International Journal of Engineering & Technology, 7 (3.30) (2018) 523-528

International Journal of Engineering & Technology

Website: www.sciencepubco.com/index.php/IJET

Research paper

The Development of Experiental Learning Model To increase the Capacity of Teaching of Universiti Teknologi Malaysia in Semarang Indonesian Schools

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Abstract

In education there is nothing more impressive than direct experience, experiental learning is now getting a place in the process of learning in the classroom, experiental learning is the process of making meaning from the direct experience. Based on the experiential learning model, the prospective teachers ofUniversiti Teknologi Malaysia in cooperation with the Universitas PGRI Semarang help each other to improve their teaching skills by learning from teaching experience in other countries, based on this need, the MOU will be conducted between the two universities.

In this research development is done by plomp model with the step that started from the initial assessment, planning, realization / construction, and implementation. With the aim of increasing the capacity of teaching of Universiti Teknologi Malaysia students in vocational high schools in semarang city, eight students taught at SMKN 2 Semarang and SMKN 4 Semarang for 2 months. The sampling technique was taken with random sampling, while data were obtained from questionnaire and interview with students of Universiti Teknologi Malaysia.

Based on the questionnaire, it is found that 92% of Universiti Teknologi Malaysia students are very pleased to be able to participate in the international PPL program in Indonesia. This is because their facilities and culture are similar to those in Indonesia, thus facilitating the adaptation process in the schools in Indonesia, while the questionnaire validation of the instructional design experts and learning materials obtained an average of 86% and 90% . It means that modification of experiential learning model is worthy of use in the process of learning in the classroom. The interviews with students shows: 1) 80% of students found difficulties in language terms in Indonesia as they are some terms different from Malaysia so they finally use English when explaining the word that is not understood by students, 2) 90% of UTM students are very happy to teach in schools in Semarang, 3) 90% of students feel the difference of curriculum taught in Indonesia and that in Malaysia so they need adaptation first.

Keywords: ***development***, *experiential learning, PPL International program.*

1. Introduction

In the development of highly varied model of learning, there is a model of experiental learning that is suitable for international PPL program students in the home country or even overseas because education is nothing more impressive than the direct experience. Experiental learning is now increasingly getting a place in the process of learning in the classroom , because the experiential learning model can process the making of meaning from the direct experience, based on the experiential learning model, the prospective teachers from Universiti Teknologi Malaysia in cooperation with Universias PGRI Semarang work together in improving their teaching ability by learning from teaching experience in Indonesian environment.

In the selection of the development model for the learning model, it is a suitable plomp model in the development of learning model. In improving the capacity of teaching performance, Universiti Teknologi Malaysia students taught at SMKN 2 Semarang and SMKN 4 Semarang for 2 months choosing the appropriate model by conducting preliminary assessment, planning, realization / construction, and implementation. SMKN 2 and SMKN 4 Semarang are two outstanding vocational schools in Semarang. In the initial assessment, they carried out seriously related to how to improve the capacity of apprentices teaching in other countries, by choosing the appropriate model one of them with experiential learning model.

Experiential learning model is a model of learning through students' experience. The experiential learning model gives students the chance to succeed by giving students the freedom to decide what experiences they focus on, what skills they want to develop, and how they conceptualize their experiences. According to Kolb (2005: 193-212), he states that: Experiential learning model is a model of teaching and learning process that enables learners to build knowledge and skills through experience directly. In this case, experiential learning uses experience as a catalyst to help learners develop capacity in the learning process. Furthermore, according to Corbett (2005: 474) experiential learning model is the involvement of students in concrete activities that make them able to experience what they are learning and get the opportunity to reflect on these activities.

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In order to produce a modified experiential model, a good plan is made, one of which is to deepen the material of learning steps with experiental learning, then constructed into well-modified learning steps. While the implementation is done separately in two vocational schools in the city Semarang, it is expected that with the development of this experiental learning model, Universiti Teknologi Malayasia students can be happy to participate in PPL International program in Indonesia. The reason why UTM is chosen as a partner because their cultural facilities and culture are similar to the Indonesian nation so it can facilitate the process of adaptation in the school environment in Indonesia.Then based on interviews with students, it shows: 1) 90% of UTM students go difficulties in terms of Indonesian language because there are some terms that are different with Malaysian because of that they end up using English when explaining words that students do not understand, 2) 80% of UTM students are happy to teach in schools in Semarang, 3) as many as 80% of students feel the difference of curriculum taught in Indonesia and in Malaysia so they need adaptation first.

From the various problems above, it is necessary to develop a learning model in accordance with the culture of UTM students and students in Indonesia, so that what is taught can be absorbed well by UTM students in Indonesia, one of them is through the implementation of experiential learning model.

2. Literature Review

2.1 Exchange Student Program

The student exchange program will provide many opportunities as well as benefits for the students and the college itself. The first is the benefits of education. One of the reasons why students choose to participate in student exchange programs is the learning opportunities provided by the program. In addition to simple things such as the acquisition of credit numbers in the courses of basic courses, students will also gain experience of various acceptance of various ways of learning. They will learn to analyze the things around them with constructive actions and learn how to find solutions to problems in their own way. Students who take the student exchange program are also able to learn a language more than one and will have experience about methods, systems, and learning techniques in other countries. They will also gain access to some courses that do not yet exist in their home country.

The next benefit of student exchange program is personal benefits. In addition to the additional benefits of student education, those participating in student exchange programs will also benefit enormously in the personal level. With the opportunity to develop themselves in new and unfamiliar places, students will have the opportunity to develop their self-awareness as well as their self-esteem in an act that can not be imitated by others who do not have the same opportunity. They will learn to develop the ability to cope with social challenges outside their zone of safety and train themselves to face all kinds of problems in reality. In addition, students participating in student exchange programs must learn how to live and together with a variety of home life at a homestay where they will learn how to express their opinions on what is the biggest problem in life in the country where they study (1).

The next benefit is the long-term benefits. Although student exchange programs only last for one semester or one academic year, students enrolling in student exchange programs will learn the various skills that will stick to themselves throughout their lives. Once a student who has taken an exchange student program graduates from college and starts looking for a job, there is no doubt that many companies will be more interested in students who have been exploring in some countries overseas or in the world. Changes in social changes that occur in students who participate in student exchange programs are easy to recognize. For example, they are more flexible in a variety of foreign situations, such as adaptation of new jobs, training, or public speaking (2).

There are many benefits to be gained and perceived and beneficial in all situations and conditions as graduate students begin to look for work, where the opportunities they gain in participating student exchange programs bring a great deal to those sought by various companies. The graduates will have high communication skills, teamwork, and interpersonal skills. Graduate students who have participated in student exchange programs will also have the motivation, initiative, and also high enthusiasm. They will have the capacity to think critically and independently. In addition they also have the ability of flexibility and adaptation that is high. This plus value can give the addition to the spirit of professionalism and confidence. Besides that, they also have the ability of problem solving, creativity, and IT skills (3).

2.2 The Effecive Teaching Internship Program

The general purpose of any apprenticeship program is to encourage attitudes, behaviors or skills in any way that positively impact the performance outcomes. Therefore, to find out whether the teaching apprentice has been running well, it is necessary to have evaluation activities implemented to identify what needs to be eliminated and what points to be developed (4). Supervisors are instrumental in the process of apprenticeship apprenticeship, where this apprentice program requires a systematic method that can be used to determine what makes student performance less than expected or vice versa. Therefore, it is important to consider the factors that affect the outcomes of this teaching internship program.

There are nine factors that need to be considered and applied so that it will be able to maximize the outcomes of this teaching internship program. The nine factors are the analysis of the need for apprenticeship teaching, teaching apprenticeship methods, apprenticeship apprenticeship, environment and internship facilities, the strengthening of the teaching internship program, the supportive organizational arrangements, the characteristics of the supervisor, the time allocation, and the characteristics of the apprentices (5).

The teaching internship program should be designed in such a way that it is integrated into a broader institutional development program. Furthermore, there is a need for a comprehensive strategy that can be developed while also considering all the strengths and weaknesses of schools and colleges to be able to provide the framework as a material analysis in the future. The skills and knowledge of the students and lecturers should be determined and assessed before the apprenticeship program is conducted so that it reflects current job requirements and qualifications (6).

2.3 The Development of Experiental Learning Model

Learning is the most vital key term in education effort, so without real learning education will never exist. As a process, learning almost always has a wide place in various disciplines related to education. Therein lies the importance of humans as human beings who think to keep learning, whether it is in formal institutional learning and learning from experience or even the future that will be experienced.

The purpose of learning is not solely oriented to the mastery of the material by memorizing the facts presented in the formal learning materials. Furthermore, the real orientation of the learning process is to provide experience for the long term. With this concept, learning outcomes are expected to be more meaningful for students. The learning process takes place naturally in the form of activities of students work and experience. It is not the transfer knowledge from teacher to students anymore.

What kind of learning process can create a learning process that can explore the insights of students' knowledge and can develop meaning so that it will give a deep impression on what has been learned? Alternative learning model that can be used to answer the

problem above one of them is by using experiential learning model.

The proverb says that "experience is the best teacher". Then the same thing has been put forward by Confucius a few centuries ago "I hear what I hear, I know a little, what I hear, see and ask questions about or discus with someone else, I begin to understand , what I hear, see, discus, and I do, I acquire knowledge and skills, what I teach to another, I master ". If the Confucian statement is developed simply, it will get a way of learning in the form of learning by listening will be forgot soon. Learning by listening and seeing will be remembered a little. Learning by listening, seeing and discussing with other students will be understood. Learning by listening, seeing , discussing and doing will acquire knowledge and skills, and a way to master the best lesson is to do. By experiencing learning materials directly, students are expected to further build meaning and impressions in memory.

As with the contextual learning process that connects and engages students with the real world, this model also puts forward the connective knowing model, thus learning is considered an integral part of a life.

2.4 Concept of Experiential Learning Model

Experiental learning theory (ELT), which later became the basis of the experiential learning model, was developed by (7). This model emphasizes a holistic learning model in the learning process. In experiential learning, experience has a central role in the learning process. It is this emphasis that distinguishes ELT from other learning theories. The term "experientrial" here is to distinguish between cognitive learning theories that tend to emphasize cognition rather than affective. And the theory of learning behavior eliminates the role of subjective experience in the learning process (8).

Experiential Learning Model is a model of teaching and learning process that enables learners to build knowledge and skills through their experience directly. In this case, Experiential Learning uses experience as a catalyst to help learners develop their capacity and abilities in the learning process.

Experiential learning can be defined as an action to achieve something based on experience that constantly changes in order to improve the effectiveness of the learning outcomes themselves. The purpose of this model is to influence students in three ways, namely; 1) change the cognitive structure of students, 2) change student attitudes, and 3) expand the skills of existing students. The three elements are interconnected and affect the whole, not separated, because if one element does not exist, then the other two elements will not be effective.

Experiential learning emphasizes the strong desire of within the student to succeed in learning. This motivation is also based on the goals to be achieved and the chosen learning model. The desire to succeed can increase student responsibility for their learning behavior and they will feel able to control the behavior (9).

Experiential learning refers to meeting the needs and desires of the students. The quality of learning experiential learning includes: personal involvement of students, initiative, evaluation by students themselves and the effects that imprint on students.

Experiential learning models give students the opportunity to decide what experiences they focus on, what skills they want to develop, and how they can conceptualize the experiences they experience. This is in contrast to traditional learning approaches where students become passive listeners and only teachers control the learning process without involving students.

Experiential learning is a process by which students construct or craft the knowledge of skills and values from direct experience. The basic principles of experiential learning are as follows:

Learning procedure in experiential learning consists of 4 stages, namely; 1) real experience stage, 2) reflection observation stage, 3) conceptualization stage, and 4) implementation stage.

In the above stages, the learning process starts from the concrete experience experienced by a person. The experience is then reflected individually. In the process of reflection, someone will try to understand what happened or what happened to him. This reflection becomes the basis of the conceptualization or process of understanding the principles underlying the experience experienced and forecasting possible applications in other (new) situations or contexts. The implementation process is a situation or context that allows the application of a concept that has been mastered (10).

The possibility of learning through real experiences is then reflected by re-examining what it has done. Reflected experiences are then rearranged so as to form new insights or abstract concepts that will guide the creation of new experiences or behaviors. The process of experience and reflection is categorized as a finding process, while the conceptualization and implementation process is categorized in the process of implementation (taking action).

According to experiential learning theory, for the learning process to be effective, a student must have 4 abilities (11).

Table1: Students' Capability in the Process of Experiential *Learning*

Capabilities	Explanation	Emphasis
Concrete Experience(CE)	Students involve themselves completely in new experiences	Feeling
Reflection Observation (RO)	Students observe and reflect on or reflect on experiences in many ways	Watcing
Abstract Conceptualization(AC)	Students create concepts that integrate their observations into sound theories	Thinking
Active Experimentation(AE)	Students use theory to solve problems and make decisions	Doing

From the above description, it can be concluded, that experiential learning model is a learning model that focuses on the experience that will be experienced by students. Students are directly involved in the learning process and students construct their own experiences so as to become an educator. Students will experience differently from what they have learned, due to the differences and uniqueness of each learning style of each student.

Meanwhile, according to (7) experiential learning model puts forward two interrelated approaches in understanding the experience of concrete experience and abstract conceptualization as well as two approaches in changing the experience of reflective observation and active experimentation.

There are four stages of learning experience in students (12), namely:

1) Real experience stage (concrete)

At this stage, students do not yet have an awareness of the nature of an event. Students can only feel the incident and have not understood and explain why and how the event occurred.

2) Stage observation reflection (observation and reflection)

At this stage, students are given the opportunity to actively observe the event. It starts by looking for answers and thinking about the events around him. Students develop the question of why and how the event occurred.

3) Conceptualization stage (forming abstrac concept)

Learning styles have been the focus to improve the instructional design and understand how students learn through personality, information processing, social interaction, and instructional preferences. At this, stage students are given the freedom to make observations followed by formulating (conceptualization) of the results of observation (13).

4) Implementation stage (testing in new situations)

At this stage, students are able to apply concepts, theories or rules into real situations. Students practice experiential learning. The experiential learning model is defined as an action to achieve something based on experiences that are constantly changing, it is useful for improving students' activity in the classroom as well as the effectiveness of student learning outcomes. Experiential learning models influence and stimulate students to change students' cognitive structure, change students' attitudes to become active. Besides that the implementation of experiential learning models are also able to expand existing pupil skills, and student learning outcomes more effectively. Moreover, experiential learning model also provides students with opportunities and the freedom to decide what experiences they focus on later (14)

3. Experiential Learning Model Steps

There are several steps of experiential learning model (15,16) are as follow:
1. Preparation stage (preliminary activity)
• The teacher formulates carefully an open minded learning plan that has certain results.
• Teachers provide students with stimulation and motivation.
2. Core Stage (core activity on exploration and elaboration)
• Students can work individually or in groups, in small groups / entire groups in experiential learning.
• Students are placed in real situations, in which students are able to solve problems and not in replacement situations. For example, In a small group, students make cars toy by using pieces of wood step by step in procedural ways instead of telling how to make cars.
• Students actively participate in the experience available, make their own decisions, receive consequences accordingly.
3. Final Stage (Closing Activity)
In closing activities, the entire students recount what is experienced in relation to the subject to broaden the learning experience and understanding of the students in conducting the meeting which will discuss the various experiences.
Based on the above explanation, the experiential learning model emphasizes more on the students to be active in learning and impact on student learning outcomes. Learning takes place in a way that students play a direct role by looking at the students' experience. Students are free to express their opinions during the lesson, and the teacher acts as a facilitator then it is the student who runs the instruction from the teacher. Experiential learning model is not only centered on the learning outcomes, but it also pays attention to the learning process because of the different learning styles of students that result in students' activities in the classroom that are different from one to another.
Learning model certainly has advantages and disadvantages, as well as experiential learning model. Experiential learning has weaknesses and advantages in the implementation process (17,18). The advantages and disadvantages are as follows:
1. Advantages of experiential learning model In the experiential learning model the results can be felt that learning through experi ence is more effective and can reach the expected goals maximally.
2. The weakness of experiential learning model
The weakness of the experiential learning model lies in how kolb explains the theory in which it is still too broad in scope and can not be understood easily.
Based on the expert opinion above, the authors analyze that experiential learning model has advantages that can help students more active in learning and learning outcomes can be seen directly. Because learning through experience is more effectively used and can reach the goal of learning itself. Experiential learning model is learning through the experience of students and the learning is applied to the student's experience in learning materials, so that students will be active in learning and expected learning results will also increase, because of experiencing the circumstances directly.

3.1. Research type of research development is to develop a suitable learning model in exchange student internship program and redesign cooperation internship program between Universitas PGRI Semarang and Universiti Teknologi Malaysia.
3.2. This research method is research development (educational research and development). This is consistent with the opinion of (10) with 10 systematic steps stating that the main purpose of development research is to develop a valid use in colleges associated with the active learning model. The product in question is not just limited to concrete objects, such as textbooks, problems, but including products and procedures such as model or learning strategy (19). Through the modification of experiential learning model, it is expected that students are able to understand what is a good internship teaching program, that is not boring and fun.
Here is a plump model with the steps as follows:

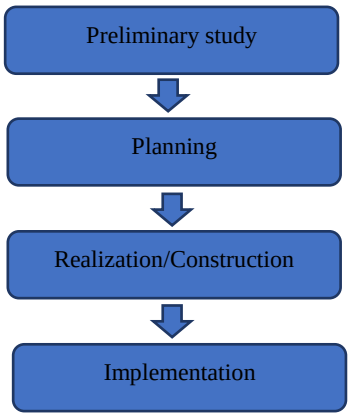


Figure 1: Plomp Model of Research Development Cycle

3.1 Research Instrument

The instruments are developed and designed based on research problems and research stages. In this study, the results are obtained from the results of interviews and questionnaires from learning design experts, learning materials experts and the response of UTM apprenticeship program students.While the subjects of the study were apprenticeship students from Universiti Teknologi malaysia in Semarang city Central Java Province Indonesia, represented by 8 students with random
sampling model, teaching in two vocational schools that are SMKN 2 and SMKN 4 in Semarang city

4. Results and Findings

The results of this development research have been adapted to the steps of R & D model that is plomp model to the realization stage as follows:
1. Initial Assessment Stage
Conducting preliminary research and initial data collection for literature review, classroom observation, problem identification and summarizing
issues.
In the preliminary research about the development of experiential learning model, it is effectively used for learning outside the classroom which shows that the experiential learning model can improve the learning process o become more effective, then do literature study related to web-based learning (20). This reality is supported by (21) who explains that experiential learning model is able to improve efficiency and ease in student learning and equipped with up to date research which shows that students are very enthusiastic in studying in class with the existence or the implementation of experiental learning model. Then in observation in mathematics class at SMKN 2 Semarang that so far the teacher has not used the learning experience for learning model, so it needs to be made a model that can be adjusted the students'

thinking level, this is because the students of SMK in Semarang is still not familiar with the model of experiental learning.

2. Planning Stage

Planning is the identification and definition of skills, objective formulation, and expert test or small-scale test, or expert judgment. In planning to identify and formulate goals in the making of this experiential learning model is able to make experiential learning model that is specified to math material in which it often occurs the misconception in the class related to the point of translucent fields, field slices and others. The next is the schedule of doing Forum Group Discussion to make the design of experiental learning model appropriate with mathematics material of SMK which is essentially able to motivate students to follow learning enthusiastically with initial design as follows:

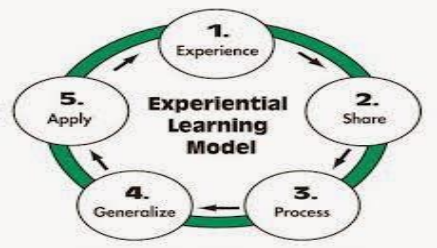


Figure 2: Initial product design of experiential learning model

After the design of the experiential learning model is completed then it is validated by the lecturer designer and the experts of learning material from which the expert validation results show an average of 86 and 90%, it means the product is feasible to be tested in the field. (22) shows interesting learning that is able to collaborate between material and model as well. In the picture below, it is the result of the validation of learning with the supporting theoretical aspects and the structural aspects of learning experiental learning model with the desired learning aspects as follows:

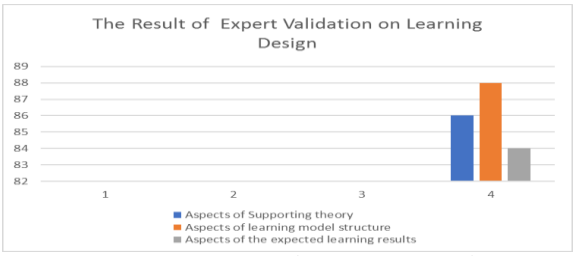


Figure 3: Experimental results of the design expert of the lesson

From Figure 3. It is explained that the product of experiential learning model has been good for all three aspects, especially aspects of supporting theories and structural aspects of experiential learning model, the desired learning outcomes aspect is very interesting to use because it is able to combine these three aspects well.



Figure 4:

3. Realization / Construction Phase

In this stage of realization or construction, students are required to practice experiential learning model with the result that they are able to have ability in Concrete Experience (CE), Reflection Observation (RO), Abstract Conceptualization (AC), Active Experimentation (AE), so they are able to have strong, able observe well, able to think with a critical and creative, then finally able to do or practice appropriate learning materials in the classroom

Capabilities	Explanation	Emphasis
Concrete Experience(CE)	Students involve themselves completely in new experiences	*Feeling*
Reflection Observtion (RO)	Students observe and reflect on or reflect on experiences in many ways	*Watcing*
Abstract Conceptualization(AC)	Students create concepts that integrate their observations into sound theories	*Thinking*
Active Experimenttion(AE)	Students use theory to solve problems and make decisions	*Doing*

1. Implementation Stage

Conducting initial trials, it is conducted on 60 subjects. Collecting information / data by using observation, interview, and questionnaires, and continued with data analysis. In the selection of research subjects, there were 30 students SMKN 2 Semarang and 30 students SMKN 4 Semarang to represent the existing population. From the result of the observations, it is found out that high enthusiasm for the use product of experiential learning model used in learning process in class.Then based on the result of interview with teachers and students, it is found out that the input to add aspect of creative thinking and spatial thinking able to attract or stimulate students to learn, adjust materials to latest curriculum. Next, from the result of initial questionnaire from the student obtained, it shows that 88,325% of students are interested in using experiential learning model in improving students' learning capacity.

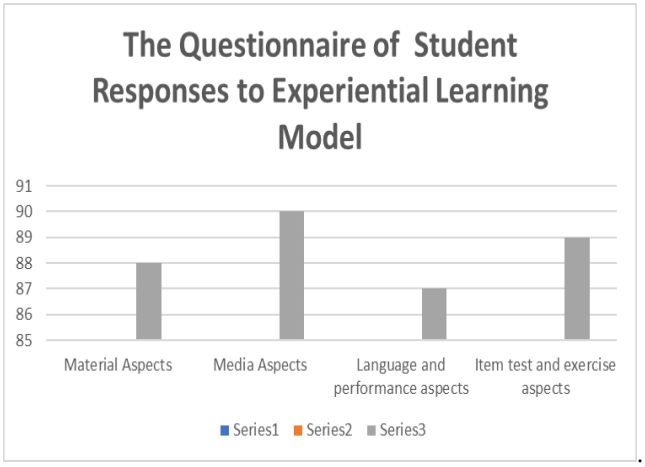


Figure 5: Results of Student's responses to model design

5. Conclusion

Kolb proposed that experiential learning has the main characteristics. Among them is that the best learning is understood as a process. Not in relation to the results achieved. Learning is a continuous process based on experience. In this case learning requires the resolution of conflicts between forces contrary to the dialectical way because learning is a holistic process. And learning also involves a relationship between a person and the environment. And the last to learn is the process of creating knowledge which is the result of the relationship between social knowledge and personal knowledge.

This theory has its weakness, the weakness lies in how Kolb explains this theory is still too broad in scope and can not be understood easily. But this theory has advantages, the results can be felt that learning through experience is more effective and can achieve the goal to the fullest. Some of the benefits of experiential learning models in building and enhancing group collaboration include developing and enhancing interdependence among group

members and increasing involvement in problem-solving and decision making. The next benefit is to identify and utilize hidden talent and leadership and improve empathy and understanding among fellow group members.

The challenges associated with applying the Experiential Learning Model sometimes do not recognize compromise. For students, experiences that will be accepted sometimes make them feel tense and also fun. Ideally, once they start to trust and dare to try, they will be physically and emotionally successful and know that something that seems impossible to do can actually be done.

Therefore, experiential learning model is very effective to apply for candidates

teachers who are studying in the faculty of education so they can better understand how to improve the activity and participation of students in learning.

Acknowledgement

This research work is supported by the Project joint research between Universitas PGRI Semarang dan Universiti Teknologi Malaysia

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