

## The Implementation of Project-Based Learning Model Based on Local Food Potency in Developing Entrepreneurship Attitude of Primary School Students

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### Abstract

This study has a purpose of finding out the effect of implementation of project-based learning, based on effective local food potencies in developing entrepreneurship attitudes of primary school students. The study is a concurrent embedded mix method research which combines quantitative and qualitative in imbalance natures with primary and secondary data. The primary approach in this study is quantitative study, the learning achievement by using the model of project-based learning on local food potencies. The secondary is qualitatively seen from entrepreneurship attitudes of the students. To get the quantitative data, this study went through pre-test and post-test meanwhile the qualitative data was gained through observation, interviews, and documentation. The data gained was analyzed using SPSS 16.0 for Windows and triangulation. Project-based learning model based on local food potencies is effective in developing entrepreneurship attitudes of the students. It is seen from the improving attitudes in each session, first meeting with 69.71, second and third meeting were 76.3 and 84.32. Based on the findings, it can be concluded that the learning model is effective in developing the entrepreneurship attitudes of the students.

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## INTRODUCTION

The development of economy will give the growth and well-being of a certain nation. However, in Indonesia, by facing the complex problems in economic development problems, has implications toward economy gaps in various sectors, one of them is the numbers of unemployment. In the educational field, it should have been sensitive toward the challenges and opportunities, especially in preparing educated human sources with the capability to face life challenges, both local, regional, national, and international. Students are not only enough to master theories but also have determination and capability to implement it into social life, and can solve various problems faced daily.

In initial observation in Wulanggintang district East Nusa Tenggara province, schools are implementing local content lesson. In the currently available syllabus, classes which implement skills to manage primary meals are only third grades. The materials taught to the students are only limited on how to manage simple meals commonly consumed by societies in daily lives. The students are not introduced directly to solve current problems which will be faced by utilizing currently available natural sources around their environments. A certain model is needed to instill appreciation to local potencies by training them to utilize the local natural sources and being ready to face future challenges in improving local food potential.

The most used method, model or learning media by productive teachers to support the learning and achieve the materials maximally are, for example, lectures, discussions, demonstrations, and so forth. The used learning model is a pattern used as guidance in planning to learn inside of class or tutorial. A conceptual learning model is describing systematic procedures in organizing learning experiences to achieve learning achievement (Suprijono, 2012). The appropriate learning model based on entrepreneurship is needed to solve mostly faced problems, especially about unemployment. The supporting learning model to students' activity in the learning process needs to make them able to

create and to have entrepreneurship spirit. It is called a scientific type, Project-Based Learning.

Project-Based Learning is a learning strategy requiring the students to construct their content knowledge by themselves and to demonstrate new knowledge in various representation (NYC Departement of Education, 2009). This learning model involves students in creating a project of product, creating a supportive learning environment for the students to develop knowledge, attitude, and skills (Astuti, Rahayuningsih, and Ngabekti, 2018). It also aligns with opinions stating the learning model will work inside of a team; it will provide chance to find skills, plan, organize, negotiate, and create consensus about the current worked issues, who takes the responsibilities for all the tasks, and how the information will be collected and presented scientifically (Rais, 2010).

Project-Based Learning is an active model, struggling to relate technology into daily life which is familiar for the students or becoming a school project. Project-Based Learning model is also to develop students' thinking ability, developing the students' creativity, motivating them to cooperate in a team. The learning model can create a supportive environment to develop meaningful, creative, active knowledge, student-centered learning, and guiding the students to collaborate (Bédard, Lison, Dalle, Côté, and Boutin, 2012). It aligns with Robinson (2013) that the students in learning project can produce products after conducting an investigation and using the findings to solve problems in which is taken from real life. So, this learning is appropriate to be used in the management skills of local foods where the students have chances to use knowledge in creating products to be lately presented.

Local foods are learning materials taught since third grades. Meals are the most basic and essential needs for a human to support their lives. It is strongly related to food security. It is developed based on local natural source power to create meal independency and to have healthy, active, and competitive individuals as the indicators of food security stated. The local wisdom as interaction results between society and

environment can be used to help society independent to solve problems (Suyanto, Endriatmo, Sumardjo, and Hartrisari, 2014). Besides that, it will result in new and strong food. Therefore, food security needs to be supported as foods independency foundation (Hariyadi, 2010).

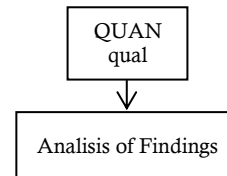
This material will be more meaningful when the Project-Based Learning model uses entrepreneurship activity steps referring to entrepreneurship values by relating the materials into daily lives (Contextual learning) to improve life skills in the children since running business cannot only rely on knowledge but also needs certain business strategies to keep it lasting (Kuntowicaksono, 2012). The model is more directed to basic values containing in entrepreneurship fields by training the students to be creative, innovative, have the courage to take the risk, have abilities to arrange strategies in solving problems, and have the ability in communicating.

The first step done by the teacher in the learning model is designing the learning activity into project activity, 'entrepreneurship' run by children. The teacher develops the competency into entrepreneurship learning ideas and to determine supportive competency activities. Entrepreneurship is not only technical technique or skill but also oriented on mental attitudes through self-process by practicing and experiencing motivation form themselves. It is due to by involving students into various activities at school will open knowledge and improve entrepreneurship skills of the students to increase students' entrepreneurship motivation and attitudes (Ani, 2013). Therefore, the teacher has important role in instilling mental attitude through the learning process.

Based on the explanation, the problems formulation is to find out whether the learning model based on a project by utilizing local foods in the surrounding environment can prepare and train the students in introducing, instilling, developing, and improving entrepreneurship attitudes in early age.

## METHODS

The design used in the research is a mixed method, combining quantitative and qualitative through concurrent embedded (imbalance combination).



**Figure 1.** Concurrent Embedded Design

This imbalance research method combination has primary and secondary data. The primary method is used to get primary data and the second method to get secondary data to support primary data (Sugiyono, 2011).

The design of the research becomes quantitative by dealing with learning achievement in learning using the Project-Based Learning model based on local foods topics. Meanwhile, it becomes qualitative when it is seen from the entrepreneurship attitudes of the students. The Quantitative data is students' learning achievement using the learning model. The data shows or informs the effectiveness of Project-Based Learning model. The second data type, qualitative, consists of observation of students' entrepreneurial attitudes found during the learning process. Also, observation data is then added to the interview. Interviews were conducted to describe students' entrepreneurial attitudes during the learning process using the Project-Based learning model. Furthermore, the results of observations and interviews were supported by documentation during the learning activities. After analyzing quantitative and qualitative data, the researcher presents all the data obtained, in the form of quantitative data and qualitative data.

## RESULTS AND DISCUSSION

Based on the factual condition of learning the material at school, it shows shortcoming in learning process due to inactive students and the

students with lower understanding related to the material. So, teacher should use appropriate learning model. Then, Project-Based Learning model is the appropriate one, by utilizing local foods. The concept of the learning model uses active learning. The model will be integrated into learning instruments.

Project-Based Learning is a comprehensive perspective learning focusing on teaching by involving the students in the investigation (Greeno, 2005). Through this model, the teacher can pursue the students to actively participate in a learning activity, so the learning will not focus on the teacher. By referring to the steps of PjBL, according to George Lucas Education Foundation (2007), it has six steps attached in three meetings.

In the first meeting, there are three steps of learning. The first one, the students recognize all problems around them so in this initial activity of learning is started by apperception as in Figure 2.



**Figure 2.** The Teacher Give Apperception

The teacher stimulates students' knowledge by local foods existing in their local environment, but it is commonly found by unemployed society. The second step, students with their peers can arrange a plan to do as in Figure 3.

After the problems are presented, the teacher helps the students to understand the problems until a concept is found. In the second step, students determine what product is going to produce from available local foods. Then, in the third step, the teacher and students will agree on

the length of the project. This agreement is done to estimate the length of time needed by students to accomplish each target. Even when a long time is provided, it does not mean all teams will finish the project in time. It is due to some students have not been adapted to learn using the model, so they have not actively involved in the team.



**Figure 3.** The Student Arrange The Plan The Proyek

In the second meeting, there are two steps to do. It is begun by the steps of conducting the project as in Figure 4.



**Figure 4.** The Students Conducting The Project

While working on the project, the teacher has a role as a mentor to do the project. The teacher has roles as a facilitator of the students in learning. The role of the teacher is needed because by the guidance of a teacher; students can run the project well. The students start working on the project in the group. Two kinds of the project done by the students are managing the

local foods and selling the products as in Figure 5.



**Figure 5.** The Student Selling The Products

Creating new and worthy products to sell are implemented in this learning model because this learning model has a purpose to educate the students in gaining real experience to create valuable products to sell. Besides that, the students can run business and lower the number of unemployment.

In the third meeting, two steps of learning: assessment toward the product and learning evaluation, are started by the teacher to assess the product of the students based on the second meeting. The assessment was done to see entrepreneurship attitudes shown by doing the project and sell the product. Besides that, the teacher must assess the presentation of the students about their discussion as in Figure 6.

Based on the discussion results, the teacher concludes about using local foods, not only about the nutrients consisting of the meals but also to earn more living supports. After that, by using the already learned material, the students apply it to the written task given by the teacher as in Figure 7.



**Figure 6.** The Student Presentation of The Their Discussion



**Figure 7.** The Student Take The Test

The analysis of entrepreneurship attitudes is written in observation sheet from 5 observed aspects: confidence, creativity, cooperation, independency, and leadership. The average of each aspect is shown below in Figure 8.

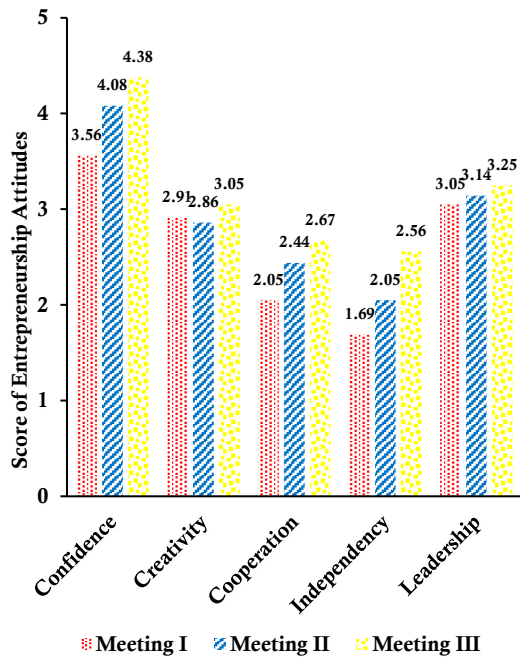


Figure 8. The Average Scores of Entrepreneurship

Based on Figure 8, it can be explained that the analysis results of entrepreneurship attitudes of the students are focused on three chosen students based on pre-test. The observation was analyzed based on the total score of each question to get the average score of each aspect. After the direct observation, an analysis of entrepreneurship attitudes of each subject was done. Here are the results of the observation of each chosen student.

#### The Description of the First Chosen Student's Entrepreneurship Attitude Development (SP-1)

This first chosen student was on the top based on pre-test result. The observation on each meeting of SP 1 shows improvement in each meeting. The result gained by him in the observation of entrepreneurship attitudes from the first until a third meeting can be seen in Figure 9.

Based on Figure 9, it can be explained in the first meeting; the student gains an average score of all aspect above 2.8. It shows the student has the basic knowledge and has developed entrepreneurship attitudes. Based on the observation, the student developed the attitudes in learning the local course using Project-Based

Learning model based on local foods potency. It can be seen in the graphic containing five aspects.

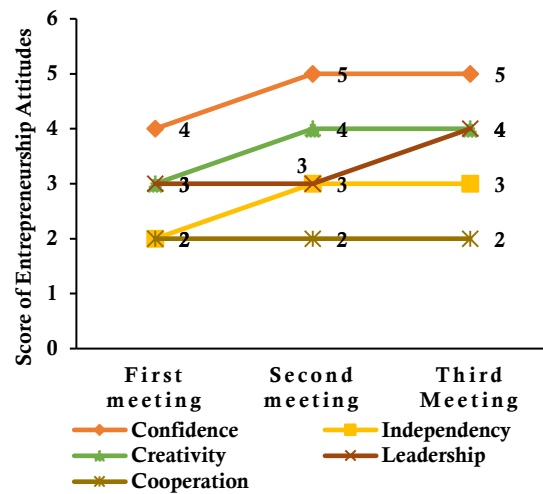
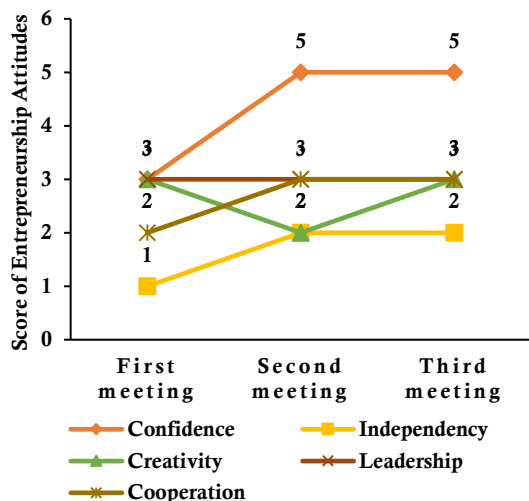


Figure 9. The Developmental Graphic of SP-1 Entrepreneurship Attitudes

The student shows improvement of each aspect of the attitudes in every meeting. It is due to the student has the spirit to learn and work on his project. Besides that, his confidence and courage to present the work in front of class reveal his calmness while working something, ability, and potency to adjust himself and communicate in various situations. Besides that, the student is open-minded toward new experience, having the determination and will to find and investigate. The student also shows his politeness and activeness in working on the tasks based on the job description and distribution, acts objectively, dares to solve the conflict, and does not depend on someone else. SP-1 shows his responsibility toward the given work and ability to communicate with other members of other teams, and he also has a strong and stable emotion. It shows that the student has already had well entrepreneurship attitudes.

#### The Description of Entrepreneurship Attitudes of Second Chosen Student (SP-2)

SP-2, grouped in the middle level based on pre-test, gained results of the observed attitudes from first until third meeting as seen in Figure 10.



**Figure 10.** The Developmental Graphic of SP-2 Student

In Figure 10, from the first meeting, the student gained average scores of all aspect about 2.4. It shows the students have already had and developed entrepreneurship attitudes. Based on the observation, SP-2 developed the attitudes in learning local content material using Project-Based Learning based on local foods potency. It can be seen on the developmental graphic of entrepreneurship attitudes, consisting of five aspects.

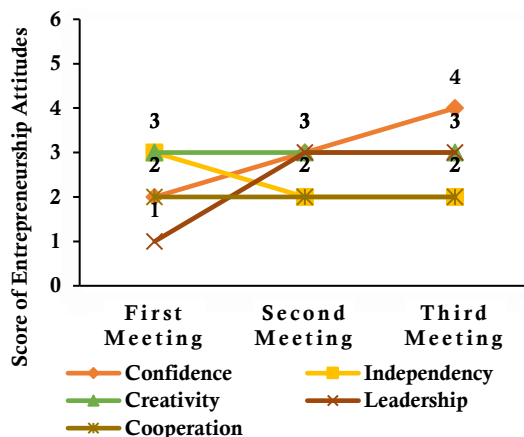
On the first meeting, the student was confident about his ability so he could adapt and communicate in various situation and able to accomplish the given tasks. SP-2 was open-minded toward new experience although he had lower desire and determination due to the influences of his friends who were not seriously following the course. The teacher should explain the material better because the students had not mastered all the material or understood the given tasks. It was shown by his attitudes which could not solve conflict without guidance from a teacher or other peers. Instead, he depended on other people. It was caused due to less attention in following the course so he could understand what he was working on.

The leadership of the student in the initial meeting had seen. It was shown by his responsibility toward the given tasks and his ability to communicate to his peers although from the first until third meeting he did show any

changes in leadership attribute. The student could not maintain his emotional stability well, so he needed guidance and motivation from the teacher and his friends.

The Description of the Third Chosen Student's Development (SP-3)

SP 3 is the lowest student based on pre-test. The result gained by the student in the observation of the attitudes can be seen below in Figure 11.



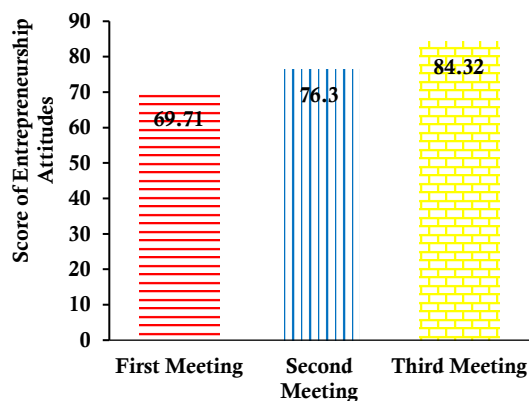
**Figure 11.** The Developmental Graphic of SP-3 Student

Figure 11, it can be explained that the student gains average score two from all aspects. It shows the student has already had some basics although his entrepreneurship attitudes have not been developed. Based on the observation, the student developed the attitudes during the learning through Project-Based Learning based local foods potency. It can be seen from the development of the attitudes consisting of 5 aspects. The student in the first meeting showed a little confidence toward his ability so he could adapt and communicate. However, SP-1 was less able to work on the given job due to his lack of understanding and being afraid to ask. Besides that, the student had lower eager and will to solve the given tasks because they misused it to tease his friend. They were not actively involved in accomplishing the task by distributing the current given work and tended to be depended on other friends because they had not mastered all

materials or had not understood with the given task.

The participation of SP-1 was low, so the teacher should give more guidance and explanation about the material, so the student did not depend on other people. It was caused when the students faced a problem; they tended to keep silent and confuse in working the tasks. Besides that, their students were not able to communicate with their peers well. It was due to the student was less active to ask his friends and teacher when he was having the problem of confusing on working the task.

The analysis of entrepreneurship attitudes can be seen from the observation of the attitudes during the learning process using Project-Based Learning model. It shows improvement on each meeting shown in Figure 12.



**Figure 12.** The Average Score of Entrepreneurship Attitudes

Based on Figure 12, in the first meeting is 69.71 and improved in the second cycle 76.3, and improved in third cycle 84.32. It shows to develop the attitudes of the students; the teacher should implement appropriate learning model to improve the skill of the students. It aligns with Rosmiati, Junias, and Munawar (2015) showing the attitudes and motivation do not influence entrepreneurship determination. It is caused because the students were only introduced by knowledge, the attitudes, and entrepreneurship determination. Based on Muljaningsih, Soemarno, Hadiwidjojo, and Mustadjab findings (2012), entrepreneurship determination is influenced by skill in which is the dominant

variable. The skill needs to be trained by giving knowledge of entrepreneurship and skills. The attitudes, in this case, are emphasized on creativity.

The learning model is a project to trigger the creativity of the students. According to Husna, Cahyono, and Fianti (2018), students using the Project Based Learning model can improve creativity and give better learning achievement. The students gained Project Based Learning has abilities to utilize local foods better compared to those applying common learning model at school. It is caused by the conceptual understanding of the students in project learning performed from abilities to create a creative project (Dewi, Yani, and Suhardini, 2015). Thus, Project-Based Learning motivates the students to constructively investigate by involving planning, decision making, solving problem, and finding. According to Uziak (2016), Project Based Learning motivates the students to involve in various investigation learning and making a decision based on knowledge. This finding is supported by Tasiwan (2015) showing the students gaining Project-Based Learning have observing, measuring and using the tool, controlling variable, predicting, and formulating model skills better compared to students without Project-Based Learning. According to Roessingh, and Chambers (2011), the students in Project-Based Learning was given the task to solve the real problem so it can support the development of skills to manage the potency of foods making them have entrepreneurship attitudes.

## CONCLUSION

Based on the findings and discussion in this study, is how significant improvement in implementing the Project-Based Learning model toward the development of the entrepreneurship attitude of the student. The attitude of the students after being treated by the model was on good category. The responses from the students toward the learning were good until learning using Project-Based Learning can be recommended to be implemented at the school.



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