Development of Problem based Learning on Student Character in Agriculture

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Abstract: *This study is aimed to develop a model of Problem Based Learning (PBL) in English teaching it belongs to research and development (R & D) which include research and information collection, planning, developing a preliminary form of product, preliminary field testing, product revision, field testing, operational product revision, final product revision, and dissemination and implementation. Based on the stages of R & D, the findings can be explained as follows. Firstly, based on the study of the concept of the PBL model, five stages as proposed by Glickman were implemented, namely: 1) pre-conference with the lecturer; 2) classroom observations; 3) the analysis and interpretation of the observation results and set up the conference approach; 4) meetings after observation; and 5) evaluating the four stages. All stages were carried out by utilizing information. Secondly, students' and lecturers' perception or understanding of the PBL model is yet complete. Thirdly, PBL Model based on character can be considered as a breakthrough for guiding teachers to improve their teaching competencies.*

Keywords: *Development, PBL, Model, Character, Learning.*

Introduction

In the context of education, English functions as a tool to communicate, to access information oral land to write with the world community in a day context. The ability to communicate in a complete sense is one of the important requirements in speaking. In other words, the ability to understand and produce written or oral texts which are realized in the four language skills. One of them is speaking ability. Speaking skill is used to respond to or to create discourse in social life (Lee et al, 2013). The PBL model was started in Canada (1970). PBL model is one of the learning strategies in a real-life context that is oriented towards problem-solving and developing critical, synthetic, and practical thinking by utilizing multiple intelligences to get used in learning (Sulaiman, 2011). This PBL model can occur if educators are able to create an open classroom environment and to guide the exchange of ideas, so that the role of educators is as the stimulator, to guide the students' activities and determine the direction of student learning. Based on the description above, the researchers developed the PBL model as a learning model to anticipate the tendency of students who do not like learning to speak English. Therefore, this study takes the title "Problem Based Learning/PBL in English Language Learning Modeling Higher Education".

Literature Reviews

Some experts explain the concept of PBL, others are Torp & Sage (1998) who describes that the PBL model is one of the learning models based on many problems that require authentic inquiry. It can be called that it is an investigation that requires real resolution of the real problems. The environment provides input to students in the form of assistance and problems, while the nervous system of the brain functions to interpret effectively so that the problems faced can be investigated, assessed, analyzed, and sought solutions appropriately.

Furthermore, according to Tompkins (1998) PLU uses a higher level of thinking, problem-oriented situations, including how to learn. In this learning model, the role of the teacher is to raise problems, to ask questions, to provide an atmosphere of dialogue, and to provide research facilities, as well as to conduct research. These activities can be carried out by educators when learning in the class and through adequate training. not only determine the success of learning but also as a learning resource for the facilities used and the curriculum contribution. PBL as a learning model has advantages and must be considered by a lecturer so that learning can be carried out effectively and efficiently. The advantage of problem-based learning is that it can be used as a reference in every learning process that takes place. Sanjaya states (2007) that it has some advantages, namely: 1) Challenging the ability of students and giving satisfaction to find new knowledge for students; 2) Increasing the learning activities of students; 3) Helping students show to transfer their knowledge to understand problems in real life; and 4) To stimulate the development of students' thinking processes to solve problems face appropriately.

In addition, according to Rusman the advantages PBL model are as follows: 1) Problem-solving is a good technique to better understand the contents of the lesson; 2) The PBL can challenge students' abilities and provide satisfaction to find new knowledge; 3) The PBL can increase student learning activities; and 4) The PBL can help students how to transfer their knowledge to understand real-life problems; 5) The PBL can help students to develop their new knowledge; 6) Through the PBL lecturers can show students that subjects are basically way thinking and something must be understood by students; 7) The PBL is considered more enjoyable and liked by students; 8) The PBL can develop students' ability to think critically and develop their abilities to solve problems; 9) The PBL can provide opportunities for students to apply the knowledge in the real world; 10) The PBL can develop students' interesting learning. In accordance with the above opinions, it was concluded that the superiority of PBL was the ability to develop students' thinking ability to solve problems and to apply in real situations.

The PBL model has several characteristics. According to Oon Seng Tan (Sani, 2014), the characteristics of the problems discussed in PBL are 1) Unstructured or poorly structured real-world problems; 2) Problems that cover several points of view (some subjects or topics); 3) Problems that challenge students to master new knowledge.

According to Bamuhair et al (2015) six characteristics that need to be considered PBL: 1) The learning process must begin with a problem, especially an unsolved problem; 2) The contents of a problem are issues that attract students' attention; 3) Lecturers are only facilitators in class; 4) Students must be given time to think or gather information and develop problem-solving strategies. In this process, creative thoughts must be supported. The level of difficulty of the problem to be solved is not to difficult; 5) Environmental comfort and safety learning must be created to develop students' thinking skills and solve problems; and 6) Lastly, according to Rusman et al (2007) that the characteristics of PBL are as follows: 1) Problems become the starting point in learning; 2) Problems raised are existing problems in the real world that are not structured; 3) Problems require multiple perspectives; 4) Problems challenging students' knowledge, attitudes and competencies that then require identification of learning needs and new fields of learning; 5) Learning self-direction becomes the mainthing; 6) Utilization of knowledge resources that vary in their use and evaluation of information sources are essential processes; 7) Learning is

collaborative, communicative and cooperative; 8) To develop mentinquiry and problem solving skills as important as mastering the content of knowledge to find solutions to a problem; 9) The openness the processes in PBL including the synthesis and integration of a learning process; and 10) PBL involves evaluating and reviewing student experience and learning process.

It can be concluded from the description above that the PBL implementation process starts from the description of a problem to the material to be discussed and the lecturer helps students define the problem by conducting an investigation to develop and present the issues discussed. The lecturers help students reflect on the reports so that they can see the shortcomings and the strengths material discussed.

2.1 The advantages of PBL

PBL as a learning model has advantages that must be considered by a lecturer so that learning can be carried out effectively and efficiently. The advantage of problem-based learning is that it can be used as a reference in every learning process that takes place. According to Sanjaya (2007), PBL has advantages, namely: 1) Challenging the ability of students and giving satisfaction to find new knowledge for students; 2) To increases the learning activities of students; 3) Helping students in transferring their knowledge to understand problems in real life; 4) To stimulate the development of students' thinking progress to solve problems faced appropriately.

In addition, according to Rusman the advantages of the PBL model are as follows: 1) a good technique to better understand the content of the lesson; 2) can challenge students' abilities and provide satisfaction to find new knowledge, 3) can increase student learning activities; 4) can help student show to transfer their knowledge to understand real-life problems; 5) can help students develop their new knowledge; 6) lecturers can show students that subjects are way thinking and something must be understood by students not just learning from the teacher or book alone; 7) can enjoyable; 8) can develop students' ability to think critically and develop their abilities to solve problems with new knowledge (9) can provide opportunities for students to apply the knowledge they have in the real world; 10) can develop students' interest to continue in learning. By the above opinions, it was concluded that the superiority of PBL is the ability to develop students' thinking ability to solve problems.

2.2 The concept of character

One of the characters is intended as a process of inculcating good values. The value of kindness needs to be planted to students as part of their character so that they can live life well and by applicable norms. Many experts of character education who find it, a variety of values that must be owned by students. Linckona (2012) explains that there are 10 characters values that should be possessed by students, namely: 1) Wisdom: is a good judgment that enables us to make sound and good decisions for ourselves and others; 2) Justice: respecting the rights of others, ie treating others as we want others to treat ourselves; 3) Courage: doing something right in the face of life's difficulties; 4) Self-control: the ability to self-regulate, which allows us to regulate emotions, regulate the desires and passions and pleasure of the world; 5) Love: love is interpreted as an effort to provide the justice needed; 6) Positive attitude: that is having positive thoughts and being positive in dealing with other; 7) Work hard: work hard includes initiative, perseverance, goal setting, and ingenuity; 8) Integrity: having moral principles, being loyal to moral awareness, keeping words and standing on what is said; 9) Gratitude: accepting the blessings well; and 10) Humility: an attitude that makes consciousofim perfections and strives to make it better.

The ten values that build character are important that the students have as provisions for them to be able to fill a better life. Implementation of character values that will be developed can be started from the values that are essential, simple, and easy to implement, such as: clean, neat, comfortable, disciplined, and polite. character education is important to be implanted data nearly age because that is the time when the formation of character building begins. Character education at an early age in the family aims for

formation, at the age of adolescence at school aims for development while at the age of adulthood in college aims for strengthening. The tasks of educators are to provide a good learning environment to shape, develop and strengthen the character of their students (Sulistyowati et al, 2012). Learning activities, in addition to making students master competencies(material) that are targeted, a real so designed and carried out to make students recognize, realize, care and internalize values and make them become behavior (Megawangi, 2004). Based on the principles outlined above, it is necessary to develop character education in the learning process. However, because of the limitations of this research, this study only took two types of characters from the ten types of characters that already exist, namely self-control and attitude of courage.

Methodology

This study was conducted at Agriculture Faculty at The Islamic University of Riau. The subject of this study was all the students in the first semester in Agriculture Faculty who got the lowest passing grades in speaking class. The focus of the study was on 5 students, selected from 20 students. Data collection is done by using interviews and observation and conducted by the researcher herself. Data collection is done by using interviews and observation. The type of research used in this study is Research and Development (R&D). The model development used in this study is the ADDIE model which consists of five stages of development. This model was chosen because the ADDIE can develop teaching materials such as model books, student books, and lecturer books.

This chart describes the stages of development design in research (Fig. 1). For the observation stage, the PBL model enters the classroom and is used by recording videos. To carry out this recording, a guideline is needed that is used as the basis for recording to obtain results that are by the needs in analyzing the results of the PBL model. The results of the recording can be seen clearly during the overall learning process, starting from the opening, core, and closing activities. In the opening activity, the recording of the lecturer's activities is closed so that it is clear what the teacher is doing and talking about. In the core activity, it produces image recordings that show lecturer activities in managing learning, how to interact with students, in using methods, student interactions during learning, lecturer performance, which displays expressions during the learning process. In the closing activity, recording pictures of the activities of lecturers and students at the end of class learning. At the analysis stage: this model was developed into two analyzes. The analysis is carried out by the lecturer, the lecturer plays back the video recording of his learning, then conducts his assessment regarding his teaching activities. This assessment is carried out using the teaching assessment format that has been provided via email. After the teacher makes an independent assessment, the results are submitted to the supervisor. Assessment is also carried out through video recordings of teacher teaching using the assessment format provided. This assessment uses the assessment format that has been provided.
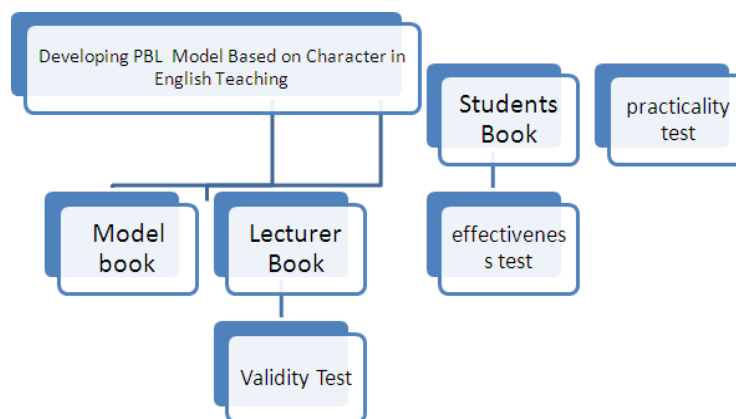

Figure 1. The stages of development design in the research

Results and Discussions

Based on the results of research and discussion, it can be concluded that there are students from the faculty of agriculture who face several problems in English skills. Most of the students have a lack of vocabulary, are not confident in speaking, are not used to speaking in class, and have difficulty expressing ideas and words or sentences. The cause of the problem, as most students face, is the fear of making mistakes and the material does not interest them. Furthermore, to see the effectiveness of the PBL learning model the results are carried out because learning outcomes are the results of assessments related to students' understanding. The following are the learning outcomes of students starting from sub-themes 1, 2, and 3, using a character-based PBL model in the field of Agriculture.

Table 1. Evaluation Value from Sub-theme 1 to Sub-theme 3

Sub-theme	Number of students	The lowest score	The highest score
1	20	68	75
2	20	65	80
3	20	76	90

The increase in the value of students who are taught using the character-based PBL learning model in agriculture, as seen in sub-theme 1, the lowest score is 68 and the highest is 75. The results show that the quality of the English PBL model is included in the 'good' category, obtaining an average score the average is 47.87 and the ideal percentage is 89.50%. Thus, it can be understood that the learning outcomes of the PBL model have significantly increase and have met the mastery of learning outcomes.

Conclusions

The conclusions obtained based on the study of the concept of the PBL model were carried out in five stages, namely: 1) pre-conference with lecturers; 2) class observation; 3) analysis and interpretation of observation results and setting of conference approach; 4) meeting after observation; and 5) evaluate the four stages. All stages are carried out by utilizing information. Second, the perception or understanding of students and lecturers on the PBL model is not yet complete. Third, the character-based PBL model can be considered a breakthrough in guiding teachers to improve their teaching competencies.

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