The Factors Affecting Learning Difficulties in Gymnastics through Portfolio Model

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Abstract: The purpose of this study was to examine learning skill's difficulties on gymnastic movement through portfolio model of PJSD FIK-UNY students. Using interview method, the population of this research were involving PJSD FIK-UNY students who attended the lecture on basic movement of gymnastics. The data were analyzed using qualitative descriptive from Mile and Huberman. The process of data analysis in this study including data reduction, presentation of data, and conclusion. Based on the result, this study emphasized that the factors affecting the learning difficulties in gymnastic movement were categorized into physical and psychological factors. Physical factors included strength, power, flexibility and movement harmonization. On the other hand, psychological factors talked about confident.

1 INTRODUCTION

The present study was grounded from the previous research entitled "Portfolio Development Model to Improve Skill Movement in Artistic Gymnastics" which showed validity about draft of portfolio. However, it was mentioned that further treatment draft model needed to be tested for trial. Draft model appeared to look like learning activity report. The result was investigated. Then, the students tried to learn about gymnastic movement skills outside of lecture hours. It was presented within group learning activity report in order to understand about artistic gymnastic movement skills which consisted of pictures and videos as the result of students' overview. For instance, the validity of this model was verified.

Researchers who were involved in Focus Group Discussion (FGD) activity said that the draft of portfolio model aimed to increase gymnastic ability skills in PJSD FIK-UNY students. The content of the draft could improve the skills of movement, safety and clarity. Furthermore, the model remained to be operated, which contained clear indicator and purpose. The objectives were to determine the aspects of the contents for the learning assignments, then to decide the treatment and the assessment. The selection of contents involving students and lecturer with their respective roles. Students choose learning activities which meet their ability. The lecturer guides students during the learning activities. Portfolio assessment process emphasized on students' achievement to improve their skills and students' ways of thinking in solving the problems in learning artistic gymnastics. Rubric was used in the portfolio assessment with the criteria as the evidences of thinking process including the quality of investigation and variety on problem solving in the training.

Complexity in the movement becomes a dangerous factor in the process of training, and the students must be proficient in helping others during the artistic gymnastic training. Helping ability is important to prevent or reduce injury. The artistic gymnastics skills are needed to create less complex movements and lower the injury risk. In 2018, the effectiveness of portfolio model was considered to be able to improve artistic gymnastic skills. The result found that portfolio model showed effective improvement on the artistic gymnastic skills on PJSD FIK-UNY.

Although portfolio model provides an effective effect, the difficulties still need to be identified. Therefore, the research was conducted to investigate the difficulties factors in learning the skills through portfolio model, in order to improve the ability on artistic gymnastics for (PGSD) FIK-UNY students. After the researchers found out the difficulties to learn the skills and how to solve it, the further study needs to investigate about the effectiveness in

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learning the skills. Therefore, a guidebook of portfolio model in artistic gymnastics will be equipped and developed the results of learning process with effective model.

2 THEORETICAL REVIEW

2.1 Motor Learning

In general, gymnastics is defined as physical training on the floor or using tools to improve endurance, strength, flexibility, coordination and self-control, especially to arrange our body move functionally (Wernner, Williams, and Hall, 2012). In gymnastics, how to develop balance and spatial awareness such as movement displacement, floated, balance, and weight transfer are learned. Gymnastic activity must be fun and challenging in all skills level (Gabbar, LeBlanc, and Lowy, 1987). Gymnastics gives opportunity for the athletes to have fun on discovering their ability and obtain immediate feedback. Another benefits from gymnastics are the opportunity to create movements against gravity, then enhances fitness and skills.

In children, self-assessment is a natural form in gymnastics and provides challenges. Children can discover against gravity and transfer weight effectively, in accordance with their ability. The gymnastic materials including the activities in balancing skills, transfer weight and movement concepts. Teachers cannot force children to try exercising, whilst they have to develop the gymnastic learning concepts suitable with the children's growth and safety.

The basic of body management and gymnastic skills must consider several studies discussing about the teaching process and understanding the knowledge of the children in gymnastics combined with the pedagogical knowledge (Graham 2008; Shulman 1987). When we form gymnastic athletes, we need to follow this steps; first, starts with the knowledge about skills components in gymnastics; second, count on the time that must be provided for training; third, consider the movement development system to determine suitable activity; fourth, create modification for children who experience difficulties; fifth, develop cognitive and affective ability; last, create a structured learning environment.

The instruction will be easier if all schools and grades can be identified. Then, perform with standard curriculum and a detail learning plan. The evidence shows that learning situation have indistinct similarities and differences (Wernner, Williams, and Hall, 2012).

Children have opportunities to learn and act in physical condition. Children learn how to collaborate by sharing space and tools with the others. Children also know how to appreciate the others' differences. Gymnastics have to provide opportunity to be successful together through interpersonal communication. Children learn how to play with others and cooperate without judging their gender, ethnics, and level of skills. Additionally, they learn how to treat other with respects and solve the problems with good manner. When children are bound in gymnastic activities, they can enjoy their participation alone or with the others, then transfer positive feelings. As children who fulfil the competencies in gymnastics, they overcome simple skills and ready to challenge for harder task. For example when creating a sequence of movements based on the level of skills development, they can show their work on the task as self-expression tools.

Psychomotor field provides the developments of gymnastic skills and fitness. The core of this terms is that pre-experience must improve the basic skills appropriate with the movement task. Start with simple task and increase to the more complex and difficult ones. Several basic skills, for instance, displacement with walking or running, balancing, and rolling.

Learning concepts on body awareness and spatial can help children to develop any movement responses in order to challenge or do the tasks. Most of the children learning in early control level. Learning experience have to transform the skills to be more efficient, effective, and easy to be adapted with simple condition. Practically, the children will walk, jump, roll and balance focusing on individual skills then move forward into simple skills sequence.

In cognitive area, gymnastic learning is practical in developing higher order thinking. Children try to do basic skills with higher ways of thinking. The assignments must be oriented toward the process of problem solving in promoting the understanding and ability to apply, analyze, synthesize, and evaluate the movement. For example, an order to be balance oriented in the fulcrum field and center of gravity. Then, let them do the balancing with variety of center of gravity from the lowest to the highest gravity. Then ask them, "Which one is balance? And why?" As a teacher, you can give an order to your students to create a sequence of movement using each of their body as three axis rotation. Gymnastic program must provide opportunity for the children to

do the movement effectively and understand the movement.

2.2 Portfolio in Terms of Gymnastic Quality Improvement

Gymnastic learning depent on physical education (PE) learning. PE is known as teaching style such as commanding, reciprocal teaching style, self-examination, guided findings, and findings (Pangrazy, 2006). Instructional system thrives on PE needs a purpose established in instructional program which is formal, direct, and strategic (Metzler, 2005). Portfolio as alternative assessment can be used to increase students' skills (Klicher, 2010). On the other hand, portfolio become tools to repair the way of teaching, which can be defined as assessment for learning (AFL) and as a tool to repair learning process which can be defined as assessment as learning (AAL).

Portfolio is a kind of personal information similar with notes and documentation as personal achievement in education. Portfolio for playground, elementary school, junior high school and senior high school as the collection of results and students' personal achievement. After documents had been collected, then the documents were selected, and at last personal reflection was created. At the end, notes on the results of activities must be assessed and this research was considered as the alternative assessment.

Portfolio is a form of continuous assessment, systematically gathering information or data on the results of person's work. All of the students' learning outcomes (test results, individual assignment results, practicum results or homework results) were recorded and organized systematically. Akhmad Sudrajat said that a collection of students' work, as a result of the implementation of performance tasks, determined by teacher or students, as a part of an effort to achieve learning goals, or competencies specified in the curriculum. (https: // akhmadsudrajat. wordpress. com / 2008-08-08 / portfolio-assessment /)

Portfolios are the systematic collection of student work from time to time that show progress, achievement, and effort in one or more areas of learning (Graham, Holt, and Parker, 2010). A portfolio can measure one or several learning objectives. The portfolio is full of power, because it can help students learn what they are learning. Portfolios give students opportunity to share responsibility in gathering evidence of what they have learned. Portfolios are the students' efforts in learning movement skills in physical education through self-directed planning, and/or collaboration with teachers or other students to achieve learning objectives, and it can be defined as mastering skills. The process includes how to learn or master the skills and efforts to solve problems in learning or mastering these skills. Then, the process is reported as the students' works. The activity report includes the process of learning movement with all its problems and reporting the results in a form of report paper for assessment. From the task which is planned systematically and structurally, it provide the students with opportunity to do repetitions (drill) of the material in gymnastics and find ways to learn it before solving the problema. The teacher then evaluates the portfolio report.

2.3 Dificulty in Learning Gymnastic

Learning problems are problems that arise and affect learning activities. There are several factors affecting the students to experience learning difficulties both from internal and external (Abu Ahmadi, 1991).

2.3.1 Internal Factors

a. Physiological factors, physical causes:

1) Due to illness. Someone who is sick will experience physical weakness, so the sensory and motor nerves are weak. As a result, stimuli received through the senses could not be transmitted to the brain. The more painful it was for a long time, his nerves got weaker. Therefore, he could not go to school for a few days, which resulted in him falling behind in learning
2) Because it's not healthy. Unhealthy children could experience learning difficulties because they are easily tired, sleepy, dizzy, lack of enthusiasm in concentration, have disturbed thoughts. Because of these factors, the acceptance and response toward the lessons were lacking. The brain's nerves were not able to work optimally in processing, managing, interpreting and organizing learning material through its senses. Commands from the brain that go directly to the motor nerves in the form of speech, writing, the results of thought become weak as well.
3) Because of disabilities: a) Minor bodily disabilities such as lack of hearing, lack of vision, psychomotor disorders. b) permanent (serious) bodily disabilities such as blindness, deafness, mute, loss of hands or feet, as well as

mild bodily disabilities such as hearing loss, vision loss or psychomotor disorders.

4) Obesity. Being overweight makes it difficult for children to move swiftly.

5) Psychological factor. Psychological factors also affect the appearance of students, including:

a) Motivation according to Leohr in Komarudin (2016) is energy that makes everything work and function. Thus, when someone having motivation, that someone will be compelled to do something in accordance with their goals they want to achieve. Self-motivation comes from within oneself as well as from the outside.

b) Confidence according to Saranson in Komarudin (2016) is a feeling which contains the strength, ability and skills to do and produce something based on confidence for success. Thus, in every performance self-confidence is really needed. However, it must be in a proper measurement, and students should not be over-confidence since it could actually endanger the students as they tend to be less vigilant.

c) Talent according to Sardiman (2011) is the ability of humans to do an activity and has existed since humans exist. It means that each person usually has a different talent they brought since their birth.

d) Abu Ahmadi (1991) stated that the absence of a child's interest in a learning will lead to learning difficulties. Learning with no interest may not be in accordance with their talents, needs, skills, and the special types of children. As a result, it caused many problems for them. The presence or absence of interest in a lesson could be seen from the way the child followed the lesson, completed notes, their attention towards the lesson.

2.3.2 External Factors

a. Family Environmental Factors,

1) Parents. According to Eveline and Hartini (2011), in learning activities a child needs encouragement and understanding from parents. The role of parents in the learning process is very crucial because the hours spend at home are longer than the children's hours spend at school. Parents are expected to be able to help when children get into trouble as well as provide motivation when children grew weaker in learning interest and so on.

2) The atmosphere of the house. According to Eveline and Hartini (2011), the lack of harmony in the relationship between family members lead to an uncomfortable learning atmosphere for children.

3) The economic situation of the family. Abu Ahmadi (1991: 83-84) argues that the lack of economic conditions can lead to a lack of learning tools, lack of funds provided by parents, which resulted in having no good place to study. While the economic situation of the family is excessive, the children will be reluctant to learn because he spends too much time to have fun. Maybe he was spoiled by his parents, in which the parents would not have the heart to see their children learn with difficulty. Those circumstances can interfere or hinder the progress of learning.

b. School Factor

1) Teacher. The teacher can be a reason of learning difficulties, if:

(a) The teacher is not qualified (Abu Ahmadi, 1991) either in acquiring the methods used or in the subjects he/she teaches. This could happen because the one they teach is not appropriate to the point of lacking of mastery, especially if they lack of preparation. As a result, the way they explain is unclear and difficult to be understood by the students.

(b) Teacher-students relationship is not good (Abu Ahmadi, 1991: 84-85). This could be due to the nature and attitude of the teachers that are less favored by the students such as: rude, easily angry, cynical, arrogant, annoying, snapping and so forth.

(c) Teachers demand for a high standard beyond the students' ability (Abu Ahmadi, 1991). It affects the students to feel depressed because what is given or taught is not in accordance with the abilities in the group, causing only few students to succeed in the learning.

(d) The teaching methods applied by the teachers can cause learning difficulties.

2) Infrastructure facilities that are incomplete or in poor condition causing the presentation of lessons to be not decent. Mainly for practical lessons, the lack of field tools would cause difficulties in learning. Many technological advances have led to the development of learning tools / education, owing to the tools that used to be non-exist before but become exist nowadays. The emergence of these tools will determine (Abu Ahmadi, 1991):

a) Changes in the teaching methods applied by the teachers,

b) The depth of knowledge in students' thinking,

c) In meeting the demands from various types of children. The absence of supporting tools affecting the teachers to be less creative which causes their teaching methods did not change and resulting in boredom and even difficulties for students to accept and participate in learning.
3) The condition of the building (Eveline and Hartini, 2011) especially in classrooms / spaces for students' learning. The condition of this building will affect the learning process of the students. At present, with the large number of students, more spaces are needed, if the room / space is insufficient, students will be obstructed in following the learning process carried out by the teacher. Moreover, the damaged building conditions can endanger students and make students feel uncomfortable.
4) Curriculum that is not in accordance with the condition of education in Indonesia and the current state of students will create difficulties for students to follow it. Thus, teachers / educators will have difficulty to implement the curriculum. An improper curriculum (Abu Ahmadi, 1991) includes:
a) Materials that are too high to be achieved.
b) The distribution of material is not balanced (there are fewer lessons for the first class compared to the higher classes)
c) There is material discrepancy.
The abovementioned aspects will cause learning difficulties for the students. Conversely, if the curriculum fits the needs of the students it will bring success in learning.
5) Learning Time is also very influential in a learning process. Learning in the morning, afternoon and evening has each advantages and disadvantages. The best time to carry out the learning process is in the morning. It is because during the day in a hot weather condition causing the students to be less focused, sleepy, hungry and so on. It also applied in the afternoon as well, since the students are tired of doing activities from morning till afternoon, if they are given instruction in the afternoon the results are not maximum. Morning learning is more effective than studying at any other times because the mind and body are still fresh and in good condition.

3 RESEARCH METHOD

3.1 Research Design

The methods applied in this study were survey and interview. The population and subjects of this study were PJSD FIK-UNY students who were in charge of the basic movement gymnastic lecture in second semester in 2018.

3.2 Research Subject

All subjects were from PJSD FIK UNY students. Random sampling technique was used with the total subjects of 194 students involved in this study.

3.3 Instrument and Data Analysis Technique

Interview guideline was used as an instrument to collect the qualitative data using Mile and Huberman method. The data were analyzed using qualitative data analysis technique interactively and continuously until it was completed, so the data were saturated. The steps in data analysis including data reduction, data display, and conclusion.

Reducing data could be interpreted as summarizing, choosing crucial data, focusing on important aspects, looking for patterns and themes. By reducing the data, it provided clearer picture, and made it easier for researchers to conduct the next data collection.

Data display in qualitative data analysis were presented in short description, chart, relationship between categories and flowcharts. Sentences were arranged logically and systematically, so that the readers easily understand various things happened in the study.

The conclusion was a new investigation and never happened before. The investigation was still indistinct and becomes clear after it was being studied. Conclusions needed to be verified to be impressive enough and were able to be answered.

4 RESULT AND DISCUSSION

Portfolio obtained information about changes in students' learning behavior on a constant basis. Portfolio was always carried out in a learning context and inseparable from the imminent situation. The portfolio had a very strong psychological foundation from strong learning theory known as Spiro and Bruner's learning theory, and Gardner's learning model, which developed verbal intelligence and mathematical logic, and also paying attention to other intelligences.

To improve learning, portfolios should be emphasized on the thinking process of the students covered in the contents of the portfolio (Reeves,

2010). The portfolio presented insightful material into students' gymnastic movements in their learning process, way of thinking, their understanding about gymnastic movements, ability to express their ideas, and attitude towards gymnastic activities. It also talked about thinking process and solving problems in learning gymnastics.

Based on data obtained by the researchers, it was found that the difficulty factors in learning gymnastic skills were categorized in physical factors and psychological factors. Physical factors including strength, power, flexibility, and harmonization of movement. Psychological factors including self-confidence. There was no single sport that could be carried out properly without involving the support of someone's physical quality. Physical qualities such as strength, power, and strength were essential in sports such as athletics, games and other sports. Similarly, the quality of strength was considered to be needed by almost all branches of sports that existed. The idea of the importance of physical quality in supporting the success of the skills was also applied in the branch of gymnastics.

A person was considered to not be able to do gymnastic skills properly if he did not possess the physical quality required in the movement. Depending on the weaknesses, the implementation of the skills performed would show imperfections. For example, if the student did not have enough arm strength, he certainly would not be able to do a handstand, etc. Therefore, it was important that the teacher realized that for the success of gymnastic learning in school, students needed to be equipped with a set of physical qualities required to do gymnastic skills.

Strength is a very important element in sports activities, because strength is the driving force and injury prevention. Moreover, strength plays an important role in the components of the condition of other physical aspects such as power, agility and speed. Therefore, strength is considered as the main factor in creating optimal performance. The stronger the muscle owned by someone, the ability in holding the weight would also get better. Especially in floor gymnastics in doing Stut (back extension) movements. Muscle strength was very important in the implementation of Stut (back extension), particularly the power of arm muscles which functioned to push the legs up and hold the body when the body was in handstand position. Besides the usual benefits, such as good physical functioning and better appearance, the development in strength also provided direct benefits in gymnastic performances including (Mahendra, 2000):

1. Safety: A stronger gymnast were able to prevent the occurrence of a dangerous injury when they fell compared to the weaker gymnasts.
2. Ability: Many gymnastic movements could not be displayed without more power.
3. Supports other abilities: Abilities such as speed, endurance, power, etc. were to some extent depended on the power or strength.

Flexibility is the body's ability to do exercises with a large or broad amplitude of movement. In other words, flexibility is the ability of the wrist / joints to be able to move in every directions optimally. According to Sajoto (1995), flexibility is one's effectiveness in adapting to all activities with a great body stretch . Furthermore, a flexible person is a person with a wide range of movement in their joints and has elastic muscles (Harsono, 1988). One of the factors affecting flexibility is muscle elasticity. People with a stiff muscle elasticity tend to have limited joint space.

In addition, confidence is an important aspect for students to achieve the highest achievements. Athletes in general tend to experience tense situations (stress) more often compared to the non-tense feeling (Cik Den Patra, 2006). If the tense continues, it would cause anxiety for the athletes. To reduce anxiety, confidence is needed. There are many aspects that could increase an athlete's confidence. The most frequent aspect is the success of previous achievements.

5 CONCLUSION

The difficulty factors in learning gymnastic skills in this study were categorized in physical factors and psychological factors. Physical factors include strength, power, flexibility, and harmonization of movement. Meanwhile the psychological factors include self-confidence.

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