfast	What do we eat for Breakfast?
Cooking	10–14 December 1 week	- Vegetable Soup	Making a Cake	Reading Books - Breakfast/ Home	- What do we cook? - How do we cook?
Vehicles	17–28 December 2 weeks	- Ece and Efe Go on a Train	- Picnic - Plane	Preparing Books: - Vehicles Reading Books: - Vehicles/ Breakfast	- Land/Air/Sea Vehicles - Traffic
Personal Hygiene	31 December–11 January 2 weeks	- Mumu Doesn't Like to Bathe - Merve Cuts Her Nails	- The New Year - Hygiene	Preparing Books: - Hygiene Reading Books: - Hygiene/ Vehicles	Body Hygiene; Hand-Foot-Nail Hygiene; Having a Bath
The Winter	14–25 January 2 weeks	- Ece and Cem Welcome the Winter - Dear Bear, the Winter Has Arrived	- Winter - The Girl who Eats Snow	Preparing Books: - The Winter Reading Books: - The Winter/ Hygiene	The Plants/Animals/ Vegetable/Fruits of Winter

As shown in Table 3, during the first semester of the 2012–2013 academic year, 17 story books relating to the class subject were covered, 18 sequenced pictures were evaluated, eight big books were prepared and seven big book reading activities were performed. In addition, the diaries prepared by the children at home with their families were used every Monday. These activities – which are implemented during the pre-school period and contribute directly to the development of reading skills – allow children to become aware of the communicative purpose of writing, and also support the improvement of their phonological awareness, syntax, semantic skills and vocabulary (Gambrell and Mazzoni, 1999).

Free play activities were performed between 09:30 and 10:30 AM. For 60 minutes on the first four days of the week, the hearing-impaired students freely played games with normal-hearing children. These activities were performed in the multi-purpose hall of İÇEM, where 22 normal-hearing students aged five years-old receive their education. Similar to other approaches in literature, the children engaged in many table games (Lego, puzzles, nopers), corner plays (science and nature corner, playing house corner, block corner, music corner, traffic corner, puppet corner) and art-related activities (Fields et al., 2004). In addition to these, various corners were also prepared related to the subjects covered in class, including materials and toys associated with their relevant subject (e.g. the hospital corner, etc.). During the free-play activities, one of the class teachers shared information with the children about the activities in which they were taking part. For the children, the main purpose of the plays was to search, find and identify new information, and to understand and make use of this information. In addition, the plays also presented the children with new language-related experiences (Beaty and Pratt, 2003).

Pairing-completing-sequencing activities were performed every Friday between 09:30 and 10:30 AM. These activities were performed in the larger classroom, with the activity-related materials being spread out on the different corners and tables in the room. The children were asked to perform each activity. During *pairing* activities, the children used pairing cards with pictures and names relating to subjects such as colors, object names, subject posters, numbers and friend's names. *Sequencing* involved activities associated with concepts such as days, months, seasons and numbers; while *completing* involved jigsaw activities (pictures of butterflies, cars, trains and people). The purpose of these activities was to allow children to associate writing with pictures or other writings; to allow them to identify sequences in concepts involving order; and to enable them to complete objects and concepts based on fragments of information (Fyke, 2007).

In pre-school 2nd grade, the *mathematics preparation* activity was performed every day between 11:00 and 11:30 AM. The mathematics preparation activities and their content are listed below in Table 4.

Table 4. Mathematics Preparation Activities performed at Pre-school 2nd Grade of İÇEM, and the Content of these Activities

Mathematics Preparation Activity	Activity Content
Volume	Concepts of "Full" and "Empty"/Asking the children questions such as: "How much do we need to add to fill it completely?"
Graph	Graphs related to the class subject.
Measuring Length	Measuring materials, objects and drawings related to the class subject using cubes.
Numbers	Teaching numbers 0-5 and 0-10/counting rhythmically/putting objects on the right number on a line marked with numbers; or marking an object positioned at the correct number/asking: "what comes after this number?" (by showing the relevant number)/completing missing numbers.
Pattern	Continuing patterns shown in figures or pictures.
Shapes	Square/circle/triangle/rectangle.
Expressing concepts through groups/grouping	Big-small/long-short/few-much/open-closed/clean-dirty/before-after/hot-cold/light-heavy/first-second-third
Mathematics Activity Book	Completing numbers by joining dots/painting numbers/forming concept groups/matching numbers with pictures

Within the context of mathematics preparation activities performed in pre-school 2nd grade, a total of eight different activities were employed. During the academic year; 10 volume, seven graph, five length, 27 number, eight shape, 16 concept grouping and five pattern activities were implemented, along with 12 mathematics activity books. During the activities, tables were used that included the title of the activity and the names of the materials, and the results and answers obtained from the children were recorded on these tablets. The activities in question not only provided a basis for mathematical operations and the development of problem-solving skills that would be used later in elementary school, but also contributed to the development of concepts, vocabulary, semantic clues and syntax clues among the children (Fyke, 2007).

Music, Rhyming and Sequenced/Ruled Play activities were performed every day between 11:30 and 12:00 AM, involving the use of music, drama, dance, plays with sequences/rules, listening plays and rhymes associated with a subject covered in class. Rhymes were also used during group and music-related activities, and also at the beginning of play activities. The activities involving rules and sequences involved memory plays and “bingo-like” plays based on the identification of colors, animals, objects and items. The children were expected to take part in these plays following a certain sequence in accordance with certain rules. These activities contributed to the development of phonological awareness and understanding among children, and also improved their use of syntax clues (Beaty and Pratt, 2003).

Drawing activities were performed every day between 12:00 and 12:30 PM, and involved various painting, cutting, pasting and assembly activities, along with the preparation of subject-related corners, in which the children took part in such activities as painting posters, either in groups or individually. The sentences formed by the children related to the class subject were written on posters by the teacher, which were then displayed on the classroom boards. These sentences were repeated together with the children during the day, and their meanings were explained. These shared activities allowed the children to use newly acquired experiences to identify relationships between spoken language and the written word (Fields et al., 2004).

How were the literacy preparation activities implemented within the groups? Literacy preparation involved activities such as storytelling, looking at sequenced pictures, preparing big books, reading big books, subject telling, diaries and pairing-completing-sequencing activities. During the implementation of these activities the teachers used materials, objects and/or toys related to the events/subjects covered by the activity as supportive aids. These activities were implemented as follows:

Storytelling: During these activities, the teacher first showed the story book to the children and made a brief introduction to the subject of the book. Following this, the teacher asked questions about the characters and events shown on the cover of the book, and shared the answers to these questions with the students. Discussing the cover of the book provides children with the opportunity to predict the events described in the book (Hoyt, 1992). Each page of the book was then showed to and discussed with the children. After asking questions about the events pictured in the book, the children were asked about cause-and-effect relationships, as well as questions requiring them to guess outcomes. The relationships between different events were also described, and the children were encouraged to take part in the activity. The types of questions asked during this activity were aimed at allowing the children to identify the relationships between different events, to make inferences and guesses, to share their experiences and to acquire new language experiences (Fields et al., 2004). After the completion of the storytelling, the children engaged in a dramatization of the events described in the story, or were directed to draw the event in question. These ensuing activities are important in that they allow the children to gain an understanding of the event, to remember relevant information pertaining to the event, and to engage in verbal interactions by employing the languages used in the book (Hoyt, 1992). The in-class observations regarding the telling/reading of the story entitled “Balcan is Drawing a Picture” (which was part of the subject named “Our Home and Rooms”) is provided below (Study diary, p. 56, 23 November 2012):

Example 1

Material: The story book entitled "Balcan is Drawing a Picture." Supportive materials: Crayons.

The teacher said: "Now, we will read a story together. In this book, Balcan is drawing a picture." She then showed the picture on the cover of their book, and asked "Do you know who he is?" and waited for the children to answer. After the children did not provide an answer to her question, the teacher herself answered "Balcan." She then asked "What is Balcan doing?" to which one of the children answered "Drawing a picture." The teacher shared this answer with the other children, and said "Let's repeat this together", after which the children repeated the sentence. The teacher then opened the book to the first page. She asked "What is happening?" One of the children said "He is sitting." The teacher then asked "Where is Balcan sitting?" The children answered "In the salon." The teacher expanded this sentence, and said "Balcan is sitting in the salon." The teacher then had the group repeat the sentence. The teacher asked the following sequence of questions "Who is there next to him?", "What is his elder brother doing?", "What is Balcan doing?", and answered the questions by saying that Balcan's elder brother was with him, that his elder brother was drawing a picture and that Balcan was looking at his elder brother. The teacher opened the book to the second page, and showed it to the children by saying "Where did Balcan go?" She then informed that Balcan had gone to his room, and that this room was the children's room in his house. She then asked "What will Balcan do in this room?", and expected the children to guess the answer to this question. After the children were unable to answer, she expanded the question by saying "Will he sleep, or will he draw a picture?" One of the children said "He will draw a picture." The teacher shared this answer with the other students, and then showed the third page of the book. After saying that they guessed correctly, the teacher asked the following questions in sequence: "What is Balcan doing?", "Where is he drawing his picture" and "Can you draw pictures on the wall?" She then informed that Balcan was drawing on the wall of the room, and that pictures should not be drawn on the walls. She asked "With what is Balcan drawing?" showing the crayons to the children, and asked them to repeat the word "crayon". She then asked "How many pens do I have?" She and children counted the crayons together. The teacher asked "What color are the crayons, and requested each student to say the color of one of the crayons. The teacher moved on to the next page and asked "Why is his mother surprised?" After the children were unable to provide her with an answer, she showed the picture on page 4. She asked "What has Balcan done to the wall?" After the children said, "Drawn a picture" in response, she said, "Yes, her mother is surprised, because Balcan drew a picture on the wall", sharing her answer with each children. The teacher asked the children to repeat the sentence "He drew a picture on the wall." After completing the story, the teacher said "Let's also draw pictures," and handed out paper to the children. She asked "What shall we draw?" Each child told about the picture they wanted to draw, and they moved to the activity table. The teacher discussed with every child the picture he/she was drawing.

In Example 1, it can be seen that the story book was associated by the teacher with the subject of "Our Home and Rooms". Words related to this subject were used by the teacher when describing the story, and the teacher had the children repeat certain colors and numbers after their association with the story subject was shown. The children were unable to answer questions that asked them to make guesses and to identify cause-and-effect relationships, and for this reason, the teacher expanded her questions by providing verbal clues, which allowed the children to come up with the answer. Guessing, identifying relationships and answering questions are important strategies when reading, and for this reason, it is important for pre-school children to understand and answer questions relating to these strategies (Beaty & Pratt, 2003).

Looking at sequenced pictures: Sequenced pictures are colored cards that tell a story, or that feature a series of events that follow one another according to a certain order and logic. Without showing the first picture, the teacher began by providing information about the event described in sequence on the cards. The teacher then showed the first picture to the children and asked them who the relevant characters were. After the names of the characters on the cards were identified, questions were asked about the events on the picture, and the answers were shared with the group of children. Before moving on to the next picture, the children were asked to guess the relevant events. After talking about the first picture, the teacher placed it in front of the children. The events on each picture were discussed in a

sequential manner, and the children were asked to describe the events and identify the relationships between them. The children were also asked to read each one of the pictures that were viewed. At the end of the class, the cards were mixed, and the children were asked to summarize the sequence of pictures and events in a single sentence (e.g. Study diary, p. 64, 12 December 2012). As is the case with the storytelling activities, the different types of questions asked about the pictures required the children to provide different types of answers. For this reason, it is important within the scope of these activities to pay close attention to the types of questions that are asked, and to focus on asking questions that emphasize the relationships between different events, and allow the children to make reasonable guesses (Girgin, 2003).

Big book preparation: Big books are reading materials that are prepared based on the Language Experience Approach (LEA), and which comprise sentences formed by the children (Browne, 1996). Big books are designed in such a way that a drawing associated with the studied subject can be found next to each page. These books have a blank page for a cover, and can include photographs or pictures that the children have seen previously in the curriculum web, or that may be based on real objects (Fields et al., 2004). In the activity, the teacher showed the first/cover page of the book to the children and asked questions about the event it depicted. The teacher then listened to the children's answers and shared them with the rest of the group. By showing the blank space beneath the picture, the teacher asked the children what sentence they would like to see written there, saying "What shall we write here?" The commonly accepted sentences selected by the children were transferred to the big book, without the addition of any thoughts/interpretations of the teacher, although the sentences were written with respect to syntax rules (Browne, 1996). After being written in the big book, the sentences were read by the class, and the sentence was placed in front of the children for reading after the relevant page number was recorded. After the other pages were similarly prepared, the big book was completed with the addition of a cover. The book was named in line with the views/opinions of the children, and the date and name of the big book was written on its cover. The in-class observations related to the story entitled "Animals" (which is related to the subject "Sounds") are provided below (Study diary, p. 24, 15 October 2012):

Example 2

Material: Pictures of a cat, dog, lamb, rooster and cow on the first, second, third, fourth and fifth pages, respectively, along with an empty cover page.

Showing the first picture, the teacher said: "Now, we will prepare a book together. Here we have a picture of an animal." She then asked the children, "What animal is this?" The children said "cat", and the teacher then asked, "So, what kind of sound does a cat make?" Some of the children answered "meow, meow". The teacher then made the entire group repeat the words "meow, meow". Following this, the teacher asked "What does a cat say?" to which one child replied, "A cat says meow". The teacher asked the other children what their friend had just said, and made them repeat the sentence "A cat says meow." Afterwards, pointing to the blank area beneath the picture, the teacher asked "What shall we write here?" Some of the children said "A cat says meow." The teacher shared this sentence with the entire group, and wrote the sentence "A cat says meow" beneath the picture. She showed the page to the children, and said "Listen to what I just wrote." She then read the sentence beneath the picture, and asked the children to repeat the sentence as a group. Afterwards, the teacher asked some of the children to repeat the sentence. She then said "This is our first page," and wrote the number "1" in the corner of the page. The teacher placed the first page in front of the children and asked the children to read the book sequentially and provide numbers for the pages. Turn by turn, each child read one of the page numbers to the teacher. The teacher placed the blank cover page on top of the other pages, and then joined/combined the pages together. She showed the book to the children, and said "Look, this is our book." She pointed to the cover page and asked, "What shall we name our book?" After the children did not answer, she showed them the pictures in the book and asked "What is this book about?" to which the children replied "Animals". She then wrote the word "Animals" on the cover of the book, beneath which she drew pictures of the animals shown on the other pages of the book. Indicating a space in the corner of the cover, the teacher said: "I am going to write the date here. What's the date

today?" After the children could not provide her with an answer, she repeated the question, to which some of the children replied "Monday 15 October 2012". The teacher wrote this answer on the cover of the book and showed it to the children. The teacher and the children then repeated the date together.

In Example 2, it can be seen that the teacher guided the children towards the sentence to be written, and shared the written answers with the group without making any additions to the children's words.

Big book reading: During literacy preparation classes, one or two previously completed class books were read together with the students for 30 minutes. Following her introductory statements and sentences, the teacher showed the big book to the children and asked them what was written on the cover. After the name of the book was repeated, the teacher discussed with the children the date the book was first prepared, and then opened the first page. The teacher asked questions about the drawings on the first page, and shared the answers given by the children with the entire group. Afterwards, the teacher read the text beneath the picture, and asked the children to repeat it. She then shared the meaning of each word (Study diary, p. 76, 27 December 2012). To create a class environment that supports literacy, big books should be placed in locations where they are easily accessible to the children, and they should be read and used periodically in both group and individual activities (Browne, 1996). Big books that are read within groups are useful and important in allowing children to remember sentences and words, to share meanings, and to take part in group reading activities without fear or concern of making errors (Girgin, 2003).

Subject telling: Selected subjects were raised and shared in class using pictures, photographs, posters, real materials and toys. In cases where posters were used, words related to subject were written on the posters. For example, the subject "the different parts of our home" was discussed using a poster showing the interior of a house, with the words "kitchen," "salon," "bedroom," "children's room," "bathroom" and "toilet" written in the appropriate places. The teacher shared information on the subject using support materials, by asking questions, by sharing the answers provided by the children with the rest of their group, and by having the children repeat words and sentences relating to the subject (e.g. Study diary, p. 40, 15 November 2012). Subject telling is an approach that supports the development of language and concepts among children, and which also allows them to acquire and use new experiences (Fields et al., 2004).

Diaries: Diaries allow children to gain awareness of the fact that writing has a communicative purpose. Within the context of this study, diaries were prepared every evening by the children and their families, and these diaries were used during the literacy preparation activities performed every Monday. The parents drew in the diary a picture of an activity they performed at home with their children, and the relationship of the child with the activity/event in question was described in a sentence written beneath the picture. These activities in the home could be routine activities performed within the family environment (watching television, cooking food, etc.), or they may also be out-of-the-ordinary events at home) Which activities were performed within the groups? which the child wished to share (a visit by a guest, a child falling ill, etc.). During group activities, the picture in the diary of each child was shared with the other children, the sentences/writings beneath the pictures were read, and the children were asked to describe in their own words the event shown in the picture. After describing the activities he/she had performed at home, each child was asked questions to expand his/her descriptions and answers. Any mistakes the child made while using spoken language were corrected as necessary (Study diary, p. 68, 17 December 2012).

Pairing-completion-sequencing activities: During pairing-completion-sequencing activities, the children performed such activities as pairing an object with a shape; pairing concepts with a picture or writing; completing or assembling a shape separated into several parts; listing days, seasons, months and numbers in sequence; and continuing patterns. The materials used in these activities were introduced to the children beforehand, and the children were informed on how they should perform the activities. Each child was guided to the activities, which were placed on the classroom corners and

tables. The children were expected to perform the activities independently. All activities completed by a child were controlled by the teacher, and then looked at together with the child. Pairing activities were first performed with materials in which pictures and written words were shown together. If the child was able to perform this activity without difficulty, the activities were repeated after removing/concealing the writing on the materials (Gambrell and Mazzoni, 1999). For example, during color pairing activities, children were first asked to pair the color names on the pairing cards with the names written on the color cards. Should the child be able to perform this pairing activity rapidly and without error, they were asked to repeat the activity using materials without writing or names (e.g. Study diary, p. 89, 18 January 2013).

Discussion, Conclusion and Suggestions

The discussion of the results of the study followed the relevant study questions.

Which activities were performed within the groups? Hearing-impaired children experience delays in the development of literacy skills. Depending on the early use of implants and the provision of qualified educational environments to suit their individual needs, the hearing-impaired will use the same strategies and experience the same learning processes as normal-hearing children (Schirmer, 2000). In this context, literacy preparation programs should: a) present a large number of diverse literacy-related materials to the children; b) include physical approaches and environments that support literacy; c) provide literacy-related activities to the children every day and on a routine basis, d) include a large amount of inputs related to spoken language; and e) involve active interactions between teachers and children (Justice, 2004). A review of the findings of the present study indicates that calendar activities; literacy preparation activities; mathematics preparation activities; music, rhyming, drawing and free play activities; and pairing-completing-sequencing activities were all performed routinely at specific hours during the week using a large variety of materials. According to the emergent literacy approach, the presentation of a large number and variety of activities during the pre-school period allows children to become interested in written materials, to understand the structure of stories, to understand the structure of events, to gain an interest in spoken sounds and to engage willingly in activities that develop literacy (Reutzel and Cooter, 1996).

Another observation of the study was that, in accordance with the Whole Language Approach, previously determined subjects were considered and presented within the context of a curriculum web. New experiences should be provided to children in school through activities that are organized and conducted according to a certain program to address various subjects (Fields et al., 2004). Presenting a subject through a number of different activities will not only allow the children to enrich their experiences on a particular subject, but will also permit them to employ their existing language and knowledge, to share the meaning of newly learned words, to utilize new words within various sentences and contexts, and to notice clues relating to semantics and syntax (Justice, 2004). The WLA aims to structure meaning by developing jointly the understanding of different language clues (i.e. phonological, syntax, semantics and use-related clues). In this way, the WLA allows real literacy activities to be integrated into the educational program, and literacy experiences to be provided in accordance with the individualized needs of the children (Harp and Brewer, 2005).

Paying attention to the written materials in their environments, children come to understand that they contain meaningful messages, thoughts and emotions, and that they can be used to convey information about events to other people. In this process, children also acquire experience in the writing and meaning of a large number of words (Browne, 1996). In this study, the children engaged in various activities in the class environment, such as the placing of objects in certain corners according to the names attributed to these corners; the writing of their thoughts onto the posters prepared in class; the placing of written information, such as the students' dates of birth, the names of the students and the teacher, and the names of colors and seasons on boards within the class room; and the labelling of objects they use personally (chair, paintbox, etc.). These activities served to enrich the literacy experience of the students in class, and also to assist them in recalling word and language structures, and to gain an awareness of the shape of words (Beaty and Pratt, 2003).

How were the literacy preparation activities implemented within the groups? The findings of the present study indicated that use of story books and sequenced pictures necessitated the use of various strategies by the children. These strategies, which have an important place in formal reading education, include: a) guessing, b) identifying the relationship between events, c) sequencing events, or describing events according to an order, and d) question-answer relationships (Schirmer, 2000). Story books and sequenced pictures provide children with the opportunity to consider events, to identify relationships between events, to make predictions and inferences regarding an event, and to share their experiences. These activities, involving prediction, identification of cause and effect relationships, and questions asked regarding the relevant events, not only allow the children to better understand and interpret events, but also to assist in the development of their vocabulary. In addition, choosing stories/events that are related to class subjects allows newly learned words and language structures to be used effectively in meaningful and proper contexts (Girgin, 2003).

Another observation made during the study involved the preparation of big books in group activities, and the reading of these big books at certain time intervals. Big books aim to develop the literacy skills of the children by starting from a level that the children can read (Browne, 1996). In accordance with the Language Experience Approach, big books are prepared with the participation of each child from the group. These big books allow the children to understand letter-sound relationships, to notice the shape of words, and to develop skills relating to word structure and reading comprehension, while also increasing the interest of children in books. The activity, furthermore, allows them to understand the relationship between the written and spoken language, and to see their thoughts in a written format (Miller, 2005). The relationship between spoken and written language is very important for reading, and for this reason it is suggested that the children's own spoken language should be used as their first reading material (Beaty and Pratt, 2003). Texts prepared based on this approach will make it easier for a child to remember content and to recognize words in order to predict their meaning. Big books teach children about sentence structure and content, and make it easier for the children to observe the use of the spoken language in written materials, while also contributing to increasing the children's awareness of sounds during reading activities (Browne, 1996).

Pairing-completing-sequencing activities allow children to focus on the use of the written language, and to better remember and understand words (Fyke, 2007). Analysis skills – which form the basis of the formal reading education provided during the elementary school years – require students to distinguish between the shapes, similarities and differences of words. Pairing-completing-sequencing activities – which play an important role in the development of concepts – require the children, as a first step, to place an object on its matching picture, to assemble jigsaws and to pair objects with correct colors. Depending on the performance and development shown by the children in these initial tasks, the use of written materials with the names of concepts and objects may also be included in such activities, which will allow the children to notice the shapes of letters and words, and to gain a visual awareness that enables them to identify the similarities and differences between letters and words. Such awareness plays a very important role at the beginning of formal reading education.

This study has determined that group activities for the preparation of literacy performed at İÇEM during the pre-school period were conducted taking the personal development of the children into account; emphasizing the relationship between spoken and written language; and supporting the development of phonological awareness, along with the ability to understand syntax clues and to notice the shapes of letters that form words. Based on the study results, the following recommendation can be made regarding the implementation of activities evaluated within the context of this study. To determine the extent to which a hearing-impaired child benefits from the education program, the development of the child's literacy skills could be assessed through the provision of a large number and of diverse activities. In future studies, the development of literacy skills among hearing-impaired children in various different pre-school education environments may be investigated, along with the characteristics of the educational practices in these environments.

References

- Akçamete, G. (1999). Improving question skills for student with hearing impairment. *European Journal of Special Education*, 14(2), 171-78.
- Beaty, J. J. & Pratt, L. (2003). *Early literacy in preschool and kindergarten*. New Jersey: Pearson Education, Inc.
- Browne, A. (1996). *Developing language and literacy 3-8*. London: Paul Chapman Publishing Ltd.
- Conway, D. (1985). Children (re)creating writing: A preliminary look at the purposes of free-choice writing of hearing-impaired kindergarteners. *The Volta Review*, 87(5), 91-107.
- Deretarla, E. (2000). *Kaynaştırma uygulaması yapılan ilköğretim okullarının 3. sınıfına devam eden normal işiten ve işitme engelli çocukların okuduğunu anlama becerilerinin incelenmesi*. Yayınlanmamış yüksek lisans tezi, Hacettepe Üniversitesi, Ankara.
- Easterbrooks, S. R., Lederberg, A. R. & Connor, C. M. (2010). Contributions of the emergent literacy environment to literacy outcomes for young children who are deaf. *American Annals of the Deaf*, 155(4), 467-480.
- Ewoldt, C. (1985). A descriptive study of the developing literacy of young hearing-impaired children. *The Volta Review*, 87(5), 109-126.
- Fields, M. V., Groth, L. A. & Spangler, K. L. (2004). *Let's begin reading right* (5th ed.). New Jersey: Pearson Education, Inc.
- Fyke, L. B. (2007). *Essential kindergarten assessments for reading, writing and math*. New York: Scholastic Inc.
- Gambrell, L. B. & Mazzoni, S. A. (1999). Emergent literacy: What research reveals about learning to read. C. Seefeldt (Ed.), *The early childhood curriculum: Current findings in theory and practice* (pp. 80-105). New York: Teachers College Press.
- Geers, A. E. (2002). Factors affecting the development of speech, language, and literacy in children with early cochlear implantation. *American Speech-Language-Hearing Association*, 33, 172-183.
- Gillespie, C. W. & Twardosz, S. (1997). A group storybook-reading intervention with children at a residential school for the deaf. *American Annals of the Deaf*, 14(4), 320-332.
- Girgin, Ü. (1987). *Doğal işitsel-sözel yöntemle eğitim gören işitme engelli çocuklarda okuma-anlama davranışlarının irdelenmesi*. Yayınlanmamış yüksek lisans tezi, Anadolu Üniversitesi, Eskişehir.
- Girgin, Ü. (1999). *Eskişehir ili ilkokulları 4. ve 5. sınıf işitme engelli öğrencilerinin okumayı öğrenme durumlarının çözümlenme ve anlama düzeylerine göre değerlendirilmesi*. Eskişehir: Anadolu Üniversitesi Yayınları.
- Girgin, Ü. (2003). İşitme engelli çocuklar için erken dönem okuma ve yazma eğitimi. U. Tüfekçioğlu (Ed.). *İşitme, konuşma ve görme sorunu olan çocukların eğitimi* (ss. 139-162). Eskişehir: Anadolu Üniversitesi Yayınları.
- Girgin, Ü. (2006). Evaluation of Turkish hearing impaired students' reading comprehension with the miscue analysis inventory. *International Journal of Special Education*, 21(3), 68-84.
- Girgin, Ü. (2012). *Phonic-based sentence method for students with hearing impairment: A case study from Turkey*. Saarbrücken: LAP Lambert Academic Publishing.
- Gioia, B. (2001). The emergent language and literacy experiences of three deaf preschoolers. *International Journal of Disability, Development, and Education*, 48(4), 411-428.
- Harp, B. & Brewer, J. A. (2005). *The informed reading teacher: Research-based practice*. New Jersey: Prentice Hall, Inc.
- Hoyt, L. (1992). Many ways of knowing: Using drama, oral interactions, and the visual arts to enhance reading comprehension. *The Reading Teacher*, 45(8), 580-584.

- Johnson, C. & Goswami, U. (2010). Phonological awareness, vocabulary, and reading in deaf children with cochlear implants. *Journal of Speech, Language, and Hearing Research*, 53, 237-261.
- Justice, L. M. (2004). Creating language-rich preschool classroom environments. *Teaching Exceptional Children*, 37, 36-44.
- Kyle, F. E. & Harris, M. (2011). Longitudinal patterns of emerging literacy in beginning deaf and hearing readers. *Journal of Deaf Studies and Deaf Education*, 16(3), 289-304.
- Miller, W. H. (2005). *Improving early literacy: Strategies and activities for struggling students (K-3)*. San Francisco: Jossey-Bass.
- Paul, P. V. (1998). *Literacy and deafness: The development of reading, writing, and literate thought*. Boston: Allyn & Bacon.
- Reutzel, D. R. & Cooter, R. B. (1996). *Teaching children to read: From basals to books (2nd ed.)*. New Jersey: Merrill/Prentice Hall
- Rottenberg, C. (2001). A deaf child learns to read. *American Annals of the Deaf*, 146(3), 270-275.
- Rottenberg, C. & Searfoss, L. (1992). Becoming literate in a preschool class: Literacy development of hearing-impaired children. *Journal of Reading Behavior*, 24(4), 463-479.
- Ruiz, N. (1995). A young deaf child learns to write: Implications for literacy development. *The Reading Teacher*, 49(3), 206-217.
- Schirmer, B. R. (2000). *Language and literacy development in children who are deaf (2nd ed.)*. Boston: Allyn and Bacon, Inc.
- Tüfekçioğlu, U. (1992). *Kaynaştırmadaki işitme engelli çocuklar*. Eskişehir: Anadolu Üniversitesi Yayınları.
- Williams, C. L. (1994). The language and literacy worlds of three profoundly deaf preschool children. *Reading Research Quarterly*, 29(2), 125-155.
- Williams, C. L. (1999). Preschool deaf children's use of signed language during writing events. *Journal of Literacy Research*, 31(2), 183-212.
- Williams, C. L. & McLean, M. M. (1997). Young deaf children's response to picture book reading in a preschool setting. *Research in the Teaching of English*, 31(3), 59-88.
- Wright, J. & Jacobs, B. (2003). Phonological awareness and metacognitive strategies to children with reading difficulties: A comparison of two instructional methods. *Educational Psychology*, 23(1), 17-47.
- Yıldırım, A. & Şimşek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri (8. baskı)*. Ankara: Seçkin Yayıncılık.