

# Influence of Rhythm Motion on Improving the Ability of Orientation of Student with Intellectual Disability

Maman Abdurahman S. and Azmi Azmi  
*Universitas Pendidikan Indonesia*  
*Maman\_PLB@yahoo.com*

**Keywords:** Rhythm Motion, Direction Orientation, Student with Intellectual Disability.

**Abstract:** A student with intellectual disability is unable to distinguish the right, left, front, and back. The student has spatial problems that affect the ability to distinguish the direction (direction orientation). The purpose of this study is to obtain information about the effect of motion rhythm on improving the orientation of the direction of the children with intellectual disability. Research method used Single Subject Research (SSR) with design A-B-A. The results showed that rhythmic motion interventions can improve the orientation of the students' direction of the students with intellectual disability. Seen from the mean increase in the level or average ability of subjects in the orientation of the direction, starting from the initial phase of baseline-1 (A1) that is 59% then increased in the intervention phase (B) to 72%, and increased again in phase baseline-2 (A2) to 77%. In conclusion, the rhythmic motion can be used to improve the orientation of the students' direction of the students with intellectual disability. The implication, for teachers who will teach the orientation of space to students with intellectual disability are need to understand how to use motion rhythm.

## 1 INTRODUCTION

Students with intellectual disability experience obstacles to the brain. Somantri (2007, p. 104) suggests that "mental or mental retardation is a condition in which the development of the intellect is inhibited, thus not reaching the optimal stage of development." Physical, cognitive, linguistic and motor development phases. Payne (1981, p. 275) say "Thus, motor related activities possess the potential for providing many success experiences." Grossman (in Hallahan and Kauffman, 1982, p. 40) defines "mental retardation refers to deficient in adaptive behavior, and manifested during the developmental period." Inflammation refers to general intellectual functioning below marked averages with a lack of behavioral adaptation and takes place in the period of development. Children aged ten years in general are able to read directions, for children with intellectual disability distinguish the right and left hands have not been able.

Understanding the concept of distance and relationship between spaces is closely related to spatial or space intelligence. The ability to understand the concept of direction will support

skills such as reading and writing upon entering school. It was found that a student with intellectual disability was having a spastic obstruction, could not distinguish letters. It is often confused when reading and shows almost identical letters. The researcher gives an explanation to the child that the letter b is facing right while the letter d faces to the left. The child does not understand the concept of right and left direction. Her class teacher has not intervened in this matter.

Delphie (2009, p. 186) suggests "The science of motion rhythm can be used as a vehicle for classroom teachers in an effort to bridge the difficulties of learners, and mastery of learning materials that will be taught through essential activities of creativity related to the pattern of motion and body work naturally designed as a form of therapeutic or healing play. "In the rhythm of the teacher is free to design games with songs, so as to make learning more creative and fun.

## 2 METHODS

This research used experimental method with Single Subject Research (SSR). The design is A-B-A.

According Sunanto (2006, p. 61) "Design A-B-A has shown a causal relationship between the dependent variable and independent variables."

### 3 RESULTS AND DISCUSSION

Data obtained through the test, the results as follows.

Table 1: Recapitulation of Progress of Orientation of Directions.

Sessions	Baseline-1 (A1)	Sessions	Intervention	Sessions	Baseline-2 (A2)
1	60%	1	68%	1	74%
2	56%	2	78%	2	74%
3	58%	3	74%	3	78%
4	62%	4	60%	4	78%
		5	74%		
		6	78%		
		7	72%		

Data analysis is divided into two, i.e. analysis in condition and analysis between condition.

Table 2: Summary of Visual Analysis Results under Condition.

Condition	A1	B	A2
1. Condition length	4	7	4
2. Trend directions	(+)	(=)	(+)
3. Trend Variable Stability	Stable 100%	Variable 57.1%	Stable 100%
4. Data Trace	(+)	(=)	(+)
5. Stability Level and Range	Stable 56%-62%	Variable 68%-78%	Stable 74%-78%
6. Change Level	62%-60% (+2%) Up	72%-68% (+4%) Up	78%-74% (+4%) Up

Here is an explanation of the table of analysis results in the above conditions.

- The length of the condition or number of sessions performed in each phase were four sessions for baseline- 1 (A1) conditions, seven sessions for intervention conditions (B), and four sessions for baseline condition-2 (A2).
- The tendency of the direction indicates that at baseline-1 (A1) condition tends to rise due to the increase of data. In the intervention condition (B) the direction tends to flatten due to the increase and decrease drastically the percentage of data. At baseline-2 (A2) condition tends to rise again, meaning that condition is getting better or improving.
- The results show that the tendency of stability in each condition is different. In the condition of baseline-1 (A1) the stability of 100% means that the four percentage of each session value is in the stability range, so the data is said to be stable. In the intervention condition (B) the tendency of stability is 51.7%, the data shows the increase and decrease significantly so it said the data is

unstable (variable). At baseline condition-2 (A2) the stability trend is 100% meaning the data is said to be stable.

- Stability levels and data ranges under baseline-1 (A1) tend to be stable with ranges between 56% - 62%. In the intervention condition (B) the data tend to be unstable (variable) due to increase and decrease, the range between 68% -78%. At baseline-2 (A2) the data tends to be stable with a range between 74% -78%.
- The level of change at baseline-1 (A1) tends to rise (+) with an increase of 2%. In the intervention condition (B) there is a change of data up (+) by 4%, in condition of baseline-2 (A2) there is a change of data up (+) by 4%. The summary of the inter-condition analysis is described as follows.

Table 3: Summary of Inter-Condition Analysis Results.

Conditions Compared	B/A1	A2/B
1. Number of Variables	1	1
2. Change of Direction and Its Effect		
3. Trend Changes Stability	Variability to Stable	Stable to variable
4. Change Level	68%-62% (+6%)	74%-72% (+2%)
5. Percentage Overlap	14,2%	50%

Explanation table summary of the results of visual analysis between conditions as follows.

- The number of variables changed is one, i.e. direction orientation capabilities in which includes the right, left, front, and back.
- Changes in the direction tendency between the baseline-1 (A1) and the intervention (B) that is ascending to the horizontal. The condition of the intervention (B) with the condition of baseline-2 (A) is flattened to ascend, meaning the condition is getting better or positive.
- Changes in the tendency of stability between baseline-1 (A1) with intervention (B) stable to variable (unstable). The instability of the data in the intervention condition is due to the concentration during testing. At intervention condition (B) to baseline-2 (A2) the stability trend is stable.
- The change of level between condition of baseline-1 (A1) to intervention condition (B) increases (+) by 6%. The condition of the intervention (B) to the baseline condition-2 (A2) changes its (+) level by 2%.
- Overlap data at baseline-1 (A1) to interventions (B) 14.2%. At intervention condition (B) to baseline-2 (A2) 50%. Provision of interventions continues to affect the target behavior, although under conditions (B) to (A2) the percentage of

overlap is large. At baseline-2 (A2) the graph increases steadily.

The development of the Mean level of each phase, i.e. baseline-1 (A1), intervention (B), and baseline-2 (A2) can be described as follows.

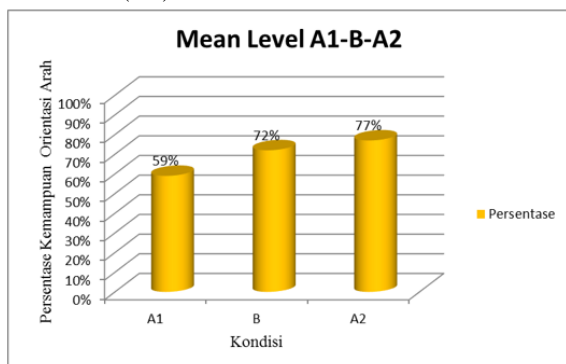


Figure 1: Mean Level Phase A1-B-A2 Directions Orientation Skill.

Figure 1 shows an increase in the mean level of each phase. Delphie (2005, p.109) puts forward "Give as many exercises of motion coordination as possible through game play by using certain media / tools." Media use affects the subject's understanding and interest in learning. Attractive media creates a memorable experience for the subject. The use of learning media such as puzzle carpets, game carpet show direction, the use of speakers while dancing, and the property used by the subject as a sign of the direction (head) students use to distinguish the right direction, left, front, and back.

Delphie (2005, p. 109) suggests how the application of the second rhythmic motion is "Give the teaching material by starting from the concrete and abstracted on the abstract." The researcher teaches the direction that begins by distinguishing the body parts themselves like right and left hand, right and left legs. Then go in the direction of movements such as stepping, jumping, facing right or left. In a position between objects such as mentioning a friend who is in front or a friend who is behind. In addition, teaching begins from the front-rear direction first and then the direction of the right-left, because the taught must be from the easiest to the more difficult.

The third method of applying the third rhythmic motion of Delphie (2005, p.109) suggests that "Group exercises or games should be given, even if individual services persist." At the time of the treatment, the researcher intervened on the subject by including his or her friend one or two people to

follow learning together. Apparently with the friend the subject is more excited and cheerful than when learning alone. In addition to training relationships with friends, also train the subject more tolerance towards his friend.

How to apply the fourth rhythmic motion according to Delphie (2005, p.110) is "The motion exercises presented in the lesson should have a form of problem solving for each student's self according to his or her level of ability." Through the right-left-silent game, the subject of practice by determining which direction he should move according to the dice eye out. Then in the game show direction, the subject practiced to follow the trail and mention the direction he was walking on without the help of the researcher. Obviously, the game has been tailored to suit the ability of the subject, so some of the rhythmic motion game activities can train the problem-solving skills of the subject in distinguishing directions. Awareness of direction is closely related to cognition.

Implementation of rhythm motion in direction orientation learning according to Delphie will be more vibrant and increase the imagination, if the pattern of motion is assisted with the pattern of lines on the floor vary so that children can perform in accordance with the pattern of the lines that are arranged. Once in the field the researchers realized that the use of the pattern of lines on the floor is very helpful at all to facilitate the subject in distinguishing directions, such as the game show the direction, the subject is easier to understand the direction because he just follows and mentions the pattern of directions that have been arranged on the floor. With the use of line patterns on the floor, making learning more concrete and easier subject.

Students are able to distinguish the front-rear direction through various tests, diverse activities, and it still shows consistent answers. Can be concluded, that students understand the direction of front-rear. For the right-left direction has not shown a consistent answer and is still often wrong, because the direction awareness still needs to be trained. Compared to the initial ability, it shows an increase during the intervention phase and baseline-2. A need for more easily remembered directions is needed. Distinguishing the right-left direction is more difficult than the front-rear, because students including children with mental tunagrahita MA 7-8 years. Hurlock (1978, p.52) points out, "Until the age of 7 or 8 years, children do not distinguish right and left, they can apply the concept to their hands, arms and legs but not to objects." The theory supports that the ability of students cannot be forced,

but it takes practice for a long time and the technique of marking the direction easier for students to remember it well.

Improved direction orientation skills on the subject due to several factors in the field that affect, namely:

- a) Motivation, students are passionate and enthusiastic. Learning is done with games, singing, and dancing that make students feel good.
- b) Giving direction signs on the limbs of students and around the class helps in remembering directions. Students wear the animal heads on the front of their bodies and wear the tail on the back of their bodies, then wear red ribbons as a signature of the right hand and the yellow ribbon as the left-hand signatory. On the four sides of the class is a picture that can remind the child of the direction.
- c) Media learning makes it easy to understand the direction, which is to distinguish the right and left or distinguish the front and back. The use of striped floor media on the floor can help the student in understanding the direction, following the instructions already provided on the floor, and moving while mentioning the direction on which he was walking.
- d) Student concentration. When excited he will concentrate on learning activities. Students start tired and joking with friends, he is difficult to concentrate in receiving lessons.
- e) Influence of friends. If students learn with their friends feel more excited than learning alone. His friend had a positive effect on, but also had a negative effect if it started to interfere with his concentration.
- f) Giving rewards and punishment. Students answer correctly, researchers provide reinforcement of toss. If the student is wrong answer, the researcher gives punishment of kelikitik. It turns out that students remember it faster, because he thinks not to answer when given questions or instructions.

Excess motion rhythm, learning is not boring, because of learning activities while playing. Rhythmic motion can create a fun atmosphere, so students will better remember the lessons that have been done. Rhythmic motion can train social and motor skills, because the learning is done with friends in groups. So, it can train interaction, work together, compete, and respect each other. Motor aspect can be trained because the motion of rhythm is done through the activity of motion. In directional

orientation, students can practice such as perceptual ability of motor, running, jumping, stepping, and spinning.

## 4 CONCLUSION

In the intervention phase students begin to understand and remember directions and show consistent answers. The end of the intervention is able to distinguish the front-back direction consistently. For the right-left direction has not been able to remember it well, but shows improvement in direction orientation capabilities. Rhythmic motion has a positive impact in improving direction orientation. Thus, the rhythmic motion effect on improving the orientation of the direction of the child's tunagrahita being.

## REFERENCES

- Delphie, B., 2005. *Individual-Based Motion-Based Learning Program*, Pustaka Bani Quraisy. Bandung.
- Delphie, B., 2006a. *Motion Rhythm An introduction to the Preparation of Individual Special Needs Student Program through Motivation and Body Movement*, Rizqi Press. Bandung.
- Delphie, B., 2006b. *Child Learning Mentally Retarded an Introduction in Inclusive Education*, PT Refika Aditama. Bandung.
- Delphie, B., 2009. *Learning of children with special needs in the setting of inclusive education*, PT Intan Sejati Klaten. Klaten.
- Hurlock, E., 1978. *Child Development*, Volume 2, Erlangga Publishers. Jakarta.
- Hallahan, D. P., Kauffman, J. J., 1982. *Exceptional Children, Introduction to Special Education*, Prentice Hall, Inc. New Jersey.
- Payne, J. S., 1981. *Strategies for Teaching the Mentally Retarded*, Second edition, Columbus: Charles E. Merrill Publishing Company.
- Somantri, S., 2007. *Child Psychology Extraordinary*, PT Refika Aditama. Bandung.
- Sunanto, J., 2006. *Introduction to Research with Single Subject*, CRICED University of Tsukuba. Tsukuba.