



A METHOD PROPOSAL FOR TEACHING STUDENTS WITH INTELLECTUAL DISABILITY TO READ AND WRITE: SENTENCE TARGETED SYLLABLE METHOD

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Abstract

Sound-based sentence method has been used to teach reading and writing (since the 2005-2006) in Turkey. This method, however, might pose difficulties in learning “sound-syllable-word-phrase” formations for students with intellectual disability. The aim of this research proposes a new method of literacy for students with intellectual disability. Conducted using document reviewing method, the study developed the “Sentence-Targeted Syllable Method” based on the language and cognitive development characteristics of children with intellectual disability and the Turkish language structure. This method firstly teaches syllables and words of a targeted sentence. For example, to teach “Ali lələ əl”, the syllables “lə-le-li” are taught to reach the word “lələ”, and then students are instructed to read/write the syllables “əl-il-əl” to form the targeted sentence. In the first stage, the targeted sentence is formed by highlighting the vowels “a, e, ı, i, o, u, ü” and the consonants “l, b, n, y, ç, t, s, k, ş” instructing students to read/write the syllables and then the words of the targeted sentence. New syllables-words-sentences are generated by splitting sentences into sounds. In the second stage, the sounds “p, r, m, z, g, v, d, f, c, h, ğ, j” are finally taught through synthesis, which is followed by other practices to improve children’s literacy.

Keywords: Sentence targeted syllable method, students with intellectual disability, teaching reading and writing, Turkish language structure.

INTRODUCTION

Reading and writing skills are the biggest means for the child to adapt to the social life in today’s world. The child who learnt to read and write, understands a written text which is given to him/her by reading and most importantly, gets the ability to express his feelings and thoughts to people by writing (Ataman, 2006). So, in the first grades, families’ greatest expectation from the teacher is to teach the children to read and write as soon as possible. For the majority of the families, their child’s learning to read and write is the criteria of whether he/she is adapted to the school life, and the first sign to whether he/she will be successful in school life later on.

Indeed, learning the first reading and writing has an important place in the individual’s life both in school and in social life. With the first reading and writing study, the students acquire basic skills such as using Turkish language correctly, effectively and properly, communication skills, problem solving and decision-making abilities. Teaching first reading and writing; while causing important changes in students’ intellectual, emotional and social skills, improves their lifelong intellectual skills such as understanding, applying, analysing, and evaluating. The methods and practices that are used in teaching literacy have a big role in acquiring these intellectual skills (Ministry of National Education [MoNE], 2005: 225).

Intellectual; try to use one term disability is a type of disability in which mental functions, conceptual, social and practical adaptability skills are low and these limitations appear before the age of 18 insufficient description (Akalm, 2018). Although it differs depending on the degree of being affected by disability, individuals with mental disability may differ significantly from their peers in terms of academic qualifications due to their different cognitive characteristics (Mastropieri & Scruggs, 2016; Mascolo-Glosser, 2015; Sucuoğlu, 2017). Since individuals with intellectual disabilities have attention and perception problems, these children may experience insufficiency in transferring



information from short-term memory to long-term memory and transferring information. Since they are not motivated enough about learning due to their deficiencies, they may have difficulties during reading studies (Alnahdi, 2015; Heward, Alber-Morgan & Konrad, 2017; Joseph & Konrad, 2009; Kirk, Gallagher, Coleman & Anastasiow, 2011). These disabilities cause these children to have difficulties in acquiring basic academic skills in reading and writing (Sucuoğlu, 2017). Therefore, in classrooms with students with intellectual disabilities, teachers should make special adaptations in the organization of the teaching environment and use different methods suitable for the child (Deliveli, 2020).

Children with intellectual disability have been taught literacy using similar methods used for other children because there are not any primary-literacy teaching methods developed specifically for the children with intellectual disability in Turkey, and depending on the type of the disability these children benefit either from special tutoring or inclusive education in first-grade classes (Başal & Batu, 2002; Çolak & Uzuner, 2004; Deliveli, 2020; Deniz & Sarı, 2017). After 1948, words, syllables, letters and such methods began to be abandoned and, teachers are recommended to use the sentence method, which is based on the principles of Gestalt theory in Turkey. The sentence method, one of the analytical methods, was included in the program for many years (from 1968 to 2004) and was used in teaching reading and writing (Öz, 2010). To give a brief insight into the sentence method, sentences are taught by making use of various flash cards of varying lengths, and each and every flash card sentence is split into words that are to be taught after making sure that students have read and written the sentences as many times as needed. Syllables of these words that have been taught are also learned while simultaneously teaching the sentences. Finally, sounds or letters are learned through these syllables (Çelenk, 2005; Güteryüz, 2002). Upon the criticism that targeted this method, since 2004, the phonics-based method has been in use in literacy teaching. Since the 2004-2005 academic year, the sound-based sentence method has been used for literacy teaching with teaching sounds, letters, syllables, words, and sentences through the sounds that have already been taught (Deliveli, 2006).

2005 Turkish teaching program indicates that the sound-based sentence method, which is a method quite similar to the alphabet method, is recommended as the only method. This new alphabet method is similar to the original alphabet method (MoNE, 2005). However, unlike the original alphabet method where sounds are taught in alphabetical order, sounds are taught in specifically-defined groups of sounds. In this new method, moreover, sentences can also be created using images in cases of inadequate word production at the stage of word teaching, which is preceded by teaching of open syllables and closed syllables respectively. However, as in the letter method, various abstract details are delivered to children at once in these practices and meaning is ignored (Deliveli, 2006). Children with learning disabilities might therefore experience some difficulties in learning literacy with the sound-based sentence method (Deliveli, 2014; Deliveli, 2020; Durukan & Alver, 2008; Güven, 2019; Saban & Yiğit, 2011; Şengül & Akçin, 2010).

Studies have indeed revealed that this method of teaching literacy by teaching sound-based syllable and word formations created out of groups of letters is meaningless for children with intellectual disability (Tokta & Avcioğlu, 2012; Deliveli, 2020). It has been emphasized that such practices employed in literacy teaching result in understanding and comprehension problems for children with learning disabilities. This method was also criticized for involving the teaching of meaningless words and unfunctional sentences (Deliveli, 2014; Döngel, 2009). Moreover, structuralism underlines that teaching process should be managed based on the structures that are present in a student's own cognition. It is therefore necessary to make sure that students can clearly see "the whole", "the related pieces" of it, and "the relations between the whole and its pieces" if the literacy teaching is truly intended to make sure that students comprehend the information rather than memorize it (Deliveli, 2006).

Arguments about which method is superior in teaching reading and writing have brought on different methods and in time, these methods were given up and new ones were tried. However, arguments



about which method should be used in the first grade for the first reading and writing education and the methods' superiority to one another are still going on today. Achieving the learning outcomes is related to choosing the proper method, but there is no always-valid, objective and teachable methods. Thereby, there is no such thing as the best method. Each method has its own advantages and weaknesses. There are different education methods and techniques suitable for different educational environments. The teacher must be able to achieve learning outcomes taking the subject and student characteristics and educational environment facility into consideration by using various methods, techniques and tools (Taşdemir, 2007: 127-129).

Regardless of their individual characteristics, it is important that all students acquire literacy skills in the contemporary education approach (Alberto, Fredrick, Hughes, McIntosh & Cihak, 2007; Deliveli, 2020). Students with intellectual disabilities may have difficulties in teaching reading and writing because they have different needs than their peers due to their cognitive and linguistic features. However, there is evidence that children with intellectual disabilities can be literate with different teaching methods when necessary support is provided (Allor, Mathes, Roberts, et. al., 2014; Arabacı, 2009; Browder, Gibbs, Ahlgrim-Delzell, et. al., 2009; Keefe & Copeland, 2011; Ruppard, Gaffney & Dymond, 2015). At this point, new teaching methods can be developed by examining the cognitive and linguistic features of children with different needs and mental disabilities and the specific features of each language. It may be useful to present the new methods to teachers who have mental disability students in their class and who are looking for different methods to teach reading and writing.

Purpose of the Study

It is expected that Sound Based Sentence Method will be used in teaching reading and writing for many years (since the 2005-2006) in Turkey. However some children who have different ways of perception can find this method difficult. Especially the mentally disabled children can have difficulty in comprehending the “vocal-syllable-word-sentence” formations (Deliveli, 2014; Deliveli, 2020). According to the modern education, it is not possible to talk about one type of method or practice in teaching reading and writing skills. During the process of producing the information, children may need different methods and practices due to their individual characteristics. Therefore, new methods must be developed and the teacher should have an opportunity to choose the best method suitable to the students' individual needs in teaching literacy. The present study thus proposes a new method for teaching literacy for students with intellectual disability. The method presented in this research are important in terms of offering an alternative perspective to teachers who want to try different methods.

METHODS

Qualitative research approach has been adopted in order to develop a new method for children with intellectual disabilities. The research was designed as a theoretical analytical research that allows the current situation to be determined and analyzed (Creswell, 2014; Punch, 2014).

In order to reach the analytical analysis, the document analysis method, one of the qualitative data collection methods, was used in accordance with the qualitative research. Document analysis is a method that includes the examination and analysis of written and visual materials related to the cases to be investigated (Yıldırım & Şimşek, 2013). In the document analysis method, all kinds of materials (books, articles, theses, pictures, etc.) are used as data with the subject of research (Balçı, 2013). Document analysis, explains the procedures performed in the process of collecting, reviewing, questioning and analyzing various documents (Bowen, 2009; Cardno, Rosales-Anderson, & McDonald).

Data Collection and Analysis

Researching in the field of Educational Sciences requires action to find an explanation (s) or response (s) related to a particular educational phenomenon. While trying to explain an educational



phenomenon in depth and within its own context, the document analysis method is used to collect the data needed. This process, in which scientific answers to the problem are sought, takes place in stages and correct and consistent ways should be followed (Özkan, 2019). In this study, it has been tried to determine what problems children with intellectual disability experience in the teaching process by examining books, articles, theses on teaching reading and writing. In addition, by searching the cognitive and linguistic features of children with intellectual disabilities and the structural features of the Turkish language, a new method that can be used in teaching reading and writing, “The Sentence Targeted Syllable Method” has been developed. While designing the stages of the method, first grade Turkish lesson textbooks and special education school textbooks, literacy practices and activities, sentence, syllable, sound methods were also investigated. Therefore, the new method can be considered as a mixed and special method. The author of this research who taught literacy teaching at the university, has experience in teaching reading and writing in classroom and benefited from teaching experiences in designing the method stages.

RESULTS

The children studying in primary schools have individual differences. These differences can be at physical, cognitive and affective level. Thereby, every child has his/her own physical, emotional learning style and learning pace differences. When these differences are at acceptable levels, the child can benefit from general educational services. However, when these differences affect the child’s life distinctively, special educational services can be necessary.

The children with special needs require special practices that will remove their inadequacies during the education process that will improve their strong sides. Special training requires individualized and privatized practices. For this reason, special training is different from general training in terms of content (Ataman, 2006). Especially the methods, techniques and materials have to be different and be suitable to child’s disability. Thereby, if the method is to be improved, the adequacy or inadequacy of the children that need special practices must be considered. By examining the mentally disabled children’s characteristics, the practices for the “Sentence Targeted Syllable Method” will be determined.

Cognitive Characteristics of Children with Mental Disabilities

Intellectual and developmental disabilities in children result in some developmental conditions that are characterized by impaired cognitive functions, causing such children to experience limitations in learning adaptive behaviour and academic skills (Salvador-Carulla, et. al., 2011). Mentally disabled student shows significant deficiency from the kids with typical pattern of development in terms of mental function during the developmental process and deficit in adaptive behaviour (Güven, 2019). Mental disability occurs due to some problematic situations before birth, the moment of birth and after birth (Aral & Gürsoy, 2007). Cognitive deficit is expressed using various terms including “mental deficiency” and “developmental deficiency” in the field of special education. According to American Association on Intellectual and Developmental Disabilities (AAIDD), mental inadequacy is described as follows: “inadequacy which is characterized as the meaningful boundedness in both adaptive behaviours that shows itself in cognitive, social and practical adaptive skills and mental function” (Luckasson et al., 2002).

When the Guide of Special Education Services that were published in 2006 in Turkey by MEB is examined, it is understood that the description of the mental inadequacy was based on AAIDD’s description. According to that, the individual that has mental inadequacy is described as “the individual who shows differences that are two standard deviations below average in terms of mental function, and in parallel with this, who has inadequacies or boundedness in cognitive, social and practical adaptation skills, whose characteristics of this kind occur in the growing up periods before the age of 18 and who needs special training and support training services” (MoNE, 2006: 2) Besides, in the legitimate texts that were published in the field of special training, mental inadequacies are



classified as, mild, medium, severe and very severe mental inadequacies (MoNE, 2000; MoNE, 2006; MoNE, 2012).

Mild Mental Inadequacies: Individual's needing support education services in a limited stage and special arrangements during the education period. **Medium Mental Inadequacies:** Individual's needing dense special training in basic academic, daily life and working skills.

Severe Mental Inadequacies: Individual's needing support service and denser special training, including teaching self-care skills, which lasts lifelong and is consistent in every aspect of life. **Very Severe Mental Inadequacies:** Individual's needing lifelong care and surveillance as he/she has other inadequacies as well as mental inadequacy and doesn't have self-care, daily life and basic academic skills."

Mentally inadequate people are the most common among people that need special training and form such a heterogeneous group. Mostly, the children who have mild mental inadequacy are spotted by teachers in schools. The ones that have medium and severe mental inadequacies are spotted earlier (Sığırtmaç & Gül, 2008). The most striking features of children with mental disability are that they differ from their peers in terms of mental development and functions. In order to evaluate in general, students who have mental inadequacy differ from in terms of cognition due to their memory, attention, academic skills, metacognitive, motivation and generalization (Çiftçi-Tekinarslan, 2010; Hallahan & Kauffman, 2006; Werts, Culatto & Tomkins, 2007).

Children with mental disabilities have learning difficulties more than their peers due to their mental function deficiencies and adaptation problems. These children have attention and memory problems. These students have problems in information gathering both long-term and short-term memory and using these information (Metin, 2012). They have difficulty in using the information which is already in their mind in different occasions. Besides, to learn, they have to pay attention to the new information for a while and control the distracting stimuli. The children who have mental inadequacy have the problem of gathering attention to a certain stimuli as well as the difficulty of distinguishing the stimuli (Heward, Alber-Morgan, & Konrad, 2017). Children with intellectual disabilities have problems in generalizing, as they have difficulty transferring what they have learned in one situation to another. Insufficient mental functions make it difficult for these children to understand and comprehend difficult and abstract concepts. Giving examples from daily life, making the concepts concrete and using visual stimuli in education can facilitate understanding of concepts. Another problem of children with intellectual disabilities is the difficulty in learning complex knowledge and skills. They may not learn complex knowledge and skills because they have problems focusing attention on several stimuli at the same time. Because of that, the teacher should separate the new information which will be taught to students who have mental inadequacy to tiny steps. When teaching knowledge and skills in small steps, repeating often can be helpful. However, it should be noted that the number of repetitions should not be too low to cause forgetfulness or too many to cause boredom (Metin, 2012: 79-80).

Children with intellectual disabilities may have problems with language skills, or both speaking and language skills expressive language, language skills, or both speaking and language skills receptive and expressive language (Aksu, 2020). The students who have mental inadequacy (depending on the level of the inadequacy) have difficulty in understanding the language (Çiftçi-Tekinarslan, 2010). As the severity of disability increases in children with mental disabilities, language and speech problems can be observed more. In children with mild mental disability, speech can follow normal development steps with a delay of 6-12 months, and these children can express themselves even with simple sentences. Children with moderate mental disabilities have limited vocabulary because they are late talkers. The sentence lengths are shorter and can express themselves more in two word sentences. The language development of children with severe mental disabilities is also very slow, these children try to express themselves mostly with sign language or expressions developed by them (Metin, 2012:78).



Receiving language levels of children with mental disabilities are higher than expressive language levels. However, they experience various degrees of difficulty in understanding long and complex sentences and distinguishing sounds. Due to mental disability, delayed speech, stuttering, articulation disorders (such as adding and lowering, adding and lowering syllables) are frequently observed in these children. Due to the inability to use the mouth and tongue muscles, they may have difficulty in pronouncing certain sounds and in the formation (production) of sounds (Metin, 2012: 78-79). The delay in their improvement in language and the fluency problems in their pronunciation and speech are too much. They have limitations in their enunciate language skills. Also these children have difficulty in using the language functionally. These children who cannot be motivated because of the fear of making mistakes to achieve a goal in educational environments differ from the children with normal pattern of development during the learning process because of their metacognitive limitations (Werts, Culatto & Tomkins, 2007).

The disabilities in their cognitive skills make it difficult for children with mental disabilities to learn and negatively affect their academic success (Çiftçi-Tekinarslan, 2010). They especially have metacognitive problems in planning how to solve a problem, checking the solutions, practicing and evaluating the solutions. Further, in generalization skills, after learning an idea or a mission, they have problems adapting them to other occasions. They have to work and practice more than their peers in order to gain academic skills (Aksu, 2020; Werts, Culatto & Tomkins, 2007). The teaching practices, curriculum provisions and school environments might require some modifications in general education for children with mental disabilities so such students with intellectual and developmental disabilities can be successful in academic terms (Chowdhury, 2011). The higher the level of literacy among those with intellectual disabilities, the better such individuals comprehend competence, compared to others without intellectual disabilities (Mosito, Warnick & Esambe, 2017).

Structural Features of the Turkish Language

Curriculum incorporates literacy as one of its integral component. It is therefore already obvious that literacy i.e. reading and writing skills are directly proportional with success in other areas of learning (Erickson, Hanser, Hatch & Sanders, 2009). While developing a method intended for the teaching reading and writing, the features of the language also must be known because during the teaching of reading and writing, language is also taught. Reading and writing have two important dimensions in terms of the language education. One is gaining reading and writing as a skill, the other is gaining the adequacy to use these skills functionally. Because of that, the studies that are carried out during the process of teaching reading and writing gradually become a part of language education (Alperen, 2001).

Teaching language processes has been proven to be effective in improving reading skills in learners with intellectual and developmental disabilities (Al-Otaiba & Hosp, 2004). The language education is targeted for the students to express themselves towards language, enrich their emotions, thoughts and dream worlds by reaching different sources (MoNE, 2006).

Turkish is a language that has the prosperity to easily express emotions, thoughts and dreams. Words, phrases, idioms, proverbs and conjugations are the elements that boost the expression prosperity. Turkish language's having stable rules and a rational pattern, both places the language in an academic structure and proves that it has improved (Keskinılıç & Keskinılıç, 2007).

One of Turkish's most important features is the relationship between voice and letter. Because the voice of the letter doesn't change neither in reading nor in writing, the words are written like they are read, and they are read like they are written. In Turkish, it is possible to produce words that have a meaning relationship with the fiction of "root + suffix + suffix". (Onan, 2009; Karadağ & Kurudayıoğlu, 2010). New words can be created by adding various roots and suffix to the roots in accordance with the vowel harmony or consonant harmony of the language (Cebiroğlu, 2002; Yılmaz, 2009).



When new and meaningful words to be produced in Turkish, derivational affixes are added to word root. With derivational affix many nouns can be produced from nouns (-lik: zeytinlik, şekerlik; -li: köylü, mavili, -siz: evsiz, parasız; -cil: otçul, bencil, -cık: kulakçık, kitapçık; -daş: meslektaş, arkadaş; -inci: üçüncü, beşinci; -msı: acımsı, ekşimsi; -sal: kumsal, bilgisel; -it: yaşıt; -tı: civıltı, mırıldı) and many words can also be produced. Moreover, new and meaningful verbs can be produced from nouns with the derivational affixes (-le: başla, sula, terle; -al: azal, çoğal; -l: doğrul-, sivril; -a: kana, yaşa; -da: fısılda-; -at: yönet-, gözet; -kır: fışkır-, haykır; -lan: evlen; -laş: çocuklaş; -(a)r: karar-; -se: önemse) . When derivational affixes added to verb roots, new words can be produced (-im: seçim; -gi: vergi; -gın: bilgin; -ı: yazı, doğu; -ıcı: satıcı; -ca: eğlence; -ecek: yakacak, açacak; -ak: yatak, kaçak; -ga: süpürge, -gan: çalışkan; -gıç: dalgıç; -ik: kesik; -in: tütün, ekin; -nç: gülünç; -ıntı: döküntü; -(e)r: okur; -maca: bulmaca; -sel: görsel, işitsel; -anak: seçenek; -ış: dikiş; -it: geçit, yakıt; -ma: dondurma; -mak: çakmak, ekmek; -tı: kızartı). When derivational affixes added to verb roots, new verbs can be produced (-t: anlat; -(a)r: çıkar-, uçur; -dır: yazdır; -il: yazıl; -in: yıkan; -ele: itele; -ı: kazı; -msa: anımsa-, gülümse).

The derivational affixes that are added at the end of the words and that are for reproducing new words enrich the language's expression prosperity. While referring to words, inflectional suffixes are used (Çelenk, 2005). The inflectional suffixes do not change the meaning of the word, it changes its form. In Turkish, apart from the sentences established with the second person order mode (atla, yap, at vs.), it is absolutely necessary to use the affix suffix when creating sentences (Emel balığı yakaladı. Ayşe eve/evden gidiyor. İki liraya ekmek aldık. Defterimi okulda unuttum. Okulun ikinci kattadır.). Plural suffixes -ler ve -lar can add another meaning except making plurality to the words they are added (çiçekler, bebekler).

The realization of word derivation in Turkish with derivational affixes and inflectional suffixes can be used while developing a new method in teaching reading and writing. Considering the suffixes in Turkish as a teaching unit can provide effective use of short term memory. When we teach to read a word by dividing it into its roots and suffixes, the word can become more easily perceptible in short-term memory (Onan, 2009). Word stem in the Turkish language generally is monosyllabic and is related to verb stem. Different sentences are made by forming new words through adding derivational or inflexional suffixes to the word stems which are the smallest and meaningful structural units. Various new words can be reproduced this way and the meaning of the sentence can be altered. Turkish language's syntax is in the form of "Subject-Object-Predicate" and so even if the syntax changes, the meaning does not. Sentences like this are described as inverted sentences (Gülyüz, 2002; Keskinçilic & Keskinçilic, 2007; Tazebay & Çelenk, 2008). Realizing the teaching of literacy based on holistic understanding can prevent the occurrence of the problems related to the wrong combining of sounds. Instead of following a path based on making syllables and words based on sound for children with mental disabilities, teaching the concept of syllable and sound, making the word as a whole, and emphasizing the syllable and sound in the word can provide necessary repetitions in the process of storing information in memory. Also, with syllable and sound, syllables can be useful in terms of including applications to support word development and language development. Demonstrating the formation of a sentence based on the word may provide the child with an opportunity to express herself, even in short, with spoken language-specific sentences.

In Turkish, the alphabet has 29 letters, 8 of them being vowels (a, e, ı, i, o, ö, u, ü). Consonants are constant consonants "f, h, s, ş, j, m, n, l, ğ, r, z, y, v" and inconstant consonants "p, ç, t, k, b, c, d, g". While teaching reading and writing "a, e, i" letters from the vowels are constantly used. The usage level of the vowels should not be below %40, the usage level of the consonants must be between % 50-60 (Güneş, 2000: 128-129). In Turkish, one of the eight vowels can be seen in the first syllable of the word. The muchness of the vowels in the first syllable does not exist in the consonants. Words in the Turkish language does not begin with "c, ğ, l, m, n, r, v, z". Only the "c" and "z" vocals can begin



words that are reflections of the sounds in nature. There can't be "b, c, d, g" consonants at the end of the words in Turkish. These vowels in the loan words become "p, ç, t, k" consonants. The words that have "f, h, j, v" in them are the words that are borrowed from other languages. The vowels that form the basis of the syllable in Turkish are vowels. Syllable is the formation of vocals that are made in a trice, with the movement of the speech organs in the same way. Whereas vowels can form syllables by themselves, consonants cannot do so without having a vowel with them. Thereby, the number of the vowels and the syllables in the Turkish language is the same. Syllables in the Turkish language can be formed in six different ways: "one vowel, one vowel one consonant, one vowel two consonants, one consonant, one vowel, one consonant one vowel one consonant and one consonant, one vowel, two consonants" (Yılmaz, 2006: 5-6). Putting forward vowels and consonants, which can produce strong syllables during literacy activities, can facilitate the forming of more words and more sentences. Continuous emphasis on syllable, word, sentence relationship, and practices that will grasp Turkish syntax are included, while frequent repetition of part-whole relationships can contribute to the development of language-based skills of children with intellectual disabilities.

Reading and Writing Education with the Sentence Targeted Syllable Method

The purpose of the Sentence Targeted Syllable Method is to teach reading and writing with the practices that ease the learning process for the mild and medium level mentally disabled children. Visualizations are mostly utilized to attract students' attention and to use the visual memory in this method's practices. During the learning process, while teaching the syllable, word and sentence formations, teachers try to improve the students' listening, speaking, reading and writing skills and teach the structural features of the language discerningly. Since the mentally disabled students have problems in gathering and using information, studying harder is required. So, "little steps principle" is practiced during the formation of vocal-syllable-word-sentence. Considering the children's having problems in understanding the language and using it functionally, teachers try to improve their linguistic skills. For that purpose, while teaching reading and writing, emphasis and intonation practices are carried out. Vocal-syllable-word-sentence formations are emphasized in front of a mirror. To get correct pronunciation during the speeches, teachers attract their attention to the formations of each vocal and syllable in the mouth.

Once the target sentence is formed through the syllables, apprehending and expression practices are carried out. While putting emphasis on each word's meaning, teachers give examples of these words from daily life. When the sentence is formed, by emphasizing its subject and predicate, teachers try to reify the action in the sentence. As the sentences are formed, as new words are formed through synthesis-analysis practices; teachers try to improve the students' reading and speaking skills to be more fluent by utilizing proper texts. In this whole process, while considering each student's learning speed and capacity, education principles like easy to hard, basic to complex, known to unknown, close to far are practiced. Most importantly, teachers don't insist on the practices that are made to reduce their worries in academic level and that they cannot succeed in; they try to make learning fun by playing games, organizing contests and listening music.

To explain the method's process steps; primarily the target sentence is formed by teaching the syllables and words that form the sentence. For example, after forming the word "lale" with the syllables "la-le-li" for the sentence "Ali lale al.", the target sentence is formed by making the students read/write the "al-il-el" syllables. After they read and write the sentence, they group the words of the sentence like (Ali-lale-al) and repeat each word separately. After emphasising the syllables like "A-li" by choosing the given word, the sentence is analysed. After analysing, when "l" and "a, i, e" vocals are formed, vowels and consonants are separately hung on the "vocals board" and syllables on the "syllables board". By utilizing the syllables on the syllables board, after repeating their pronunciations/spellings, new words are formed by combining syllables. As students reach new sentences through words, they hang these structures on the "words board" or the "sentences board" (Figure 1.- Figure 2.- Figure 3.)

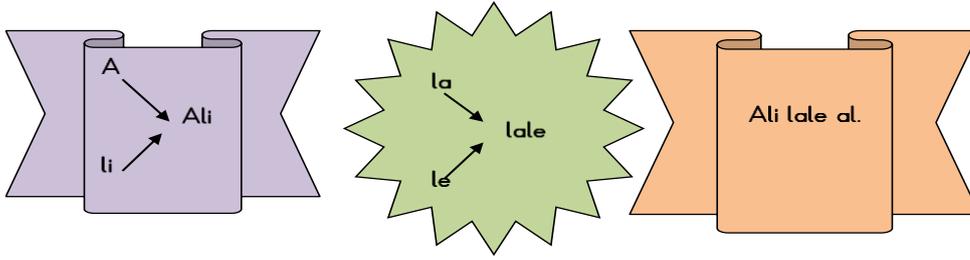


Figure 1. Teaching of syllable, word, sentence

As each target sentence is formed/analysed, vocals of 1. Group and of 2. Group are formed. After analysing, students hang them on the “vocals board” (Figure 2.).

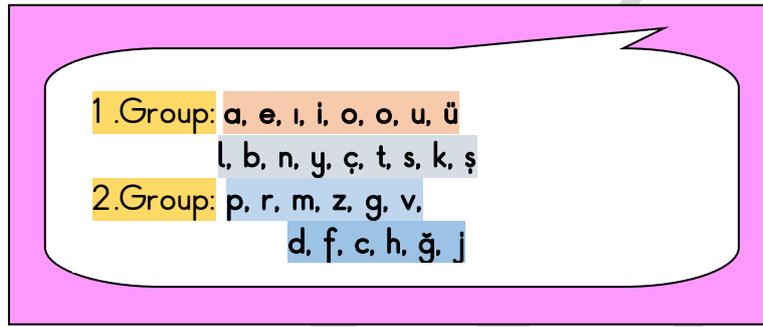


Figure 2. Groups of vocals and consonants

The recommended 1. Group target sentences respectively are 9 sentences being; “Ali lale al. Baba bal al. Anne nane al. Öney bal ye. Ela çok aç. Tuna atı tut. Suna su iç. Kenan oku, anla. Işıl şişe şişe süt iç.” By analysing these sentences, students reach 1. Group vocals (a, e, i, l, o, o, u, ü, l, b, n, y, ç, t, s, k, ş). They get syllables, words and sentences through vocals (Figure 3).

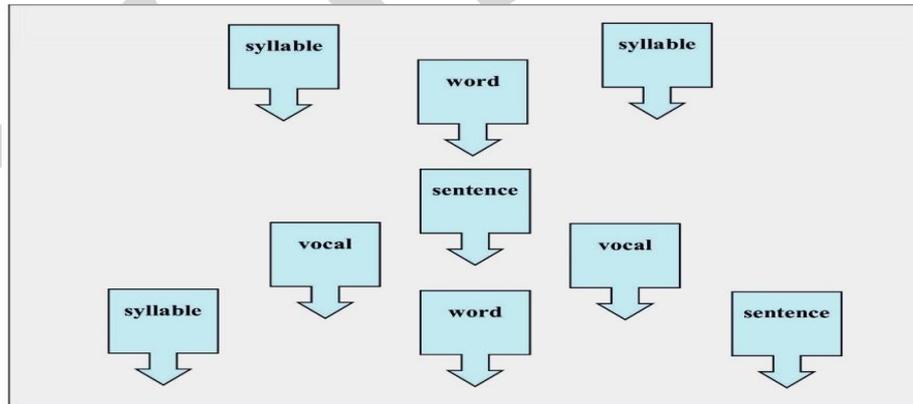


Figure 3. The vocal and syllable based sentence method synthesis and analysis stages

Formation relationships are repeated continuously in the partition-analysis-partition-based applications. The principle of small steps is applied during syllable-word-sentence formations. While forming new words or sentences, “syllables board”, “words board” and “sentences board” are utilized. For example, when the children are to form different words with the syllables they learned, the teacher points at the word “nane” on the words board and says; “Take the word nane.”, and then he/she points at the “li” syllable on the syllable board and says “Add the -li syllable to it and write naneli.” The teacher tries to simplify the process of forming new words for the students by reading/emphasising the



formed word like “na-ne-li”. The teacher leads the children with clues by drawing attention to the words board or the syllables board while similarly forming sentences. As sentences are formed with words, the teacher forms texts that are pertinent to their level. The teacher hangs these texts which he/she prepared on a 60x70 size collared cardboard with visualizations. When occasion arises, the teacher utilizes these texts during the individual practices (Figure 4).

Syllable	Word	Sentences	Vocal	Syllable	Word	Sentences
la-le-li	lale	Ali lale al. (l) (a) (i) (e)	Ll, Ae Ee, li,	il-el-al la-le-li	ele-elle-elele-Ela ala-Ali-elli	Ali, Ela elele. Ali, lale al. Lale al. Ali al.
ba	Baba	Baba bal al.(b)	Bb Aa	ab-eb-ib ba-be-bi	bil-bel-beli-belli-bebe ebe-bal bele-abalı-ebeli	Ali bil. Lale bil. Ela bil. Baba bil. Belli belli.
ay-ye	Önay	Önay bal ye. (y) (ö)	Yy Öö	ya-ye-yi- yö-ay- ey-iy-öy	yaya-aya-yay-iyi- öyle-iyilik-bilye-böl- böyle-yaylı-	Baba bana bilye al. Önay bilye oyna. Ali bilye oyna.
aç-ço an-ne	çok aç	Ela çok aç. (ç) (o) (ç) Anne aç. (n)	Çç Oo Nn	ça-çe-çi- ço-çö- aç-eç-iç na-ne-ni- nö-no	çay-çene-Açelya-bol- ilaç-boy- ay nane-nine-öne-anı- eni-yana-yalı-yay-bay Nilay-Nalan-nal-nallı- çaylı-olaylı-alaylı-çile- niçin-?-yeni-yanı-bayıl ayı-çek-çok-çil-çal-çöl	Açelya ilaç iç. Açelya çeneni tut. Nalan elini tut. Nine ilaç iç. Önay ilaç iç. Nalan çay iç. Nilay bal ye.
tu-ti-ot- lat	Tuna- tut	Tuna atı tut. (t) (u)	Tt Uu lı	ta-te-ti- tı- to-tö- tu-at-et	Ata-çatı-çalı-tut-tuttu- ayı-attı-itti-tay-bul- boylu-Talat-taç-çatı- çatal-çit-çita-ataç- anıt-telli-atı tel-tanı-tane-Tuna	Talat atı otlat. Ali anlat. Önay çatıya bak. Önay çayını iç. Tuna balı ye.
su	Suna- iç	Suna su iç. (s)	Ss	sa-se-si- so-sö-su	saç-suç-suçlu-sus-ses- sil-tas-söyle-sula-Sıla salı-seni-sana-bana- say söyle-soy-sini-sen- sayın	Önay Ela'ya seslen. Önay aya bak. Suna suçlu. Açelya çenesini tuttu.
ke-ku	Kenan -oku	Kenan oku, anla. (k)	Kk	ka-ke-ki- ki-ko-kö- ku-kü- ak-ek-ik-	uçak-kaç-kan-kin-kon- ekin-çiçek-keçi-çanak- kilit-küçük-köy-kayık- kıyı-kulaç-bellek-kus-	Kenan küçük atı otlat. Açelya bak uçuk. Açelya uçak uçtu. Açelya kuş



				ok-ök- uk-ük	kule-kelek-bebek- benek-binlik-bolluk- oluk-kısa-çanak- benek-sinek-sokak	uçtu. Kenan kuşu yanına koy. Bu bebek. Ali bak bu bebek.
şi-şe-şı	İşil- şişe- süt	İşil şişe şişe süt iç. (ş) (ü) (ı)	Şş Üü lı	şa-şe-şı şi-şo-şö şu-şü-aş- eş-iş-iş- oş-öş-uş- üş	şaş-aşı-şası-şok-koş- Şule-kaşık-aşık-şelale- şal-beş-beşlik-başlık- aşçı-aşçılık-kaşık-kış- kışlık-taş-tuş-şık-şıklık- Koşar-aşar-aşır-kaşı- başı-başın-şarkı	Şule ata, taya bak. At koştu. Tay koştu. Kuşa bak. Kuş uçtu. Uçtu uçtu beş kuş uçtu. Kuş bana uçtu. Kuş ona uçtu.

Figure 4. Carts of first group synthesis and analysis practices
(a, e, ı, i, o, o, u, ü Vowels and l, b, n, y, ç, t, s, k, ş Consonants)

When the first group practices are complete, second stage starts. Also, in the second stage, similarly through the syllables, analyses are carried out after respectively forming target sentences in pursuit of the teaching of the words (Figure 5).



Figure 5. The sentence targeted syllable method

As the analyses are complete, 2. Group vowels (r, m, p z, g, v, d, f, c, h, ğ, j) are formed. For this stage, 11 sentences being, Berna bak arı. (r) Ümit birkaç mısır ye. (m) Petek patik ör. (p) Mete azar azar üzüm ye. (z) Gamze gazete oku. (g) Veli eve gel. (v) Yıldız odaya gir. (d) Funda fidan dik. (f) Cemil cici kuş öttü. (c) Bayram dağa çıktı. (ğ) Jale jandarma görmüş. (j) are recommended. If the teacher wants, he/she can change some of the target sentences for the first and the second group or can handle different words in sentence formations. When the synthesis-analysis-synthesis practices for both stages are complete, the vowels in these groups and the syllables that are formed with these vowels are memorized by repeating them. For example, syllables are formed by recombining the “l, b, n, y, ç, t, s, k, ş” consonants that belong to the 1. Group with the “a, e, ı, i, o, o, u, ü” vowels and these syllables become the syllable board. The teacher hangs the syllable board on the wall in the classroom, and uses the board during the repetition practices. The syllables given in the form of coupons are cut and converted into words (Example: la,le, ba-ba, ya-ya, askı, kule) during the joining works. By adding consonant sounds to the end of closed syllables, new syllables and words consisting of three sounds (lak, lek, lık, kat, sat, çat, süt, kıt) are obtained (Figure 6).



al	el	il	il	ol	öl	ul	ül	la	le	lı	li	lo	lö	lu	lü
ab	eb	ıb	ib	ob	öb	ub	üb	ba	be	bı	bi	bo	bö	bu	bü
an	en	ın	in	on	ön	un	ün	na	ne	nı	ni	no	nö	nu	nü
ay	ey	ıy	iy	oy	öy	uy	üy	ya	ye	yı	yi	yo	yö	yu	yü
aç	eç	ıç	iç	oç	öç	uç	üç	ça	çe	çı	çi	ço	çö	çu	çü
at	et	ıt	it	ot	öt	ut	üt	ta	te	tı	ti	to	tö	tu	tü
as	es	ıs	is	os	ös	us	üs	sa	se	sı	si	so	sö	su	sü
ak	ek	ık	ik	ok	ök	uk	ük	ka	ke	kı	ki	ko	kö	ku	kü
aş	eş	ış	iş	oş	öş	uş	üş	şa	şe	şı	şi	şo	şö	şu	şü

Figure 6. 1. Grup syllables cupons

During the component education studies, teachers draw attention to the formations by forming syllables/words/sentences. Besides, after determining the vocals which the children have problems reading-writing; the syllables, words and sentences in which these structures are repeated are formed and the children are made to read and write them. All the structures that are formed during these practices are hung on the “syllable-word-sentence” boards (Figure 7).



Figure 7. Reading cards

On the phase of passing through the individual reading and writing, practices which improve the students' reading and writing skills are carried out. For that purpose, the syllables or vocals that each student has problems with are determined. By preparing special reading texts for them to remember/repeat these structures, the students are made to read/write these texts. Besides, these texts that are changed to reading cards by the teacher are used to improve their skills of fluent reading (Figure 8).

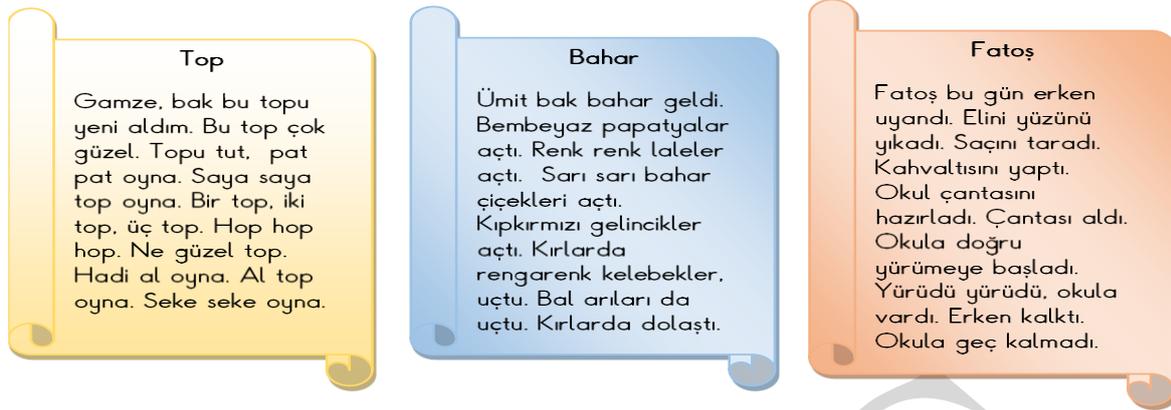


Figure 8. Texts of fluent reading

DISCUSSION and CONCLUSIONS

Many of the educational activities are based on literacy, comprehension, expression, and speaking. The individual needs to learn to read and write so that she/he can control herself/himself and her/his environment, adapt to society and act independently. Many methods are used in teaching primary reading and writing. These methods have their own advantages and limitations (Döngel, 2009). The mental state of the child may require the teacher to choose one of the different methods in teaching literacy (Deliveli, 2020). Since teaching reading and writing is the basic skill for functional academic skills, like the other skills reading and writing instruction should be carried out in accordance with the performance and needs of the child with intellectual disability (Browder & Snell 2000). It is possible for students with intellectual disabilities to acquire literacy skills when using methods and techniques appropriate for their individual characteristics (Akçamete, Gürgür & Kış, 2003; Eroğlu, 2010). For this reason, when there is a delay in gaining reading and writing skills of students with mental disabilities, their situations should be taken into consideration and the correct method should be tried to be chosen (Sarı, 2005).

In Turkey, one type of method practice is preferred for the first grades in teaching reading and writing. In special training, the teacher is given two choices about the methods of teaching reading and writing and is asked to use the “Sound-Based Sentence Method” or “Sentence Method”. The sentence method based on deductive understanding, which has been in use since 1948, has been abandoned with the new first reading and writing program put into practice in the 2005-2006 academic year; sound based sentence method based on inductive understanding (where syllables, words and sentence structures are taught based on sounds) has begun to be used. But there are individual differences between children. The tutors who know better about this subject have to consider the students’ individual differences during the education process. Cognitive disabilities in children with mild and moderate mental disabilities affect their academic success negatively and this causes them to be behind their peers in academic activities.

Students with intellectual disabilities have difficulties in learning many information and behaviors that children who develop normally due to their individual characteristics learn almost by themselves (Dündar, 2006). The fact that these children have difficulties in recognizing and mixing written symbols, their attention being scattered and short-term memory causes them to have difficulty transferring information to long term memory during teaching activities (Yılmaz, 2009). The reason for learning to read and write late and slowly may be related to their individual characteristics or the method used while presenting the reading programme in the process. Perceiving the visual complexity of these children; having difficulties in perceiving whole-parts and distinguishing letters may cause



difficulties during reading-writing activities. Perceiving whole word is visually more complex than perceiving a letter.

Due to their individual characteristics, they may have difficulties in learning the letter-sound relationship, and since letters and sounds are abstract stimuli, these children may have difficulty understanding the relationship between letters and sounds. Letters are abstract in the single letter form or in group form which is called word or sentence.

While the pronunciation of sounds alone is different, the sound that occurs when combined with other sounds is different so we blend them and letter sounds are the same. For this reason, these children may have problems combining sounds and forming words or distinguishing sounds in words so we use phonological awareness skills before starting reading (Hoogeveen, Smeets & Lancioni, 1989).

Children with mental disability generalize using the same elements in learning rather than general principles. The fact that many learning activities require abstract thinking and concept development makes it difficult for children with intellectual disabilities to make generalizations. In addition, since reading methods are generally programmed according to the pre-skills of children with normal development, students with intellectual disabilities learn to read late and difficult when using a teaching method that is not suitable for their individual characteristics (Şengül, 2008).

Limitations in cognitive skills of children with mental disabilities make it difficult for them to express themselves in linguistic skills. In these children, problems such as stuttering, articulation disorders (adding sound-lowering, adding syllable-lowering), as well as delayed speech, can often be seen in the production of sounds. As the severity of mental disability increases, learning becomes harder to slow down and its scope is limited (Metin & Işitan, 2014). Children with intellectual disabilities have difficulties in understanding the reading passages and reading the texts and the grammar rules in the receptive language activities. They experience problems with their skills such as making meaningful sounds in expressive languages, limited vocabulary, limited variety of used words and sentence structures, grammatical errors, and conveying what they read and listen.

The fact that there are limitations in cognitive skills prevents the development of expressive language skills. In some cases, children with mental disabilities may have vocal errors in more than one sound. For example, if the child sounds "t" instead of "k" sound, "t" instead of "ç" sound, and "d" instead of "c" sound, it will sound the word "çocuk" as "todut." In addition, mental children have problems using the roots and suffixes (morphology) in words correctly. Since Turkish is an incremental language, words with suffixes are often used.

However, children with intellectual disabilities have difficulty in using word suffixes in proper places. This difficulty manifests itself more intensely, especially as the number of suffixes in the word increases (Aksu, 2020). Therefore, making applications that start with sounds for these children in literacy activities may cause them to make more mistakes. Poor memory affects the language development of children with intellectual disabilities.

The inability to organize information, limited generalization skills, limited attention to common attention affect communication and language development, and in some cases, hearing impairment and slowness in motor development also cause problems in language development of children with intellectual disability. The phonological periods of these children may take longer than their peers with normal pattern of development, and the phonological error patterns related to development can continue until later ages. The sentences of children with intellectual disabilities who use limited words and more limited words in terms of word types are also short and they have difficulties in all areas of the language (Ünverdi, 2019: 97). For this reason, it may be useful to start teaching with short sentences in reading and writing activities in order to support the linguistic development of these children. The students who have mental disabilities have different characteristics of memory, attention, language, academic skills, metacognitive, motivation and generalization. These students have problems in understanding and using information both in long-term and short-term memory.



These students who have problems in paying their attention to a certain stimuli, learn the information through tiny steps. These children who have problems in their linguistic skills have problems in using the language functionally. Thereby, the mentally disabled students who have different characteristics than their peers, need different methods or practices while teaching reading and writing. To answer the need, in this study “Sentence Targeted Syllable Method” was improved by examining the developmental characteristics of the mentally disabled children and the structural features of the Turkish language. While teaching reading and writing to mild level and medium level mentally disabled children, this method is recommended to the teachers who do not want to try different practices.

In the process steps of Sentence Targeted Syllable Method, syllables and words that will form the sentence are taught. For example, after forming the word “lale” with the syllables “la-le-li” for the sentence “Ali lale al.”, the target sentence is formed by making the students read/write the “al-il-el” syllables. According to sequence of the target sentence; in the first group, by attracting attention to the “a, e, ı, i, o, u, ü” sounds and the “l, b, n, y, ç, t, s, k, ş” consonants, the sentence is formed after making the students read/write the syllables and words of the target sentence respectively. These sentences are; “Ali lale al. Baba bal al. Anne nane al. Önay bal ye. Ela çok aç. Tuna atı tut. Suna su iç. Kenan oku, anla. Işıl şişe şişe süt iç.” After repeating each sentence, the voice is formed by analysing respectively. By forming new syllables-words-sentences with these sounds that are integrated to the vowels, they are hung to the “sound-syllable-word-sentence” boards with their visualizations that evoke each structure. In the second stage, by emphasising the “p, r, m, z, g, v, d, f, c, h, ğ, j” sounds, the students are made read/write the new syllables and words for the target sentence. These 11 sentences are; “Berna bak arı. Ümit birkaç mısır ye. Petek patik ör. Mete azar azar üzüm ye. Gamze gazete oku. Veli eve gel. Yıldız odaya gir. Funda fidan dik. Cemil cici kuş öttü. Bayram dağa çıktı. Jale jandarma görmüş.” When reached to the independent reading and writing stage, teachers try to improve the children’s reading and writing skills by starting with basic texts.

There is no single method to be recommended in any case in teaching literacy. Therefore, the Sentence-Targeted Syllable method may also have its advantages and limitations. When this method is applied to children with mild and moderate mental disabilities, successful results can be obtained, and some children may have difficulty in the steps of the method. In further studies, semi-experimental studies with single subject design (multiple probe design among subjects) can be conducted and make comparisons between the methods and the changes in students’ performance level before and after training can be determined. With these studies, it is possible to reveal advantages and limitations of the methods. Of course it is possible to use different methods to teach the students to read and write. For this reason, the researchers must improve different first reading and writing methods that answer the need of the special education literature. MoNE must let different methods to be used and leave the decision about method-choosing to the experience teacher.

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