Research Article

Action Research on Education of Students with A Learning Disability

Murat BAŞAR[1], Ahmet GÖNCÜ[2], Muhammet Sait BARAN[3]

Abstract

This study, which aims to reveal the effectiveness of parents' participation and the method of coloring the sounds mixed in teaching the students to learn how to read and write, was designed according to the technical collaborative action research, which is one of the qualitative action research methods. The study group of the study consisted of a male and a female student coded as Elif and Rıza with the diagnosis of learning disability. While Elif's mother voluntarily participated in the study, Rıza's mother could not participate in the study by showing excuses for her health problems. The literacy activities were carried out with the "Voice-Based Sentence Method" and "Open Syllable" system, considering the students' situations and ensuring their active participation in the process. The sounds that students confused and had difficulty in perception were presented to the students with coloring studies. However, both visual and auditory senses were supported using echo, repeated, and paired reading methods. The study determined that the use of color was effective in creating a visual perception in students with learning difficulties. In this process, Elif, whose parents participated in the study, completed the literacy education process in a short time, and reached the level of free reading. Rıza, whose parents did not participate in the process, completed the literacy education process in a long time and remained at the teachable reading level that required external support. As a result, it was concluded that the students' participation and addressing multiple senses were effective in the education of students who had learning difficulties during the literacy education process.

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[1]Associate Proffesor, Uşak University, Faculty of Education, murat.basar@usak.edu.tr, https://orcid.org/0000-0001-6635-4563

[2]Research Assistant, Uşak University, Faculty of Education, ahmet.goncu@usak.edu.tr, https://orcid.org/0000-0003-1846-8122

[3]Research Assistant, Uşak University, Faculty of Education, sait.baran@usak.edu.tr, https://orcid.org/0000-0002-3300-8311

Introduction

Although they are in the upper classes in schools, students who have not completed the literacy education process can be seen. It turns out that these academically insufficient students are also emotionally worn. There may be several factors that affect this process. Teacher attitude, parent attitude, emotional traumas, or situations requiring special education can be listed as the reason. One of the situations that require special education is learning disability.

The American Psychiatric Association (APA, 2014) shows signs of learning disability; despite the necessary interventions, it has been listed as having slow or wrong word reading, having difficulty in understanding what has been going on for at least six months, having difficulties in number perception and calculation, reasoning, having difficulty in writing and written expression. Snowling and Melby (2016) stated that individuals who have learning disabilities have poor visual and auditory perceptions. According to Rack (2017), short-term memories of students with a learning disability are weak. Individuals with a learning disability have problems transferring short term memory to long term memory, so they quickly forget what they have learned. According to these symptoms, a learning disability is grouped under three headings. These; reading difficulties (dyslexia), written expression difficulties (dysgraphia), and mathematics difficulties (dyscalculia) are expressed (APA, 2014). One or more of them may coexist in a student with learning disabilities.

Learning disability is the highest group among individuals in need of special education. According to MEGEP (2014), it is seen in one of seven children, whereas according to Saraç (2014), it is a special need situation that can be seen in one of every five children. Since the term "learning disability" has been legally included, the rate of children diagnosed with learning disabilities between the ages of 6 and 21 has increased by 38% (Lyon, Fletcher et al., 2001). MEGEP (2007) states that learning disability is seen in one of every 6-7 students, while Saraç (2014) stated that it is seen in one of every 4-5 students. Learning difficulties are defined as difficulties in listening, thinking, speaking, reading, writing, and mathematical calculations that occur with the effect of one or more psychological processes essential in understanding and using written and spoken language (IDEA, 2004). Therefore; Perceptual difficulties, minimal dysfunction in the brain, and developmental language disorders are included in the learning disability field. Academic

failures arising from visual, auditory, and motor disorders, mental disability, emotional disorders, environmental, cultural, and economic negativities were also accepted outside of learning disabilities.

The group of students with a learning disability is very heterogeneous. While one of the students with a learning disability may show disability only in one area, another may show disability in several areas (Lerner, 2000). The primary problem of students with a learning disability is low academic achievement. However, they also experience difficulties in other skills (Gargiulo, 2012). They may also have problems with issues such as time, place, and direction. For example, a student who graduated from science high school cannot find his home on the same street or stay there for hours if he is not warned when he enters the bathroom. In addition to their academic life, they may have problems in their daily life and try to come to school on Saturdays and Sundays by mixing the days of the week.

Since the definition of learning disability is not clear enough, it is very difficult to identify children with a learning disability who need special education support services and to benefit from appropriate educational opportunities (Fletcher, Lyon, Fuchs, & Barnes, 2007). Problems in diagnosing learning disability and organizing the education process can be listed as follows (Scruggs & Mastropieri, 2003): issues including overdiagnosis, individual differences, lack of conceptual clarity, intelligence score (IQ) and success differences, early diagnosis, problems encountered in the implementation of legal obligations. All these problems reveal that concepts are complex. A conceptual change must take place to eliminate this confusion and misconceptions. First of all, misconceptions should be revealed in detail (Coştu, Ayas, & Ünal, 2007). Often this problem is perceived as low academic performance or a mental problem. In the study of Başar and Göncü (2018), it was determined that one of the misconceptions related to the learning disability of the classroom teachers is a mental disability. When the literature was scanned, many studies were found to meet the reading difficulties or writing difficulties of the students who had a learning disability (Akyol & Ketenoğlu Kayabaşı, 2018; Akyol & Sever, 2018; Bienkowski, Feng & Means, 2012; Bouck, Chamberlain & Park, 2017; Fırat & Koçak, 2018; Jozwik & Douglas, 2017; Kaur, Koval & Chaney, 2017; Kaya, 2016; Kodan, 2016; Kuşdemir, Kurban & Bulut, 2018) but no studies involving the literacy process were encountered in the studies. On the other hand, in their studies, Tekin (2017) and Başar, Tekin, Doğan, and Şener (2017) determined that the parents of students who have learning disabilities do not have information about their children's situation and are inadequate in terms of their education.

These families are upset about their child's condition, unaware of this problem, and nothing else comes to them. In his study, Tekin (2017) stated that many parents experienced exclusion by teachers and the environment. It is a fact that parental involvement is at least as important in the education of students who require special education, just as the parental contribution is important in the education of normally developing students. For this reason, it is thought that parents' participation in the education process will be important for students with a learning disability. Deniz, Yorgancı, and Özyeven (2009) stated that it would be beneficial to inform students' parents about learning disabilities. Thus, parents' awareness of their child's situation will be created or will develop. Since students with learning disabilities experience visual and auditory perception problems, parents need to support their children in activities that support visual and auditory perception in line with the activities in the classroom. When the activities carried out at school, and the activities in the home are not compatible with each other, larger disabilities may arise in the students. For example, if the teacher's color for the sound "b" and the family's color differ, perception confusion may occur. This study is original in terms of taking an active part in the literacy education process studies. Suppose the intervention cannot be started from the literacy education period. In that case, it can be said that students cannot gain fluent reading skills since their phonological awareness cannot be developed. Saksida et al. (2016) concluded that students who could not grasp the language's phonological structure failed to understand what they read. Reading skill is one of the areas where students with learning difficulties experience difficulties. Letter recognition, spelling, word recognition, and correct and fluent analysis difficulties are common difficulties (Raskind, 2001). Difficulties in the analysis also negatively affect reading comprehension. Problems can be seen in understanding the text, sorting the flow of events, finding the main ideas, and drawing conclusions (Özmen, 2008). Students who do not develop fluent reading skills cannot improve their reading comprehension skills. One foot of my site will be incomplete when the student's parent does not participate in the process. Effective participation of the parent in the process will ensure the harmony between the school and the home while speeding up the parent's acceptance of special needs children. Therefore, starting from the literacy education process in solving the problems of students who have learning disabilities, a study was needed to reveal the effect of parent participation in comprehending the phonological structure of the language. This study is thought to meet such a need.

The Current Study

In this study, which was carried out to solve students' problems with learning disabilities caused by visual and auditory perception with the participation of parents, answers to the following questions were sought.

1- What effect does the use of "color" have in the scope of the visual and auditory perception problem-solving activities of students with a learning disability?

2- What effect did parent involvement have on acquiring the literacy education skills, location, direction, and time concept of students with a learning disability?

Method

Technical/scientific collaborative action, which is one of the qualitative research methods, in this study, which was carried out to eliminate the reading problems arising from the visual and auditory perception deficiency of students with a learning disability, to carry out the literacy education process with the use of "color," "Open Syllable System" and to demonstrate the effect of student parents' participation in the process. research pattern was used. Technical/scientific collaborative action research is a method in which the application takes place under the researcher's guidance and in an intensive interaction. The researcher intervenes in the problems within the framework of his expertise. It is important to describe the process in technical/scientific/collaborative action research (Yıldırım & Şimşek, 2011). Johnson (2014) stated that action research could be used in educational practices and create effective educational environments after these practices. In this study, the teacher conducted the literacy education teaching activities for students diagnosed with learning difficulties under researchers' guidance, and the researchers also provided technical support to the teachers. Accordingly, researchers should be careful about performing activities such as creating visual perception by painting the mixed sounds (BD) in different colors, echo, paired, repeated reading, creating visual symbols at the beginning and endpoints of operations, such as the beginning of the teaching of voice, syllable, word, sentence, and text. They also made sample applications where necessary. Then the teacher continued the process. For example, exemplary activities such as comprehending that the consonant takes its name according to the vowel sound that precedes the consonant sound, and first grasp the "le" syllable instead of "el (hand)" in the syllable stage. The parents of the students also participated in the process. The parents who participated in the study of the practitioner's activities were also repeated at home. Situations that may arise, such as the parent's

misrepresentation of the sounds, were discussed with the practitioner beforehand, and mistakes were tried to be minimized. The practitioner conveyed the problems they faced in this process to the researchers, such as voices' perception. The researchers examined the problem on the spot and made the necessary intervention or explanation to the practitioner and the guardian. Moving to the next stage in the studies was carried out with the researchers' joint decision and the teacher. If the student reached the teachable level in the wrong analysis inventory adapted by Akyol (2011) to the voice, syllable, word, sentence, or text stage, the activities included in the activity plan in a new stage were applied.

Study Group

The study group of the research consisted of two students, their families and teachers, a boy and a girl diagnosed with learning disabilities, who were educated at a primary school 2nd grade in the center of Uşak in the 2017-2018 academic year. The reason why the teacher was willing and inclined to work and the students were diagnosed with a learning disability was the reason for choosing the relevant class of the school.

Students whose primary school 2nd grade can only recognize the sound of "e," which is the first of the first group of letters that have not completed the literacy education process. According to ethical rules, female student Elif is coded as male student Rıza. Elif completed the first year in another primary school, and at the beginning of the second year, she came to the class she is currently studying. Rıza completed the first semester of the first class in a different primary school and joined the current class from the second semester of the first class.

During the literacy education process, it was determined that one of the students mixed the sounds of b-d, c-ç, and m-n. It was determined that Rıza mixed b-d, b-p, and m-n sounds. Coloring is used for these sounds. At the same time, both students had time, place, and direction problems.

Process

The researchers started to go to the school in the study group and started to practice. Joint activities such as educational games, singing, and conversation with the students was organized to closely get to know the students and parents and avoid a negative attitude towards the researchers. A situation assessment was made with parents and teachers, and information was given about the process. Then, a plan was prepared with the classroom

teacher and parent. In line with the prepared plan, the things to be done to the teachers and parents were explained. The student's development as a result of the activities and applications; It is recorded every week by teachers, parents, and researchers. Nobody was aware of these records except for teachers, parents, and researchers. Student names are coded. In this way, trust-based communication was established with students and parents. The researchers observed the application process without making the students and other students studying in the classroom feel. The activities were carried out with the researchers' support in the resource room at the end of the school, with the parents' participation, with the support of the researchers, without disrupting the normal education and training activities of the students. The research is planned for 12 weeks. However, it continued throughout the 2017-2018 academic year, as students experienced traumatic events such as domestic violence and parents' divorce. Applied activities were repeated in coordination by parents at home. Thus, the parents actively participated in the teaching-learning process. Problems in the concepts of location, direction, and time were tried to be solved with the participation of Elif's mother. A time-oriented plan was developed with Elif's mother.

The days of the week are coded as follows: Monday is the starting day of the school, Tuesday is the day the mother watches the series, Wednesday is the painting course, Thursday is the cartoon day followed by Elif, Friday is the flag day, Saturday is the street market, Sunday is the day of traveling with mother and sister. Elif was waking up early to come to school on Saturday and Sunday as it mixed the days and time at the beginning of the study. For the concepts of location and direction, a visual sign such as a grocery store, electric pole, a tree in front of the house is shown in every return road on the road where the houses go to school from the street. Elif went to school with her mother for the first week. The mother pointed a visual at each turn. In the next one month period, the mother followed Elif remotely. The parent of Rıza could not actively participate in this process due to her health problems.

Within the scope of the study, students were taught first to read and write. Currently, the "Voice-Based Sentence Method" is applied in the program. In parallel with this method, the process is carried out according to the "Closed Syllable System." "E" sound is given first and then "l" sound. As the first syllable, "el (hand)" syllable is created. The "el" syllable is closed and does not correspond to the structure of Turkish. According to the closed syllable system, students memorize sounds instead of comprehending them (Başar, Karasu & Şener, 2016). TDK (2016) Consonant letters in Turkish combine with the vowel that comes after

form syllables. For this reason, an open syllable system was used in literacy education studies since it is suitable for the structure of Turkish. Başar, Doğan, Şener, Karasu, and Yurttaş (2015) concluded that conducting the literacy education process with an open syllable system contributes to students' comprehension and reading comprehension skills. The open syllable system requires less time than the "Ba Syllable Method" and has been preferred because it is suitable for the structure of Turkish, according to the TDK spelling guide (2016). Starting from this process, researchers went to schools one hour a week for consultancy purposes and examined the studies, and evaluated the process. Activities and problems encountered in the process and observations were transferred to semi-structured forms. The information obtained was evaluated with five 1st grade teachers during the study.

Students who have a learning disability are tried to be saved from learned helplessness. Students who have learned helplessness may show themselves inadequacy and turn themselves to learning. Başar and Batur (2018) found that students who had emotional problems had problems in reading comprehension. Bek and Şen (2012) stated that students with learning disabilities were emotionally abused by the teacher, the environment, and factors. During the process, it was observed that Elif had an interest and talent for visual arts and Riza's tendency to drama. Since the students are in the primary school period, they are in the "Productivity and diligence" of Erikson's personality development periods (Senemoğlu, 2005). In this context, to ensure productivity and diligence and meet the "Social Acceptance" need in Maslow's hierarchy, Elif was directed to the painting course. Rıza was assigned to drama activities in the classroom. By participating in the activity, the student was both busy and successful in the activity. This situation has created emotional support for students. With this process, parents' involvement in the process accelerated the process of understanding and accepting their children's situation.

The literacy education method with an open syllable was used for both students with a diagnosis of learning disability. The sounds that the students first mixed in were painted in different colors. For example, sound "b" is identified with spring and painted green, as shown in figure 1. Sound or letter, echo, paired, repeated, harmonious reading was made, and both visual and auditory awareness was created. All the readings were done to the students. In the reading aloud, dialogue readings were made, and Hacivat Karagöz figures were used in these readings. The students were asked to pay attention to the distortion problem by first coloring the sounds they mix. The correct sound, syllables, and words that they wrote wrong were always printed with the same color pen. The starting points of his

notebooks are always painted in the same color. Bold lines facilitate lines and line tracking. The student is immediately warned when he starts from the middle of the line or page. The students' correct words are always written on the same color cardboard and shown to the student. Against contradictory writing, there is a space between words by leaving a space between the words, and a space between words is created. Against the mistake of separating the word from the syllable, the truth of the words written separately is always shown in the same color pen and the same color background cardboard. If the student does not know the meaning of the word he wrote wrong, it is given meaning, and the word is used in the sentence. The student is also provided to write the word using the sentence.

Data Collection Tools

The development of students in the literacy education process was collected by the teacher, parent, and researcher with an observation form. While preparing the observation form, the classroom teacher's opinions, special education, and assessment evaluation experts were consulted. The items that the experts agreed on were included in the observation form. The observation form consists of recognizing the sound, writing, distinguishing it from other sounds, recognizing syllables, writing, reading the words at the word stage, writing, distinguishing them from other words, reading the sentences at the sentencing stage, writing, dictating the sentences. The text phase was evaluated as reading and writing the text and associating it with the other texts.

In the free reading period, according to "Error Analysis Inventory" adapted by Akyol (2011), Harris and Sipay (1990), Ekwall and Shanker (1988), and May (1986). There are three levels according to this false analysis inventory.

1- It is the independent level where the student understands reading and reading without the teacher or parents' help.

2- The instructional level where the student is read according to the target at the desired level with the help of the teacher or the parent.

3- The level of anxiety that the student makes many reading mistakes and can understand a small percentage of what he/she reads.

The Multi Dimension Illegibility Scale evaluated students' writing process.

Multi Dimension Illegibility Scale

Multi Dimension Illegibility Scale developed by Yıldız, (2013), Yıldız and Ateş, (2010), Yıldız, Yıldırım, and Ateş (2009). In this scale, the text was evaluated in five dimensions as legibility, slope, space, line and line tracking, size, and shape tracking. 1 Sufficient, 2 Partially Sufficient, 3 Insufficient were evaluated in three categories.

Interview and assessment of student status

During the study, the teacher was interviewed with teachers, students, and parents in order to strengthen communication in the style of chat. From time to time, an expert from the Guidance and Psychological Counseling field also participated in these conversations. As the student improved in painting, he tried to reflect his pleasure in reading and writing. The students' attitudes and behaviors about the family, Elif's behaviors at home against the mother and sibling outside the school, the level of interest in teaching and the effects of the traumas she experienced about family division. Since Rıza's mother did not participate in the process, the situation of Rıza at school, her attitudes towards the school, and her friends were discussed.

Data Analysis

The pen-holding activities carried out in the research classes were followed up weekly and monthly with structured forms. The data obtained were subjected to descriptive analysis together with academicians. In determining students' reading aloud errors, the reading aloud determined by Başar, Şener, and Karasu (2016) and Başar, Batur, and Karasu (2014) was based on. 1 Sufficient, 2 Partially Sufficient, 3 Insufficient were evaluated in three categories. From the data obtained from the students, the data obtained by the experts were included in the research findings.

Results

The effect of color usage related to the first question of the research on the student's distinguishing sound process is shown in table 1.

Table 1. *Effect of Color Usage on the Process*

Student	Mixed Sounds	Applied Activities	Level Reached at the End of Process
Elif	b-d, c-ç, m-n	Coloring; echo, repeated, paired reading; vocalization and touch	Independent Reading Level
Rıza	b-d, b-p, m-n	Coloring; echo, repeated, paired reading and vocalization activities	Instructional Reading Level

As can be seen in Table 1, both students mix three groups, namely six voices, during the literacy education process. Coloring work has been applied for the sounds mixed with each other. First of all, it was started from the sound "b," and the same color was used by the teacher in the classroom and the mother at home for the sound "b." No sound was given before reading a sound without comprehending it, recognizing it in other sounds, reading and writing syllables and words correctly. As seen in Figure 1, while visual stimuli are presented with color; on the other hand, auditory awareness is created with echo, repeated, paired reading. While Elif grasped the sounds in a shorter time with her parents' support, Rıza's comprehension process was long. When the literacy education process was completed, the period of free reading was initiated, and all b and d letters were emphasized in the first text. In the first text, the same colors used in the literacy education process were first identified with the letter b in spring. Visual awareness was created by emphasizing the letter d in green and d in pink. Voices are supported by echo, repeated, and paired reading methods. The number of coloring has been gradually reduced in subsequent texts. Thanks to her parents' involvement in the process, Elif solved the problem of mixing for each letter duo in the second reading of the text. When the student was stuck, he immediately remembered the sound when the color emphasis was made.

At the beginning of the process, while Rıza can only recognize the voice of "e," "Open Syllable System," which is suitable for the structure of Turkish, has been applied without creating meaningless syllables and words and sentences by starting with the "Voice-Based Sentence Method" during the literacy education process. Voice, syllable, word, sentence, and text periods were carried out according to this system. Rıza was able to read the letters

b-d without mixing at the end of the fifth text. After the confusion problem of b-d letters was fixed, c-ç letters were changed. Elif resolved the problem of mixing the letters c-ç after the third text. Rıza was able to read the letters c-ç without mixing them in the sixth text. In the study, since the first letter of "blue" color is "m," blue color is used for letter "m," and pomegranate red is identified for letter n, and red color is used. Elif was able to read the letters m-n without mixing the text after the second reading. When Rıza mixed the letters m-n in the fourth reading, she made a "mandarin" cake with the letter "m" for Rıza and tasted it. Rıza was able to read the letter m-n in the fifth reading without mixing. As shown in Figure 2, activities such as sight, hearing, touch, etc. were included, and all students' senses were addressed. These activities were effective in recognizing the voice of the student in the literacy education period. It was determined that the students comprehend the p, ç, t, k sounds better during the literacy process. It was revealed that the use of color effectively eliminated the insufficiency in visual perception caused by learning difficulties. During her action, Elif's interest in painting was discovered. The student was developed in this field by being directed to the relevant institutions.
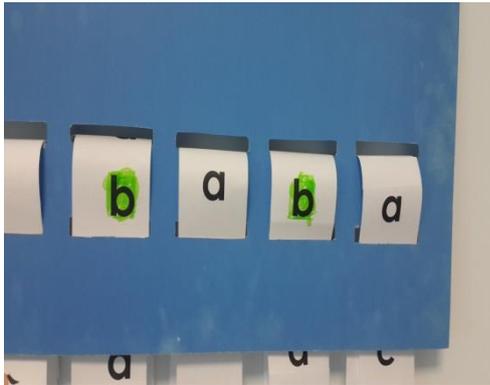
Figure 1. *Create Words*   Figure 2. *Touch Activity*

The effect of parent involvement in solving the problems related to the literacy education of students with learning disabilities, the second question of the research, is shown in Table 2.

Table 2. *Impact of Parent Participation on the Process*

Student	Parent Participation	Literacy Education Completion Time	Accompanying Learning Difficulty Features	At the End of the Process
Elif	Mother attended	12 weeks	The concept of location, direction, and time has been fixed	Independent Reading Level/ Very few simple spelling mistakes were seen.
Rıza	The parent did not participate	24 weeks	The concept of time has been fixed	Instructional Level / Spelling errors, spelling and design errors in word spelling

While Elif's mother participated in the study, Rıza's mother refused to participate in the study by showing an excuse for some health problems. Due to her divided family structure, Elif experienced a lot of trauma, Rıza was very sick, and Rıza's mother did not participate in the study, which extended her work period. While Elif completed the literacy education process at the end of the twelfth week, Rıza, whose parents did not participate, completed the literacy education process at the end of the twenty-fourth week. While Elif has reached the independent level of reading after the literacy education process, Rıza remained at a level to be taught. At the end of the work process, Elif can read without the parent's help or someone who reads well. Rıza, whose parents did not participate in the study, could read it at the end of the process, needing help from the teacher, the parent, or someone who reads well.

At the end of a month, Elif started to use the concepts of place, direction, and time correctly. However, Rıza, who has the same problem, could not distinguish between days. The joint activity could not be developed because the mother did not participate in the process. Rıza was able to acquire the concept of time at the end of the first semester, with her teacher accepting unconditionally, paying special attention during breaks, and organizing activities in line with Rıza.

Discussion and Conclusion

Elif, whose parents participated in the process, completed the literacy education process in a shorter time, and reached the level of free reading without the teacher's help or mother. Rıza, whose parents did not participate in the process, completed the literacy education process in a long time and remained at the level of teachable reading that his mother needed the teacher's help. It was concluded that the parents' effective participation in the process was effective in the education of students diagnosed with learning disabilities. In his way, Tekin (2017) concluded that parents 'education and parents' participation in the process is effective in the learning, teaching, and acceptance process of students with learning disabilities. Sugeçti (2019) concluded that students interested in their families overcome difficulties in education more easily. It was concluded that parents' participation in students' education process with learning disability affects the process positively.

Students completed the literacy education process in a shorter time than expected. It was determined that students who have a learning disability better understand the burst sounds in the literacy education process. This situation may be caused by the tongue, lips, and ear activating multiple senses due to the explosion of the sound in the voices' pronunciation. The vibration of the lip during singing also affects the sense of touch. In this case, it can be said that it demonstrates the importance of addressing multiple senses in students' education with learning difficulties. Thus, they can better understand the phonological structure of the language. Begeney and Martens (2006) stated in their study that the literacy education process aims to comprehend the language's phonological structure. In his study, Owens (2008) stated the ability to recognize sounds in the spoken language to express the structure of sounds, syllables, and words as phonological awareness.

The name of the entities that have taken part in the student's daily life at the word stage during the preliminary reading and writing process has become a part of his life. Words that the student does not know or do not see, words such as "by hand" that do not contain any meaning alone, are not created. Thus, it was determined that the student in the concrete operations period could make sense of what he was reading. Again, a meaningless sentence was not established to the student in the sentence period. "Ela on yılan al (Take ten snakes of Ela)," "Keke un ekle (Add flour to the cake)." Since sentences like were not formed, the student made sense of the sentence instead of memorizing it. It was concluded that the open syllable method is an effective method that can be used to teach the students to learn how to read and write.

It has been determined that the dyeing of sounds to colors and echo, paired, and repeated reading is effective in creating visual and auditory awareness. It was concluded that reading eco, paired, repeated, and six-minute methods effectively supports auditory perceptions of students with a learning disability. It was determined that students made fewer mistakes in dialogue reading. It was concluded that having reading aloud to students who have a learning disability is effective. Begeney and Martens (2006) state that reading aloud is essential in the first two classes. The spelling mistakes students make during the literacy education process are emphasized with the same color. The lines and starting points that the students will write are filled with the same color that the student preferred. In this way, it was seen that the students wrote on the line starting from the beginning of the line.

Suggestions

Suggestions for Research Results

1-The use of color effectively eliminated the insufficiency of the students with learning disabilities in visual and auditory perception. Teachers and families of students with a learning disability can also work using color, echo, paired, and repeated reading to recognize the letters they have mixed, grasp the numbers and operations, and enable students to embody and transfer from short-term memory to long-term memory.

2- Hand-held activities can be carried out in a digital environment and can be developed in the form of activities that appeal to multiple senses.

3-Student parents should participate in the learning and teaching process. The activities carried out should form a union between the home and the school.

4- Students with a learning disability can better understand the burst sounds (p, ç, t, k). In the literacy education process of students with a learning disability, burst sounds can be given priority.

Suggestions for Researchers

1-In the education of students with learning disabilities, the effectiveness of learning and teaching activities can be investigated by preparing learning and teaching activities.

2-Research can be done using different methods.

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