

# Fun-Drilling Techniques Based on Character Education in Improving Intensive Writing Skills for Borderline Intellectual Functioning Students

Danissa Citra Uthami

Universitas Muhammadiyah Bandung, Bandung, Indonesia

E-mail: [danissacitrauthami.dcu@gmail.com](mailto:danissacitrauthami.dcu@gmail.com)

## ABSTRACT

Children with special needs include Borderline Intellectual Functioning (BIF) students are not able to master good writing skills. The article reports a study conducted using a single-subject research method with an A-B-A design as an effort to improve the writing ability of the BIF-disabled students. At the initial baseline, the researcher photographed the writing ability profile of BIF students by conducting a test of 4 sessions. Then, the intervention was carried out using play-based learning approaches with fun-drilling techniques based on character education. At the final baseline, the researcher again conducted a test for four sessions. The results of the study proved that the play-based learning approach with the drill method based on character education is effective in improving the writing ability of the intensive stage of BIF students.

**Keywords:** *Borderline intellectual functioning, character education, fun-drilling techniques, intensive writing skill.*

## 1. INTRODUCTION

Writing is an exclusive skill that only the educated have. Formerly, handwriting was appreciated because it was the main form of communication (Ediger as cited in Crouch & Jakubecy, 2007). For Emilia (2010), writing is the main center of education. It is not surprising that governments in many countries, both developed and developing countries such as Indonesia, place a strong emphasis on teaching writing.

The reality on the ground also shows that not all students could master the stages of writing skills well. This is even true for students who experience intellectual functioning at this threshold of Borderline Intellectual Functioning (Jankowska, Bogdanowicz & Shaw, 2012)

In response, inclusive schools became popular due to an urgent need in society. In essence, inclusive schools are organized by the government to answer the educational needs of Indonesia, where the number of children with special needs is increasing every year. Based on BPS data (Tarnotoi 2016) there were 4.2 million children with special needs and in 2007 the number increased to 8.3 million. The term inclusion is a new term to describe the integration of children with

disabilities (disabled/disabled) into school programs. To organize this program, schools must commit to involving students who have obstacles in every learning activity. However, this good intention certainly faces various obstacles that result in educational goals not being achieved optimally. Facts on the ground also show that there are still many inclusive schools that open special programs, but they are confused in determining the education program that suits the needs of each student with special needs in their school. Tarnoto (2016) states the same thing that the obstacles in implementing inclusive schools are that school management is still not optimal and workers who are capable to teach children with special needs are still lacking.

Students with special needs have learning difficulties, if not handled properly. These difficulties are likely to have a long-lasting negative impact in their academic process. Other than that, these students have low self-confidence which leads to frustration in the community. Wood (2007) reveals the fact that difficulties in learning mostly only affect a part of a child's developmental stages. He states that there are alternative treatments, various types of treatment strategies to overcome them. Jamaris (2014) emphasizes that students who have

learning difficulties are not directly related to the intelligence level of the individuals, but it means that these individuals have difficulty in carrying out their learning tasks (underachievers). Therefore, appropriate intervention is needed so that these individuals are successful in their studies.

In an effort to improve the writing skills of the BIF-disabled students, the researcher tried to design appropriate and more effective strategies by using the appropriate learning method, namely the drill method. The use of the method is drill carried out based on the problems of the students investigated. Students who have an intellectual function at the threshold of Borderline Intellectual Functioning tend to have a limited IQ (approximately up to 90). Therefore, continuous training is needed to instill habits. This habituation is expected to improve students' intensive writing skills later. The researcher used Play-Based Learning approach with Drill Method based on Character Education so that in addition to focusing on writing skills in the intensive stage, the learning/training carried out can also bring more fun.

In addition to the learning method, various creative and interesting media are also used so that learning with this method becomes more fun and can trigger students' enthusiasm for learning. For children with special needs, the use of creative and interesting learning media is very much needed. Briggs & Hansen (2012) found that schools that have used a creative curriculum have greater benefits for students, namely increasing children's learning motivation. In addition to being more fun, the drill method used was also modified to allow the researcher to insert character values that are very much needed at the age of the research subject.

Day (as cited in Vinkers, 2013) states that individuals with intellectual and intellectual functioning problem often have behavioral problems from an early age. Chaplin (as cited in Vinkers, 2013) predicts that individuals with these intellectual functions are at high risk for violent offenses and arson. Therefore, character education is felt to be important to be given BIF students in an effort to change the writing ability of research subjects and also change their attitudes and behavior.

**2. LITERATURE REVIEW**

**2.1. Approach Play Based Learning with Drill Method Based on Character Education**

The play-based learning with drill method based on character education can be interpreted as delivering the drill method which is done in a fun way and based on character education. Due to the condition of the research subjects with special needs, the researcher used the approach and learning methods so that learning could be carried out while doing fun/playing activities. The fun activities here are realized in the form of fun activities

carried out as an introduction, the use of fun media, and the delivery of pleasant learning conditions. Play-based learning is a 'context for learning in which children organize and understand their social world, as they are actively involved with people, objects and representations' (DEEWR in Edward, 2017).

The media used to make learning fun are letter cards, word cards, and picture cards. Fun learning conditions are created by conditioning learning outside the classroom, while chatting casually about the daily life of the subject. This casual conversation is deemed necessary in the learning process so that the learning situation is not awkward. In this casual talk, the researcher inserted the values of character education which were the theme of the treatment at that time. This allows the role of play to be in accordance with what was conveyed by Edward (2017) that play is a context for learning where children are actively involved with people and objects to learn.

**2.2. Writing Intensive Stage**

Brown (2003) divided writing performances into four categories. Each of these writing categories reflects the uniqueness of the skill domains of each category. After imitative writing skills are well implemented, the next level of writing is the skill of producing the right vocabulary in a context, collocations and idioms, and grammatically correct sentences. At this stage of writing, context and meaning have begun to be considered, but learning is more focused on form with rather tight control. Brown (2003) states that this writing control focuses on the form of writing, grammar, or simple writing. The handwriting written at this level is the original handwriting display. Students at this writing level produce language to display their abilities in grammar, vocabulary, or sentence formation, and do not have to convey meaning for authentic purposes. The response expected in this test only shows the ability to combine or use words correctly according to the context. This stage requires students to produce letter shapes, letter sizes, spaces between letters and words, letter positions, spelling, sentence patterns, and sentence contexts that are made correctly.

**2.3. Intellectual Functions at the Threshold**

Woodworth and Marquis (as cited in Soemanto, 1998) stated that the intelligence level of borderline children is at the fourth level from the lowest level. The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) (in Ninivaggi, 2005) defines intellectual function at the threshold (Borderline Intellectual

**Table 1.** A-B-A Design

O O O O	X O X O X O X O	O O O O
Baseline (A1)	Intervention (B)	Baseline (A2)

Functioning) as limited intellectual function with an Intellectual Quotient (IQ) range of 71-84. However, this type of disorder is not included in the system and is compared with the residual ICD diagnostic system code R41.8 which refers to other symptoms and signs that indicate cognitive function and apperception. According to Kostrzewski (in Jankowska, Bogdanowicz & Shaw, 2012), BIF has been classified as a generally understood norm, and not a category of intellectual impairment.

Children with BIF have normal physical characteristics in appearance and tend not to show their limitations (Garaigordobil & Perez in Rakhmawati, 2012). However, with this condition of intellectual ability, students who experience BIF tend to get low scores (underachievers) in doing their schoolwork.

Individuals who experience BIF have limitations in their verbal abilities, so they are difficult to generalize and identify something. From educational and clinical studies, it can be concluded that children with limited intelligence have several characteristics that make learning and memorizing academic information more difficult. Their thought process is characterized by a high degree of viscosity, limited freedom, and a low level of criticism, accompanied by creativity and little ability to find new and original ways of solving a problem. With such a condition of analytical power, they will find it difficult to carry out their daily lives, especially at school (Jankowska, Bogdanowicz & Shaw, 2012). However, it is undeniable that students who have limited intellectual conditions can also have abilities above their intelligence range. This happens when the students get an intervention that is in accordance with what he needs. On the other hand, in terms of psychosocial functioning, individuals with BIF can adapt well to their environment (Papalia, Olds, & Feldman, as cited in Rakhmawati, 2012). However, these individuals remain potentially to experience a personal crisis because their self-esteem and self-concept were not good, and very vulnerable to psychopathological symptoms (Shaw as cited in Rakhmawati, 2012). This is very likely to happen because of their fluctuating emotional state.

**3. METHOD**

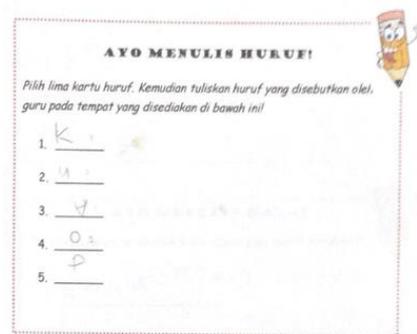
The participant of this study is one male student who is in his 2nd grade of elementary school with borderline intellectual functioning. The subject is a special needs student taught by the researcher in an inclusive school. The data were in the form of the learning profile of the student' writing skills. The data were collected by observing the student' writing skills in the class and individual learning outside the classroom. In addition, an analysis of the design of the Individual Learning Program was also carried out by the accompanying teachers, and interviews with his parents and homeroom teachers. The writing ability of the student in the intensive stage is changed into a target behavior. The research method used

in this study is a single-subject method. The research design used is A-B-A single-subject research design (Table 1).

The data were collected in the first condition (pretreatment) which was the period Baseline (A1) in four sessions. Intensive writing training on the subject was then conducted in four sessions for 30 minutes each session. Each test session contains 4 types of tests (letter, vocabulary, word, and sentence tests) with different character education themes for each session. The treatment was carried out using a fun drilling technique based on character education. In the next stage (Baseline A2), an intensive writing test was conducted again on the subject for 4 sessions for 30 minutes each session. Each test session contains 4 types of tests (letter, vocabulary, word, and sentence tests) with different character education themes for each session. All instruments in this study have been validated by experts.

**4. FINDINGS AND DISCUSSION**

The results of the study show that the subject has mastered writing skills at the imitative stage based on Brown's writing classification. Therefore, an intensive improvement in writing was carried out. The subject followed a special program for Indonesian subject which is handled by two teachers in turn. The number of special meetings for Indonesian subject is 18 meetings with a total of 42 lesson hours. Writing skills are the focus of learning because the condition of the subject's ability is still not satisfactory and needs to be improved. The learning technique used in learning Indonesian is assignments giving and using only story texts contained in textbooks. The learning already contains elements of character education because the texts were taken from the KTSP book which contains the values of character education. Figure 1 presents the example of the letter test A1.



**Figure 1.** Example of letter test A1.

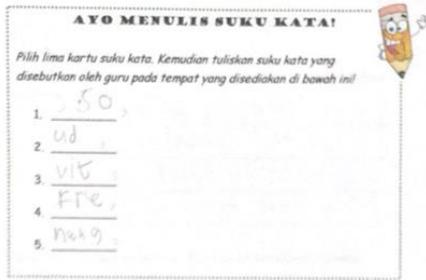


Figure 2. Example of syllable test A1.

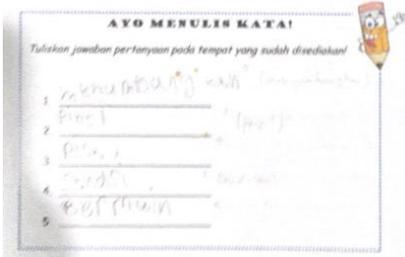


Figure 3. Example of word test A1

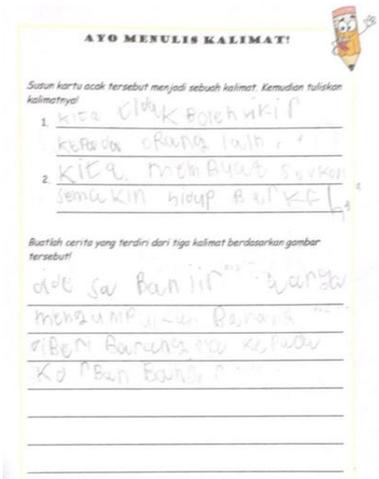


Figure 4. Example of sentences test A1

Figure 2 presents the example of the syllable test A1, figure 3 presents the example of the word test A1, and figure 4 presents the example of the sentences test A1. In baseline stage (A1), subject still cannot write letters parallel to the bottom line. The subject is still not skilled at writing letter shapes. The writing of the wrong letter form is mostly caused by the subject not writing the letter according to the position of the head, body, and tail of the letter, and writing the letter upside down. The subject cannot write syllables with attached vowels (consonant-vowel-vowel). The subject used large and inconsistent font sizes, incorrect spelling (fewer letters), and spaces between letters are sometimes still clumped together or loose. The subject sometimes reduces letters in a word or misspelled letters or add letters to other words. Sentences writing also ignores the punctuation and use of capital letters. Sentence patterns composed by the subject are often reversed or incorrectly positioned or incomplete.



Figure 5. Example of letter writing treatment



Figure 6. Example of syllable writing treatment.

The subject was later given intensive writing training in four sessions for 30 minutes each session and 4 types of tests (letter, syllable, word, and sentence tests) with different character education themes for each session. Figure 5 presents the example of the letter writing treatment, figure 6 presents the example of the syllable writing treatment, and figure 7 presents the example of the word writing treatment.

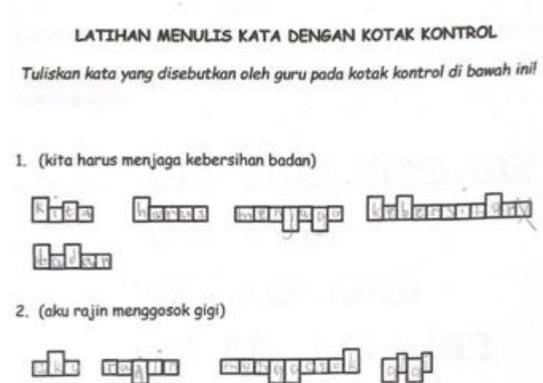


Figure 7. Example of word writing treatment



Figure 8. Example of sentences writing treatment

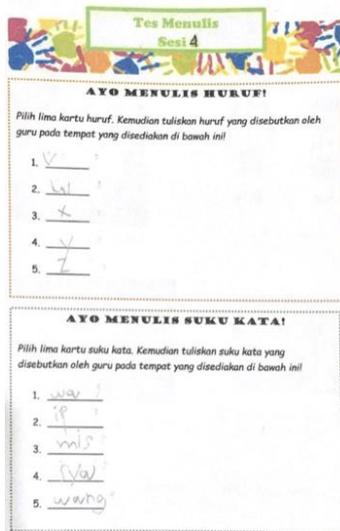


Figure 9. Example of letter and syllable writing test (b)

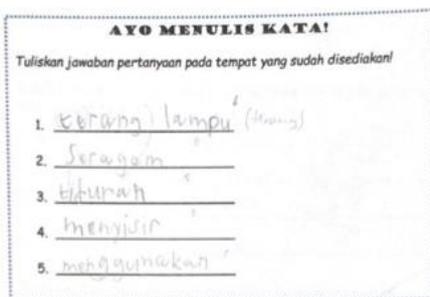


Figure 10. Example of word writing test (b)

Figure 8 presents the example of the sentences writing treatment, figure 9 presents the example of the letter and syllable test intervention B, figure 10 presents the example of the word test at intervention B, and figure 11 presents the example of the sentences test at intervention B.

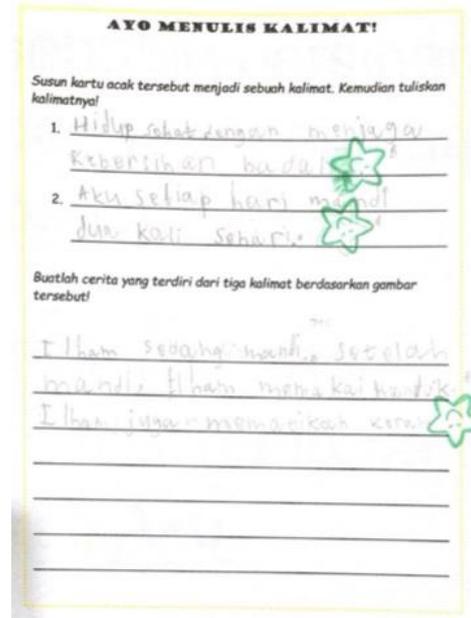


Figure 11. Example of sentences writing test (b)

The subject's writing looks neater than before. The subject has begun to be able to write letters according to the position of the head, body, and tail of the letter properly. The subject can also write parallel letters close to the line. Although not consistent, the font size written by the subject is not as large as before. The subject can write syllables correctly. He no longer writes words without removing letters or adding letters to the words they write. The subject is able to write sentences with the correct sentence pattern and meaning, but in some numbers, the subject often keeps information between the subject and the predicate. The subject can also use capital letters and punctuation marks well. The problem lies in the spacing between letters which is still often tenuous. In the next stage (Baseline A2), an intensive writing test was conducted again on the subject for 4 sessions for 30 minutes each session. Figure 12 presents the example of the letter test A2.

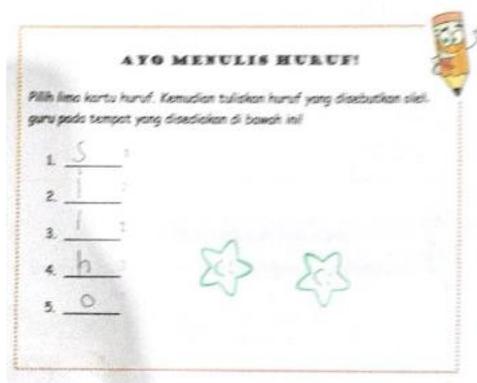


Figure 12. Example of letter test A2

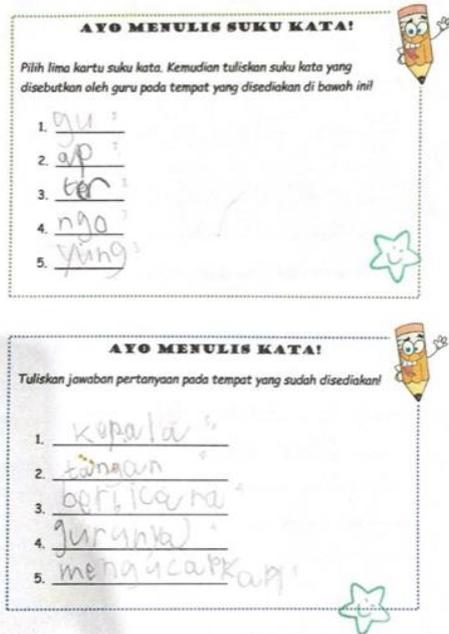


Figure 13. Example of syllable and word test A2

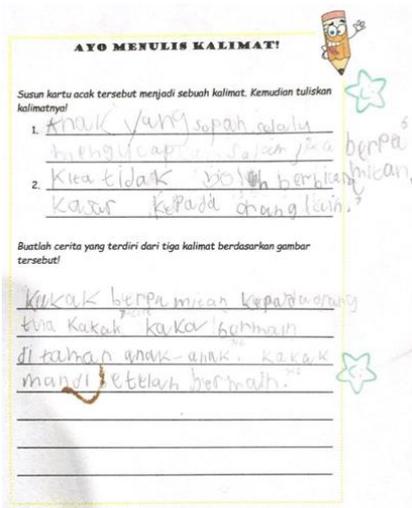


Figure 14. The example of letter test A2

Figure 13 presents the example of the syllables and word test A2, figure 14 presents the example of the sentences test A2.

The subject seems to be trying to keep the writing parallel to the line, but the font size is still too large. Sometimes, he also forgets to put spaces between words in a sentence. The subject is often wrong or does not finish writing a word and seems accustomed to omitting the last letter in words ending in 'k', such as "kakak", "nenek", "kakek". The subject did not put a sign (-) on the reduplicated words, no longer write the letter 'b' with capital letter as before. The subject seems to have started to get used to writing headed letters (such as t, k, l, b, and d) correctly, namely from the upper limit of space, unlike in the initial baseline stage (A2).

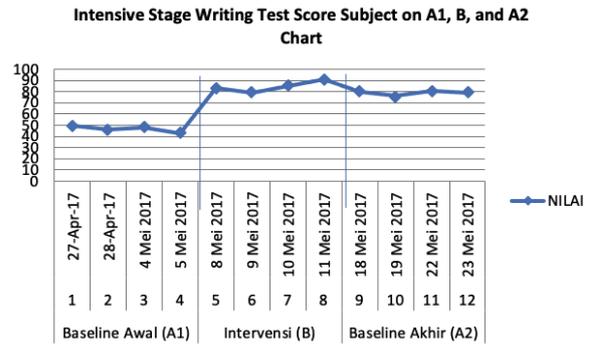


Figure 15. Intensive stage writing test (A1, B, A2)

Figure 15 shows the direction of the line change. In this case, the subject has indeed been facilitated by the school's hours of learning programs and special accompanying teachers to maximize learning materials that the subject cannot follow in class together with others. Jankowsk, Bogdanowicz & Shaw (2012) suggests that due to the reduced intellectual abilities of children with BIF, they are unable to meet the demands of school programs, especially when they lack appropriate psychological and educational support. Based on the results of the interview with the class teacher and the subject's parents it is found that the subject was sometimes unfocused and often daydreamed or disturbed his close friends when the lesson was in progress. This happens because the subject is easily bored with difficult material or tasks that have a lot of portions.

According to Tarigan (2008) writing skills will not come automatically but must go through a lot of practice and practice regularly. The *play-based learning approach* with the drill method based on character education seeks to improve writing skills by providing regular training so that it creates habits that can be practiced by the subject automatically. This is based on one of the basic principles of exercise or drill proposed by Surakhmad (1980) that drill only applies to automatic actions. Based on the 2013 revised edition of the Elementary School Curriculum (Ministry of Education and Culture, 2016), Grade 2 students should be able to produce their own vocabulary and expressions, as well as write simple texts. This shows that this grade 2 level is at the stage of intensive writing which also pays attention to the meaning of the writing, although it still focuses on the form of writing (Brown, 2003).

The writing difficulties experienced by the subject were because of his intellectual function abilities that were not the same as other students in the same grade level. According to Wood (2007), students who experience writing delays usually have difficulty reading and expressing ideas into language and may not be able to compose complete and correct sentences. If we look at the factors that cause writing difficulties as conveyed by Jamaris (2014), it seems that the subject has difficulties due to the perception of visual-motor coordination.

Surakhmad (1980) explained that one of the basic principles of drills is that training sessions should be relatively short, but often done. JB Watson's (in Hergenhahn & Olson, 2008) believes that classical conditioning is not because the *unconditioned stimulus* (US) strengthens the *conditioned stimulus* (CS), but because CS and US occur one after another in a long-time interval. Also, the more often events occur together, the stronger the association of those events. Therefore, training using the drill method must be carried out frequently and in a short time, so that the training process becomes a strong association and produces a good response.

The condition of the subjects who have intellectual functions on the threshold also determines the time the training needs to be carried out. Wilson (1971) states that these children are having a short memory. They tend to forget things quickly and a good learning method for children like this is to them give short, frequent, and reinforcing doses.

After the intervention, the subject was able to improve his writing ability even up to a score of 91. This research proved that *play-based learning* approach with the drill method based on character education is suitable to be applied to the intensive stage of writing learning for children who have intellectual functions on the threshold. This intervention process shows how the relationship between the training designed by the researcher and the results of the writing test conducted by the subject. As described by Schunk (2012) regarding the relationship between stimulus and response, that is, the more often they make a response to a stimulus, the stronger the response becomes connected to that stimulus.

The *play-based learning* approach with the drill method based on character education is proven to be effective in improving writing skills in the intensive stage of students with functions intellectual at the threshold. Continuous training (*drilling*) carried out at the intervention stage will foster a habit for the subject to continue to do it without any more intervention being carried out. The use of the approach also shows that the problem of writing in individuals who have conditions of intellectual ability on the threshold can be overcome by treatment according to the needs of these individuals.

## 5. CONCLUSION

The play-based learning approach with the drill method based on character education can be interpreted as delivering the drill method which is carried out in a fun way and inserts character values in learning activities. This was then applied in single subject research with an A-B-A research design. The results show that there is a very significant increase from the initial baseline (A1) to the intervention (B). Then at the final baseline stage (A2), it decreased, but not significantly. These changes prove

the effectiveness of the play-based learning approach with the drill method based on character education in the ability to write at the intensive stage of the subject who has intellectual functions on the threshold.

## REFERENCES

- Briggs, M. & Hansen, A. (2012). *Play-based learning in primary school*. India: Sage.
- Brown, HD (2003). *Language assessment: Principles and classroom practices*. USA: Longman.
- Crouch, AL & Jakubecy, JJ (2007). Dysgraphia: How it affects a student's performance and what can be done about it. *Teaching Exceptional Children Plus*, 2(3).
- Edward, S. (2017). Play-based learning and intentional teaching forever different. *Australasian Journal of Early Childhood*, 42(2), 4-11.
- Emilia, E. (2010). *Teaching writing: Developing critical learning*. Bandung: Rizqi Press.
- Hergenhahn, B.R. & Olson, M.H. (2008). *The theory of learning (seventh edition)*. Jakarta: Kencana Prenada Media Group.
- Jamaris, M. (2014). *Learning difficulties: Perspectives, assessments, and treatments*. Bogor: Ghalia Indonesia.
- Jankowska, A., Bogdanowicz, M., & Shaw, S. (2012). Borderline intellectual functioning. *Acta Neuropsychol*, 10, 271-90.
- Ministry of Education and Culture (2016). Indonesia national curriculum. <https://www.kemdikbud.go.id/>
- Ninivaggi, FJ (2005). Borderline intellectual functioning and academic problem. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry*, 2(8).
- Rakhmawati, SM (2012). *Working memory untuk musik bagi anak dengan Borderline Intellectual Disorder*. (thesis). Faculty of Psychology, University of Indonesia, Depok.
- Schunk. D.H (2012). *Learning theories: An educational perspective*. Boston: Person
- Soemanto, W. (1998) *Psikologi pendidikan*. Jakarta: PT. Rineka Cipta.
- Sudjana, N. (1991). *Dasar-dasar proses belajar mengajar*. Bandung: Sinar Baru Alingsindo.
- Surakhmad, W. (1980). *Metodologi pengajaran nasional*. Bandung: Jemmars.
- Tarnoto, N. (2016). Permasalahan-permasalahan yang dihadapi sekolah penyelenggara pendidikan inklusi pada tingkat SD. *Humanitas*, 13(1), 50-61.

Tarigan, HG (2008). *Menulis sebagai suatu keterampilan berbahasa*. Bandung: Angkasa

Vinkers, DJ (2013). Pre- Trial reported defendants in the netherlands with intellectual disability, borderline and normal intellectual functioning. *Journal of*

*Applied Research in Intellectual Disabilities*, 26, 357–361.

Wilson, JA (1971). *Diagnosis of learning difficulties*. USA: McGraw-Hill

Wood, D. (2007). *Kiat mengatasi gangguan belajar*. Jogjakarta: Katahati.