



Development of mutual adaptation model PE teaching in Indonesia

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Abstract

Background and purpose: This study aims to develop a Mutual Adaptation Model of teaching of Physical Education subjects in junior high school. The model used in this research is model development (Berman & McLaughlin, 1976; Snyder, Bolin & Zumwalt, 1992). The research method used is interview.

Method: This study employed a case study approach to the investigation of eight different schools.

Result: Based on the interview, the Mutual Adaptation Model teaching is better used by teachers in schools. The Mutual Adaptation Model has several advantages to be implemented optimally as a teaching model in Physical Education subject. There are several things from the Mutual Adaptation Model that need to be further developed, that is, the concept of teaching corresponds to the students' ability, curriculum, infrastructural, the state of the environment and improve learning students outcomes. Teachers to be more creative in teaching and so students can do this activity well, effective, efficient and fun.

Conclusion: This Mutual Adaptation Model can provide an appropriate teaching model to be used so that the objectives of Physical Education can be achieved.

Keywords: mutual adaptation model, teaching, physical education (PE), junior high school

Introduction

Movement is one of the fundamental needs for students, with the movement that they express what is in his mind, including his emotions, or anything he wants. Movement becomes very instrumental to students that can interact with people who are around him, ranging from his parents, his brother, and especially with his peers. When interacting with peers, they usually actualize themselves in the form of games that they make their own rules, from group games to individual games. Unwittingly and indirectly they have learned, especially learning the motion itself.

Students in junior high school dominate their daily activities in the form of activities that they play themselves until the activities are deliberately adapted in this case is the teacher. In the preparation of these teaching activities, teachers usually use a reference in the form of a curriculum that has been prepared. In the acculturation of teaching in junior high school is usually the form of activities undertaken still packed in the forms of the game, the power of thought and movement skills. Teaching plans that have been composed is to be a teaching material for teachers or accompanying students at school. One of them is PE, however, based on interviews that have been done on some PE teachers in junior high school, it is said that teaching in school has very distinctive characteristics so that the teacher must really know what is in the student's self. In PE teaching, a lot of complaints found by teachers, especially when students do not want or do not actively follow the activities that have been determined. Reactions displayed by the students include; the reason for fear, silence, separation from the group, and some of them doing their own activities according to what they like. Faced with such circumstances,

what teachers do should be able to accommodate what all students require without exception. Teachers should try to develop an interesting learning model that can inspire students to follow the learning activities. One of the models that teachers need to do is the Mutual Adaptation Model, the model is expected to accommodate the diverse needs of students in schools.

a. Mutual adaptation model as a teaching model

Mutual Adaptation Model is a model of teaching for teachers in schools whose development is based on the theory of conformity of students and school environment. This model was first created by a researcher from the United States that is (Berman & McLaughlin, 1976) [5]. This model is implemented in general in America. The characteristic of this model is to emphasize the activities raised by the students themselves and emphasize the modification of students' learning according environments at the level of their development and the role of physical activity in absorbing learning concepts and according to their abilities. Then it is also explained that the Philosophy of the Mutual Adaptation Model is to build the idea that the development and mindset of students differ from adults because they are not adults. Mutual Adaptation Model states that there should be equal rights of students, so students will learn to develop themselves into adults, but still with guidance from teachers.

According to Berman & McLaughlin (1976) [5], who presented for the first time an overall view through his research that discussed that Mutual Adaptation Model is better used in schools in planning lessons such as their skills, knowledge and attitudes. In all dimensions, teachers in schools using the

Mutual Adaptation Model in teaching have relatively better abilities, such as a study that former researchers have done. The teacher feel better results as well as positive interactions in the teach. Students displays good interactions as well with social environment as well and to his friends. From the description and the above statement can then be described that Mutual Adaptation Model has many advantages compared to traditional model in teaching. Below we can illustrate the table on comparison of Mutual Adaptation Model with traditional

teaching model. The other factors to the Mutual Adaptation Model is to provide the concept that has been given by the teacher in the school to be applied students in their environment. Mutual Adaptation Model are provided for students in order to enable activities for them to be able to solve them because of the wide range of equipment available or used during the very limited teaching of the students. In this case to carry out the teaching becomes better and very liked by students.

Table 1: Comparison of Mutual Adaptation Model in teaching with conventional/traditional teaching model.

| Conventional/Traditional Model | Mutual Adaptation Model |
|---|---|
| Using equipment and regulations standard. | Using equipment modification appropriate |
| Students are difficult to get skill because the rules and size are not their ability. | Level of difficulty can master according to students ability in appropriate PE subject. |
| Boring, making students not able to master skills in the learning. | Students feel happy, joyful, an competitiveness and student high learning motivation. |

Source: Adaptation by Suharta (2011) ^[41, 45].

From the table above can be seen a striking comparison between Mutual Adaptation Model in the implementation of teaching with traditional models. Based on the opinions of Donahue, Gillis and King (1980) ^[12] and Basuki (2011) ^[4], it was stated that the Mutual Adaptation Model can develop good character and good interaction between teachers and students in the classroom teaching process. Jewett, Bain and Ennis (1995) ^[21], Susan (2011) ^[47] and Ihsan and Hasmiyati (2011) ^[17], also stated that the Mutual Adaptation Model can improve student learning outcomes, therefore teachers should have creativity by using Mutual Adaptation Model to assist the teaching process in school.

Berman and McLaughlin's opinion (1977) ^[6], stated that the life path of students through a sensitive period at a young age then Mutual Adaptation Model in this period students have a high ability to learn and adapt from the surrounding environment. By this time the students are very easy to accept something new. The Mutual Adaptation teaching model can be used for the teachers so that teachers can maximize their teaching by introducing materials, tools and activities specially designed according to their ability to students and also to stimulate student intelligence. Encouraging students to focus on a particular activity will make it reach its optimum abilities in an environment where comfort, discipline, and pleasure are emphasized. Spontaneously the pleasure of learning is revealed when students are given freedom within certain limits to determine their desires. A teacher in the Mutual Adaptation Model should be trained as a facilitator and facility in class and always ready to assist and direct students. Their goal is to stimulate students' desire to learn and then direct them with their natural desire to learn and become independent. Each student will learn by activity in the game and learn to understand according to his unique and dynamic needs and abilities (Reiser *et al.*, 2000) ^[35].

Any activity in the classroom, the Mutual Adaptation Model has specific benefits and objectives. All things that have been prepared can be seen and touched by the students. All equipment are made by teacher in a simple size according to student size in easy to use. A good Mutual Adaptation Model has a good and productive environment where the student's joy and excitement will arise. In specially created

environments the students' freedom, responsibility, social and intellectual development spontaneously develops well.

For example in teaching modified all things related to teaching, such as facilities and infrastructure, the learning process students are faced with a comfort where at the time will perform activities they can use the appropriate tool, and students do to learn more comfortable. If there is something that is not appropriate then the role of teachers is very important to make Mutual Adaptation Model in order to improve their teaching in the classroom. It can also be illustrated that one form of play performed by students with the Mutual Adaptation Model seeks to teach students a sense of kinship and helps them to coexist with others. By forming bonds between parents, teachers and students. The Mutual Adaptation Model seeks to create an environment where students can learn to be self-reliant, to be part of the family so they can love the younger, learn from the elder, trust others. The Mutual Adaptation Model differs not because the subject matter is used in the classroom only. But the class is the place where students want to be because the class is the second home for those who are comfortable (Rachel & Navarrete, 1986) ^[34].

b. Mutual adaptation model in PE

Saryono (2010) ^[43] and Bahagia (2010) ^[3], stated that we can find various activities in the Mutual Adaptation Model in the students' daily activities through the PE curriculum subject. Students will develop an understanding of the importance of physical fitness, health and the factors that support the students' personal commitment to physical activity and to understand healthy lifestyles, developing basic movement skills they have for fitness in physical activity in their lives. In the Mutual Adaptation Model PE teaching is very important to develop students' health and student's development especially to learn new skills. Research conducted on the development of the nervous system shows the importance of providing physical and creative experiences to optimize brain development (Xu *et al.*, 2010; Khodadoost, Bashbarat & Valizade, 2011) ^[50, 25]. Physical experience (activity using large muscles), when viewed from the comparison between the traditional model and Mutual Adaptation Model of

teaching that has been presented above is very prominent, therefore in this study the Mutual Adaptation Model will be attempted to be developed towards PE in accordance with good curriculum content in junior high school.

If we look at the content of PE curriculum in junior high school we will find a variety of activities. Among games and sports, development activities, rhythmic, aquatic, gymnastics, health and fitness. Various kinds of activities then we try to pack into a model that is based on the teaching Mutual Adaptation Model. One of the teaching models in the Mutual Adaptation Model is a student-centered teaching model according to his ability, but the teacher still acts as a control in the student's activities (Darst *et al.*, 2014) ^[9].

The following will explain the Mutual Adaptation Model of PE of teaching in junior high school, while the explanation for the Mutual Adaptation Model is as follows; 1) In the Mutual Adaptation Model are forms of games or other activities in the subject of PE, which is certainly in accordance with the content of the existing curriculum and in accordance with the ability of students and the state of the school environment. 2) Form Mutual Adaptation Model of this teaching is to replace the forms of the game with the form of real physical activity, such as team and individual game, while the forms of game can be a game by using the cardboard, balls and the ropes. 3) Teachers are only involved to provide guidance on how the tools are played, this just a small sample, then let the students be creative on their own, to treat such tools as well as to give students freedom to choose the type of game be pleased.

With the record of all types of games provided it can all be utilized by students well without any dominance in one form of the game. Can also divide the students into several groups according to the number of games available, then students are given the freedom to play in a predetermined place when the specified time has finish, then the students are given time to try another form of game, 4) the next stage of control in this case mainly Mutual Adaptation Model gives the reinforcement of teachers successfully to make creativity. Students perform and cooperate with his friends in doing a form of game and if there are students who are considered lack of motivation, courage, confidence, then the teacher is expected to quick to react to provide motivational and strengthening creativity, 5) one important thing to be considered by a PE teacher students will usually be more motivated to do a game if in it contained modification, this is it actually delivered from the Mutual Adaptation Model in teach. Therefore in this activity is expected a teacher able to arrange various form of game or other physical activity which a modification, because this is activity is expected student will become more active in moving, play and interact with his friends besides that also student will think and trying to interpret every activity that exist in relation to solve the problems encountered and the social values contained in the activity.

c. Content of curriculum PE in Indonesia

The learning in junior high school is directed to the development of students, both spiritual development and physical development, in order to achieve a good and healthy human being. Furthermore, it is conveyed that at the age of junior high school, students' physical condition undergoes rapid changes. Within a few months his weight and height

were very rapid, his motor, his muscular coordination, his physical dexterity showed striking advances. In the implementation of their physical development in various forms and types of activities. Such general objectives may be further detailed as follows; a) Developing rough motor skills efficiently, b) Strengthening and stimulating the growth of muscles and skeletons, c) Thickening resistance to disease, d) Improving posture and coordination of muscles, e) Fostering physical skills, f) Developing positive feelings, g) Maintaining good mentality, h) Developing intelligence, fantasy and initiative.

From the above objectives and then formulated the forms of activity that is the level of ability expected to be achieved (Ministry of Education Indonesia, 2012). Meanwhile, according to the Ministry of Education and Culture (2013) ^[24], one of the scope of PE delivered at all levels of education (Primary and Secondary School) are as follows; 1) Games and sports include, traditional sports, games, motion explorations, locomotor and non-locomotor and manipulative skills, athletics, casings, football, basketball, volleyball, table tennis, tennis courts, badminton, and martial arts and other activities. 2) Development activities include: body attitude mechanics, physical fitness component, and posture shape and other activities. 3) Gymnastics activities include: simple dexterity, dexterity without tools, dexterity with tools, and gymnastic flooring and other activities. 4) Rhythmic activities include: free movement, morning gymnastics, SKJ, and aerobic exercise and other activities. 5) Aquatic activities include: water games, water safety and swimming. 6) Out-of-class education: picnic work, environmental introduction, camping, exploring and mountain climbing. 7) Health education includes; the planting of a healthy living culture in daily life, especially with regard to body care to stay healthy, nurturing a healthy environment, choosing healthy foods and drinks, preventing and treating injuries, arranging appropriate rest periods and taking an active role in first aid activities.

Problem statement

In fact teachers are entrusted to teach physical education subjects but teachers still lack the understanding of the models used in learning that require students to be physically and creatively active (Destani, 2011; Mutohir, 2011; Gustiawati, Fahrudin & Syafei, 2014) ^[11, 29, 15]. Most teachers still do not know the teaching model in curriculum implementation so that teaching is not effective. Teachers have not yet understood the teaching model to better perform the process of teaching PE in schools (Sucipto, 2011; Qomarrullah, Furqon & Kristiyanto, 2014) ^[40, 33]. Especially the most relevant is the Mutual Adaptation Model by making modifications used in PE teaching (Ihsan & Hasmiyati, 2011; Januarumi, 2013; Darmadi, 2015) ^[17, 20, 8]. In Indonesia, PE teachers should apply the Mutual Adaptation Model or make modifications in the application of PE curriculum in junior high school (Supriyanto, 2013; Ardana & Darmawan, 2013) ^[46, 1]. This is in line with the National Sports System Number 3 of 2005 and the Regulation of the Minister of Education No. 24 of 2007 on Teaching Materials and Equipment at School (Saryono, 2010; Kusbani, 2012) ^[43, 26].

Based on the description, the diversity of models in the implementation of PE learning should now be done. Teachers

should apply the Mutual Adaptation Model to produce more precise learning to help improve the role of teachers in the implementation of PE teaching. Teachers need to focus on the teaching process of PJ curriculum in schools in Indonesia requiring modification or Mutual Adaptation Model (Supartono 2004; Curriculum and Book Center of the Ministry of Education and Culture, 2013; Susana & Wibowo, 2014) [42, 24, 48].

According to experts, the use of the Mutual Adaptation Model can benefit students and teachers in teaching with modification as a model in the application of PE in schools (Jewett, Bain & Ennis, 1995; Sridadi, 2009; Iffah, 2012) [21, 49, 16]. In the implementation of PE in schools, teachers are encouraged to improve the quality and limitations of teaching materials and equipment by modifying (Indarto, 2011; Ihsan & Hasmiyati, 2011; Pratomo, Hanani & Setyawati, 2013) [18, 17, 29]. Mutual Adaptation Model in PE teaching is very important so that students get ease and get better teaching result (Suharta, 2011; Fajri, 2012; Mahmud, Mile & Hidayat, 2014; Priakusuma, Hasyim & Husin, 2015) [41, 45, 14, 28, 31].

Based on the above suggestions, this research tries to explore and understand the Mutual Adaptation Model in the implementation of PE in school. The implications of this Mutual Adaptation Model can contribute to new knowledge in school PE subjects in Indonesia. In addition, this research is able to provide information to teachers of PE and advice to curriculum makers of PE to formulate needs in teaching and learning processes to incorporate the Mutual Adaptation Model into junior high school.

Material and method

To know the effectiveness development of Mutual Adaptation Model in teaching PE, the subjects in this study are PE teachers, amounting to 8 teachers. In this research, information about effectiveness development of Mutual Adaptation Model in PE teaching is obtained by using interview. Interviews conducted to teachers are given shortly after the PE teacher provides material PE in classroom. In the interview the teacher asked for their views or opinions according to the question items posed by the researcher. The question posed in the interview contains six items so the teacher does not need much time in the interview process.

This research was conducted with qualitative approach. All research activities are directed to exploring development the Mutual Adaptation Model for the development of PE teaching. The data collection is done by interview (Sanafiah, 1990; Arikunto, 2006; Iskandar, 2008; Emzir, 2010; Sugiyono, 2012) [36, 2, 19, 13, 44]. This research is focused in Makassar, Indonesia. The related schools teachers are; SMP 1 (Junior High School 1), SMP 2, SMP 3, SMP 4, SMP 5, SMP 6, SMP 7 and SMP 8 Makassar. The selection of these schools with consideration of school variation based on teacher orientation, completeness of facilities, and school environment.

a. Examining the validity of interview

In an attempt to verify the validity of the interview instrument, research question or instrument validity by expert PE curriculum. This validity is required to ascertain whether the instrument used accurately measures the concept (Creswell, 2011) [7]. Thus, this study uses the content of validity to

determine which items are appropriate for measuring the development Mutual Adaptation Model implementation of PE subject. Thus, experts check items related to appropriate sentence structure and terminology.

b. Sample and population

The population sample for this study consisted of a PE subject teacher who taught at a junior high school in Makassar, Indonesia, a total of eight PE teachers identified as a population. Researchers have gone to the eight schools mentioned above and met face-to-face with all the respondents. Of the eight respondents, all respondents were willing to cooperate and agree to be the subject of this study. Therefore, researchers interviewed eight respondents for the purposes of data collection. Eight respondents successfully completed all the interviews given for this study. After completed instruments by eight of the sample of the PE subject teacher, so this proportion is considered sufficient to represent the population in Makassar, Indonesia.

As stated by Creswell (2014) [7], the minimum sample obtained from qualitative studies is, at least one of the study population. The sampling procedure as mentioned above, this research also uses purposive sampling to select the sample of this research. This type of purposive sampling was chosen because it is easy to manage and meets the requirements of the research sampling method (Jones, Brown & Holloway, 2013) [22]. This sampling method can also be used on population who are willing to cooperate with researchers. In essence, the sample is also considered the homogeneity of population consisting of similar teachers who became the PE subject.

Result and discussion

From the results of a study conducted by eight PE subject teachers, the whole teacher said that the Mutual Adaptation Model was eligible and better applied to PE subjects for junior high school students in Indonesian schools. The results and discussion of eight PE subject teachers in the development of the Mutual Adaptation Model as a follows;

1. The teaching condition of Mutual Adaptation Model of PE is very well done in accordance with the condition of school, curriculum, students, means and infrastructure. Government policy especially in PE subject requires Mutual Adaptation Model for improvement learning, need special attention especially teaching model related to teacher ability and necessary infrastructure (Marsh & Willis, 2007; Saputra, 2010; Ihsan & Hasmiyati, 2011) [27, 37, 17].
2. Use of the Mutual Adaptation Model of PE teaching can evolve toward better and more complete student engagement. Therefore, the Mutual Adaptation Model of teaching is well used to improve teaching and learning process that can improve learning Students outcomes.
3. Mutual Adaptation Model of teaching can also be used as an alternative to improve learning outcomes in PE subject. The model was developed by Rachel and Navarret (1986) [34] and Karip (1996) [23], saying that the Mutual Adaptation Model is enabling teachers to be more creative in teaching and students learning with impressive and accompanied excitement. In addition, Jewett, Bain and Ennis (1995) [21], Sridadi (2009) [49] and Iffah (2012) [16], revealed that

teaching and learning outcomes can be effective, efficient and appealing. Effective teaching can be measured from the level of student achievement of the indicator. Efficient learning can be measured by comparison between the effectiveness and the amount of time students spend or the amount of costs used in learning. The attractiveness of learning can be measured by observing students' inclination to keep learning.

Based on the teaching outcomes conducted by the eight PE teacher, the Mutual Adaptation Model teaching declared feasible and better implemented in PE subject by junior high school students in school Indonesia. The study found that the quality of PE teachers using the Mutual Adaptation Model in schools was classified as teachers knowing how to develop the Mutual Adaptation Model in the subject of PE. The Mutual Adaptation Model makes teachers proficient and successful in PE teaching. The criteria of success of teachers are the Mutual Adaptation Model will be a good teaching model in PE curriculum.

Conclusion

This study aims to develop a Mutual Adaptation Model of teaching in the implementation of PE in junior high school which is the application of teaching models. Based on the teaching outcomes that have been done, the Mutual Adaptation Model of teaching is quite good and can be used based on the state of the school environment and student abilities. In relation to this, the Mutual Adaptation Model of this lesson can be used as an alternative to teaching PE so that the teaching and learning process can be active, creative, effective, and fun. In addition, Mutual Adaptation Model in teaching can also be used as an alternative to cultivate student's ability in PE subject.

Playing is a very basic requirement for students, students can actualize himself which later can improve the ability, both intelligence, affective, social life and especially psychomotor ability. In school students can play primarily in the packaging of PE in order to generate pleasure and confidence in them. Thus teachers need to make on forms of play that can accommodate the interests or needs of students is playing as a medium to develop various abilities that exist in themselves. And of course the forms of play are in accordance with the contents of the existing curriculum, so the teacher is not too worried about going off the rules that have been set. The Mutual Adaptation Model is one of the models of choice to overcome the shortcomings equipment's experienced by teachers during the teaching process of the students. It is expected that this Mutual Adaptation Model are provides a choice of teaching model forms that are eligible to use.

This research gives a good implication for policy makers. First of all, the policy makers must ensure that teacher must be well proficient in order to implement a policy in subject PE in order to ensure that the teaching process is going according to Mutual Adaptation Model (Ihsan & Hasmiyati, 2011) ^[17]. In addition, the implementation of PE subject in this case teachers should be prioritized to make modifications or make Mutual Adaption Model. Thus, policymakers should recommended Mutual Adaptation Model in teaching PE which can be done throughout the semester and throughout the years.

Based on interviews, Mutual Adaptation Approach occurred when the teacher saw her students being successful with the good learning outcomes. By the teacher, the Mutual Adaptation Model in the teaching and learning process helped what appeared to be a very challenging task and however still within the grasp of their students. The Mutual Adaptation Model helped make explicit the new task demands for explanation and evidence and helped students succeed in learning.

Recommendation

There is inadequate research in Indonesia especially in Makassar about teaching model so that this research can be extended to Makassar or all of Indonesia. This investigation should be undertaken periodically to improve the teaching model in the school.

Limitation of research

The sample size is limited to eight PE subject teachers because this research is a qualitative study as well as limited funds and time constraints. A small number of study participants mean that the results cannot be generalized to all teachers who teach PE subjects in junior high school in Makassar, Indonesia (Patton, 2015).

Relevant of the study

This development research produces of Adaptation Model in SMP. The results of the model development can be utilized by all parties subject PE in junior high school. This strategy can be used as an alternative for teachers to improve the activity and creativity of teachers in teaching PE subject. In addition, this model can also realize the teaching of PE that is active, creative, effective, and fun.

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