

Could Students with Mild Intellectual Disability (MID) Memorize Numbers through Dance?

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Abstract—This article discusses dance as an instrument to improve memorizing ability of numbers 1-5 for students with mild intellectual disability (MID). For those who suffer MID, their short-term memory in abstract-thinking is relatively hard because they need a concrete object and those students need to perform periodically in memorizing numbers. To support the stages of this study, dance can be used as an instrument in studying mathematics; in this case, the author referred to Gardner's understanding that students with MID have linguistic, math logic, musical, spatial, kinesthetic, natural, intrapersonal and interpersonal ability. However, those components are not as good as those in students who do not suffer MID. By using that idea, the author concludes that students with MID are able to memorize numbers in order and recognize numbers randomly through dance as their learning instrument given periodically.

Keywords—students with mild intellectual disability; number 1-5; dance learning

I. INTRODUCTION

Student with intellectual disability is one of social groups who should have equal, fair and democratic rights and treatments in education. According to Law No. 20 of 2003 National Education System article 5 paragraph (1) stating "Each citizen has equal right to get quality education" [1]. Students with intellectual disability have right on education service, so it should not be distinguished from normal students. Therefore, education service should be given to all students both normal and with disability in this case is mild intellectual disability

One characteristic of students with mild intellectual disability is disability to think abstractly and their tendency to easily forget things. Thus, teaching material should not directly begin with abstract learning, but in stages which can be started with concrete, semi-concrete, and abstract stages. According to American Association on Mental Deficiency (AAMD), it is classified that students with mild intellectual disability is included in educable category. Students with mild intellectual disability in performing learning activities directly connected to intelligence should be certainly adjusted to students' characteristics that have weaknesses in short-term memory, reasoning, and developing ideas. As a result, it needs a model to help simplify the learning process, so that the attempt to optimize those students can be improved and encourage them to study. Those all should be created in fun learning.

This article aims at describing concept that dance can be used as a media or an instrument to develop memorizing ability of numbers 1-5 through fun experience for students with mild intelligence disability. As an instrument, dance can direct and train the students with MID to freely express themselves but as guided by teachers, so that they know how to move to dance, utilize their limb as action media and find new technique in memorizing numbers. Dance learning especially in Primary School for Disabled Students is not based on available dances with standard stages, but dance activity becomes an activity to express and explore through movement and rhythm experiences, as the instrument to train their memory about numbers 1-5. The movements they perform are expected to develop their sensitivity so that it can contribute to live their daily life.

Stated that the functions of movement and rhythm for special education program are as follows [2] :

- Increasing physical growth and development,
- Increasing physical fitness and health,
- Increasing motor skill,
- Improving reasoning ability and intelligence,
- Encouraging creative, reactive, and social life.

Based on the statement, the condition of Extraordinary School students, especially they who suffer MID, strongly determines the objective of dance learning process by teachers as the instrument to train students' memory about numbers 1-5. Seeing that the students with MID have low comprehension and easily feel bored in studying any subjects, to evaluate their development it needs help and specific service, including their education program. However, these students can be educated and trained to count simply. Children with mild intellectual disability can count simply, with guidance and good education, when they will obtain their own income [3]. Dance used as instrument to train memory about numbers 1-5 is certainly liked by students because according to "give coordination of movement training as much as possible through a game using certain media or tool" [4].

Based on the result of literature from several research results, there is no researcher studying about the influence of dance as instrument to train students with MID to memorize numbers 1-5. In the learning process, media such as number

puzzle employed as guidance of students movement in performing dancing process. The use of number puzzle seems appropriate to be used as media to guide students' movement such as to walk in place, the students should step on and move on number 1, the position of number 1 is place on the middle as the center point, whereas number two is placed in front, number 3 is situated on the right side, number 4 is in the back, and number 5 is on the left side. Then, the position of the numbers will be placed randomly with the placement of the same shape. In the dancing process, the students will perform it enthusiastically and are motivated to memorize numbers, smile or even any form of expressions will be shown by the students as the form of students' interest in joining the lesson. The dance used as the media to memorize numbers 1-5 for students with MID certainly gives valuable learning experience, not only experience or beauty in the dancing, but they also train their ability or memory in recognizing and memorizing numbers 1-5 well, and prove that learning system performed by using training model, which more emphasizes on periodic or continuous learning will be meaningful for the students. The dance described is not the general dancing, but a creative dance created by the students with MID based on exploration result supported by audio visual.

II. LITERATURE REVIEW

Learning capacity of students with MID is very limited. It is more on abstract things. They study more about imitating (rote learning) than by definition. From day to that they do the same mistakes. They tend to avoid thinking. They feel hard to concentrate, and their passion is very low. They are easy to forget things, hard to create new things, and have little attention to things. Those characteristics can be analyzed more comprehensively, for instance if they are given Mathematics they needs only several minutes to feel bored, difficult, sleepy. On the other hand, if they are given Art, physical education, or skill subjects they will show great passion and they will have longer attention to it. They are eager to study more [5].

In Bahasa Indonesia Dictionary, puzzle means *mencengangkan, membingungkan, mengaduk, mengacau, mengganggu, memperkusut, heran tercengang, kebuntuan, kesandung*. Learn and play will give them freedom and help them to develop. The movement is based on their preference, such as running, jumping, rolling or even other actions. Do not force them or criticize their mistakes or feel dissatisfied with them. Several benefits of playing puzzles are: 1. Increasing learning concentration, 2. Developing fine motor ability, 3. Improving their social skill [6].

Teachers should be able to understand students' need of dancing movement being taught, one of them is how the teacher can identify the ability of the student she teaches [7]. "Identifying a student's abilities is essential part of modifying instruction. When student's ability is covered, often new talents arise that were previously unrecognized. As a teacher, in this process is to identify the facility, talent, and skills in each student and present opportunities to use and enhance these qualities in dance learning" [7].

Dancing learning as the implementation of rhythmic movement pattern in learning approach at school aims at

developing cognitive and social potentials completely. The main objective of rhythmic movement in somebody's life because there is stimulation principle in the function of somebody's life, that is perceptual motor, social, emotional, and intellectual skills [8].

Creative dance according to Gilbert quoted by Desfiani combines movements through art of expression [9]. It is a combination of both which develops to make creative dance stronger. He also stated that dance learning at school can develop cognitive outcomes, affective outcome, physical outcomes, and social outcome. The teaching method should consider students' condition/willingness. Students' ability and characteristics are unique. A suitable method is relative. There are so many different teaching methods. Each method has its own strengths and weaknesses. A teaching method is said appropriate and suitable if it can support and is supported by teaching factors.

The development of gross motor skill determines children's ability to perform physical activity [8]. The development of gross motor, especially in children who suffer growth retardation such as intellectual disability, needs guidance from educators in pre-school education and primary education. The development of gross motor in children will influence the development of behavior, social and cognitive skills and other relevant matter.

III. RESEARCH METHOD

The design of study is qualitative approach, which is "a research used to study a natural object condition" with a descriptive-analysis method [10]. According to Bogdan and Taylor in Basrowi's and Suwandi's book, qualitative research is 'a research method generating descriptive data in form of speech or writing and behavior of observed people' [11]. Through a qualitative research, the researcher can identify the subject, feeling what they undergo in their life. Data collection technique is a literature review. Therefore, the technique used in data collection is by literature data that is coherent material for literature review to the defined discussion object. The data available is collected and processed by: editing that re-examine the data obtained, especially in terms of completeness, clear definition, organization which is organizing the data obtained with required framework, and findings of the study that are conducting advanced analysis on the result of data organization by using defined steps, theories, and method so that a particular conclusion can be generated which is the answer of the research problem.

IV. RESULTS AND DISCUSSION

A. *The Use of Media in Dancing for the Students with MID*

[6]Intellectual disability is a kind of mental retardation suffered by a child. The child will be slower in learning different things compared to their peers. Children with MID need specific guidance or service to help them learn both school stuffs and daily activities. Education for children with MID is a need. In formal education, they also get the same lesson as general students, the difference is they get special services adjusted to their need.

Dancing lesson, as the implementation of rhythmic movement pattern in learning approach at school, aims at developing cognitive and social potentials completely. The main goal of rhythmic movement in somebody's life is stimulation principle in the function of somebody's life that is perceptual motor, social, emotional and intellectual skills. Varied movement pattern can improve physical, emotional, socialization, and cognitive abilities. Movement pattern training strongly influences somebody's moving potential in physical exercise skill. Therefore, knowledge about moving experiences is needed. Through awareness toward body movement patterns, somebody is able to achieve body movement skill independently.

Bandi stated that the implementation of rhythmic movement is performed as follows: a. give as much as possible the training of movement coordination through game by using certain media [2]. (a) For instance, walking on a long board, or balancing block; (b) start the lesson from concrete things and continue to abstract things; (c) training or group game should be given, although individual service is provided as well. For example, training to make a line by holding each other's hand while walking in circle; (d) movement training presented in the learning process should have problem solving for each student based on the competence level. For instance is training by using bike. Problems in body balancing or similar trainings will be found.

Based on the description above, the use of number 1-5 puzzle as media as the footing when moving/dancing gains attention from the students at the time they listen to a song and are directed to move based on the tempo and order. By playing puzzle, children with MID will learn about colors and shapes.

Learning using this method is usually more impressive for children with MID compared to classical lesson by lecturing. It is because by using this method, children with MID can identify shapes or numbers and colors by using a concrete media [6]. Moreover, we can also give basic concept through available pictures on the puzzle, for example numbers, animals, environment, kinds of fruit, alphabets, and so on.

In the dancing activity, the students search and explore movement based on audio stimulation from the song being played. To describe how the implementation of the dance as media to help students with MID memorize numbers, the activities are outlined below:

1) Performing warming up in form of stretching movements: This step can be used as warm up activity and also an activity to explore movement based on surrounding, daily activities, and other things related to physical activities. Exploration and identification of movement gain much attention from the students. It can be observed from their expression that smiles or even laughs as the evidence that the dancing lesson is fascinating for them.

2) Listening to song with different tempo: This aims at stimulating the students' sensitivity on music. Listening to some songs being used in their lesson is dominated by songs for children, which are familiar for them. It is done to gain their interest toward the next lesson.

3) Introducing numbers 1-5 by using numbers 1-5 puzzle: Previously, the students identify numbers 1-5, this aims at observing to what extent the students know about numbers 1-5. After the process of number identification is over, the students will stand up by stepping on the number puzzle with number one placed in the middle as the center, number 2 is placed in the front, number 3 is on the right side, number 4 is in the back, and number 5 is on the left side. The students will be instructed to step on several numbers to train their memory and concentration.

4) The students are able to step on numbers 1-5: In this stage, the students will be instructed to form a series of simple dance movement based on their finding, the movement consists of walking in place on number 1 as the center, jumping, waving, spinning, stepping based on the instruction. For instance : let's walk in place on number 1, let's jump to number 2, let's step on number 3, wave your hands to the right and the left, and so on.

Dance learning has extraordinary attraction for the students with MID, the students give different expressions such as smiles, shining eyes, laughing happily, and so on which shows much interest on dance learning. The use of number puzzle in performing dance will help the students to know numbers 1-5. Since they do fun activity, their reluctance to pronounce numbers is much decreasing. Creative dance the students found and create will have a great impact on their motor ability which is gross motor.

Different movement pattern training can improve physical, emotional, socialization and cognitive skills [8]. Movement pattern training strongly influences somebody's movement potential and physical exercise skill. Therefore, knowledge of physical exercise through moving experiences is required. Through awareness of body movement pattern, somebody will be able to achieve body movement skill independently. For most children with growth retardation (such as autism, intellectual disability, ADHD, ADD, LD, and behavior disorder) the implementation of rhythmic movement therapy/training is highly beneficial to improve their motor skill.

V. CONCLUSION

Based on analysis results and the discussion outlined then it is concluded that ability to identify numbers 1-5 before the implementation of dance using number puzzle is relatively lower than it is after the implementation of dance. The skill to identify numbers 1-5 after the implementation of dance by using number puzzle is higher and stable compared to the previous condition without intervention. Dance learning gives advantages toward brain function improvement, because structured and programmed motor training is beneficial to stimulate different learning center in the brain. The improvement of skill to identify numbers 15 in the students with MID has a good impact on their learning effectiveness at school because the children are more ready to perform learning process in the next stage.

Dance learning, especially in Extraordinary School for Disabled students is not based on available dance with standard stages, but the dance is considered as an activity to express and explore through movement and rhythm, as a media to train their memory about numbers 1-5. The movement they perform is expected to be able to develop their sensitivity so that it can contribute to live their daily life.

Based on the idea, the author concludes that the students with MID are able to memorize numbers in order and identify numbers randomly through dance as their learning media given periodically.

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