

Subak as A Scientific Learning Model

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Abstract-The purpose of this study was to determine the effectiveness of the application of scientific learning models in social studies learning in the economic education department of Undiksha Economic Faculty with the use of subak as a learning resource. To achieve that goal, this research was conducted with the Research and Development (R & D) approach. The findings of this study are the learning model of Social Sciences that has been tested for its effectiveness. Research results show that the Scientific approach with steps to observing, questioning, associating, experimenting, and networking (communicating) is able to support and inspire students to think logically, critically, analyze, identify and solve social problems

Keywords: *IPS Education, Subak and Scientific Approach.*

I. INTRODUCTION

Conceptually Social Sciences Education is a course in which the material is derived from the social life of the community selected by using the concept of social science concepts that are used for the benefit of learning. Social studies learning ideally should be able to build a national identity based on local wisdom to lead a better future. Wisdom in the context of social studies education shows the nature of human nature such as justice, harmony and solidarity in conditions of changing social life. Thus the social studies education provided Economic Of Education Department Economic Of Faculty Undiksha graduates as candidates for social studies teachers in addition to having professional competence must also be able to have sensitivity, critical and anticipate various changes especially related to learning resources, curriculum structure and various innovative learning methods so that this institution has the title as agent of change.

Changes that are happening in the educational world including social studies learning that get great attention and have implications for the processes and products of higher education, especially those that produce teacher candidates are the enactment of the 2013 curriculum and the

issuance of Minister of Education and Culture Regulation No. 64 of 2013 concerning standardization of primary and secondary education. This change of course needs to be responded by higher education in the implementation of learning programs and learning resources that are in accordance with the characteristics of the applicable social studies curriculum. Curriculum development at the school level in Indonesia since 1947 after independence has undergone a change of 10 times, the 2013 curriculum that is now in force is the development of the education unit level curriculum (KTSP) designed and implemented since 2005, There are two reasons why the KTSP curriculum needs to be refined.

The first reason is to anticipate the quantity of learning citizens who will certainly increase in line with the increase and awareness of the population of the importance of education. They are expected to be human beings of good quality spiritually, intellectually, socially and vocationally (skills / work skills), the second reason for anticipating external challenges in which future Indonesian people must have competence, namely a set of knowledge, attitudes and skills to overcome global problems, the environment life, advances in information technology, open markets, gender equality, human rights, global warming which will all affect education, especially how to carry out character education formulations which are stated explicitly in the 2013 curriculum structure. Economic Of Education Departement Economic Of Faculty Undiksha as a LPTK that will give birth to teacher candidates who are entrepreneurs with all the challenges and changes that will occur, must reconstruct the material and learning paradigm in line with the demands of the 2013 curriculum.

Changes or shifts from traditional learning with a variety of innovative learning methods in line with the demands of the 2013 curriculum process standards are expected students to understand various learning methods as their provision when they become teachers. In Economic Of Education Departement Social Knowledge Education courses

(IPS) as one of the lectures given in the second semester, have special characteristics because the lecture material changes so quickly and contains the character values, These changes are in accordance with the nature of social studies subjects in the 2013 curriculum, especially in the SMP / MTs, which explains that social studies subjects are applicative oriented education programs, the development of thinking skills, learning abilities, curiosity, and the development of caring and responsible attitude towards the social environment that is always face change.

Thus the challenges faced by social studies education in universities, especially in the Economic of Education Departement, Economic of Faculty Undiksha, at this time is how students have social sensitivity and high-level thinking skills so that they can participate and anticipate changes that occur without losing their identity. During this time the implementation of social studies education in these institutions when examined from various learning dimensions consisting of curriculum, textbooks, learning resources, facilities and infrastructure has not supported the expected output. In line with these conditions and the issuance of Minister of Education and Culture Regulation No. 58 of 2014 concerning changes in curriculum, explained that social studies courses are educational programs that are applicative oriented, developing thinking skills, curious abilities and developing caring and socially responsible attitudes so that the implementation of social studies education at every level cannot be separated from the influence of the social and cultural environment of society. This means that social studies education in an effort to shape behavior, instill knowledge, think processes, encourage social values and truth is not only determined by the mastery of academic material, but also by how the community views about the world and its value [1]. At this time social studies education was carried out in Economic Of Education Department Economic Of Faculty Undiksha not yet optimally empowering people's lives that have religious and social values such as subak as a learning resource. Textbooks and textbooks are the main learning resources, learning is still tight, regular class schedules are scheduled. Such conditions are of course not in line with the objectives of social studies education and a paradigm shift that is built from "mainstream academic knowledge" to a constructivistic paradigm that emphasizes contextuality and methods that develop thinking directed to inductive reasoning. To realize such social studies education, community life such as subak must be used as a learning resource. According to previous research [2] proved that the use of the community environment as a source of learning and constructive learning methods can develop an

understanding and values of affection that lead to aspects of the spiritual and social aspects of the economy and culture of the surrounding community. In line with this background, research is needed in which the results are expected to be able to reconstruct the development of the substance of the Social Studies Education study which integrates local cultural concepts such as subak as a source of social studies learning.

II. LITERATURE REVIEW

A. Model Scientific Application in social studies learning

According to the 2013 Curriculum [3] one of the goals of science-based learning is to train students / students to develop high-level thinking and the learning process is directed to inductive reasoning that is centered on students. The students in the learning process look for and find phenomena, problems, issues and social cases so that they can study, discuss and communicate what they experience. In principle the scientific approach follows the steps of scientists through observing, asking, experimenting, associating and communicating. With such scientific steps, students are expected to be creative and innovative who always use the logic of thinking to solve the problem of social problems if this approach is applied in social studies learning. With such scientific steps, students are expected to be creative and innovative who always use the logic of thinking to solve the problem of social problems if this approach is applied in social studies learning. Besides having the stage the scientific approach now has characteristics, namely: 1) material based on social and real life contexts that can be explained logically and sensibly (2) lecturer explanation based on thinking and objective logic and referring to the latest theories (3) lecture materials encourage students to be curious, aspire, think critically to solve social problems in real life. (4) encourage and create an atmosphere so that students learn actively, creatively, effectively and fun. (5) the formulation of simple lecture goals, clear, interesting and meaningful.

In the guidelines for the implementation of the 2013 Social Sciences curriculum, the applicants use a scientific approach, so in social studies education there are several skills that are fostered and developed, among others: 1) thinking skills, namely the ability to describe, define, classify, make hypotheses, make generalizations, predict, compare, and contrast, and give birth to new ideas .2 academic skills namely the ability to read, study ,, write, speak, listen ,, interpret , make an outline and make notes. 3) research skills, namely defining the problem, formulating a hypothesis, retrieving and finding data relating to the problem, analyzing data, evaluating hypotheses and drawing

conclusions, accepting, rejecting or modifying the hypothesis appropriately. 4) social skills, namely the ability to work together, give contributions in assignments and group discussions, respond with various problems, provide strengths to the strengths of others and show appropriate leadership.

B. Learning Resources.

It was observed from the aspect of its utilization that the learning resources were differentiated, namely (1) the sources of learning designed (by design), (2) the sources of use (by utilization). For example: textbook, packages, slides, educational videos, etc. that are specifically created and designed to achieve educational goals (2) Learning resources that are utilized (by utilization) or not specifically designed for permanent instructional needs are available / can be obtained because indeed it already exists in nature and the surrounding environment, and can be used for the benefit of learning in achieving educational goals [5]. For example: social institutions. village hall or village office, sub-district office, and so on. The benefits of learning resources for students who attend social studies in the context of learning / lectures in class can be mentioned as follows: 1) Give students a concrete learning experience in their learning activities. 2) Presenting something that is not possible to be observed directly, that is by showing the model, floor plan, sketch, photo, film, etc. 3) Extending the presentation horizon inside. 4) Providing accurate and up-to-date information, or complementing / expanding existing information. 5) Helps solve problems of education or teaching 6) Gives or enhances learning motivation 7) Stimulates creativity and the ability to think critically

C. Subak

Subak is estimated to have more than one millennium is one of the cultural heritage in Bali that has been recognized by UNESCO as a world cultural heritage [6]. Subak is a farmer community organization in Bali that regulates agriculture and

irrigation water management for farming. Subak in Bali has always been guided by the concept of balance (Tri Hita Karana) and management of irrigation systems based on togetherness and harmony (Sirtha, 2008). In subak there are religious, historical, natural, economic, social values that prioritize harmony compared to complex, prioritizing togetherness compared to individual interests is the conception of social values and social science is very suitable to be a source of social studies learning, in which students will be able to build an integrated social science concept based on empirical experience.

III. RESEARCH METHOD

The population in the study was all students of the second semester Economic Education who were divided into classes A, B and C who took 96 Social Studies Classes. Class II A and II B numbered 60 people as the research sample and class C numbered 36 people as the control class. To obtain the level of validity of the instrument, it was consulted with the evaluation experts and IPS education experts. The design used in this study was the design of research and development in the field of social knowledge education. what happened in Balinese social activities, namely subak. The material was developed in the form of handouts based on 4-P or 3D models, namely defining, designing, developing and distributing [7]. The development model used in this study is a descriptive procedural model. This model outlines the general steps that must be followed to produce a product or design that is guided by the stages of research and development [8]. Ten steps of development research including (1) research and information gathering, (2) planning, (3) development of product plans, (4) initial / limited trials, (5) major product revisions, (6) main trials, (7) operational product revisions, (8) field trials, (9) final product revisions, and (10) dissemination and implementation [9].

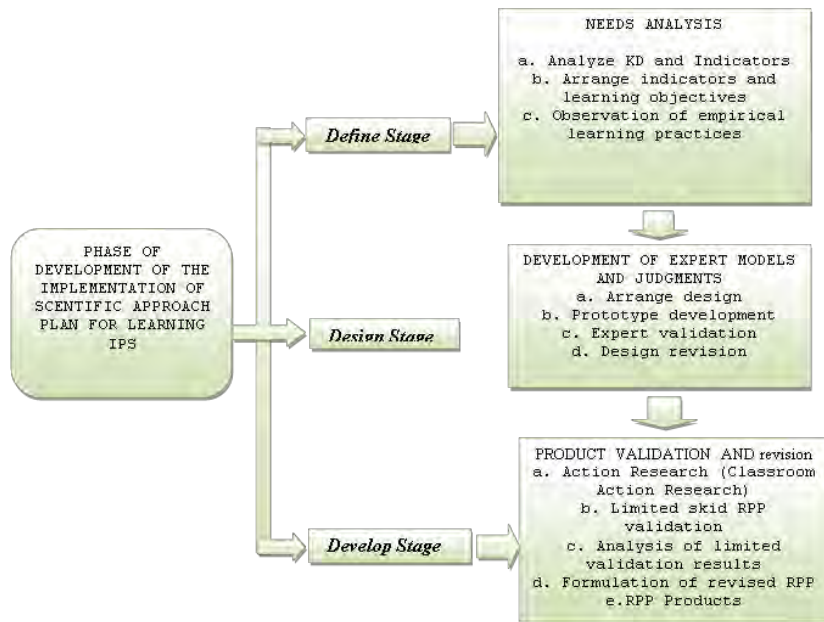


Fig. 1. Research Design

IV. RESULT AND DISCUSSION

Based on the results of the study showed that social studies lectures using the Scientific approach through the steps of observation, questioning, experimenting, associating and communicating to the object of the study of Balinese social life that regulates water governance for agricultural purposes, namely subak shows that the students who were used as research samples higher thinking skills and can understand concepts related to people's lives and the environment.

Based on the students' observation activities on subak, it shows that students learn a lot about the past life values (history) of the subak recorded in the Sukawana inscription that subak has existed for 1000 years. planting like Mendak Toya, Upaca Neduh when carrying out planting and Nyangket at harvest time.

In the subak there is also an organizational structure there is a meeting of members (paruman), dialogue in solving complications (sociology), there are rules that need to be obeyed by all members through awig awig (law) ,, fulfillment of economic benefits, maintaining environmental sustainability (geography) and of course the practice of religious values. From the concept of subak students can learn how human efforts to achieve a dynamic but harmonious welfare of life. The information obtained by students through observation, asking and reasoning activities, the students who study social studies get rational and empirical answers about the factors that develop prosperity, which essentially must always strive and maintain the harmony of human relations with the creator (Parahiyangan) implemented through various religious rituals. Humans must also

establish harmonious relationships with fellow humans (Pawongan) and a harmonious relationship with nature (Palemahan). After students associate and communicate through discussion, the basic ability of students grows to think logically and critically, curiosity, inquiry, problem solving and skills in social life increases. The commitment and awareness of students used as research samples are classes II A and II B towards higher human values compared to class II C which were not used as research subjects.

The results showed that the scientific approach in social studies learning by using subak as a learning resource, showed that students gained character values from subak such as religious values, discipline, communicative, cooperation, economy, environmental care and social care. The character values obtained will establish an attitude of respect for the teachings of the religion adhered to in an honest manner, responsibility for tolerance, mutual cooperation, being able to interact effectively with the social and natural environment within the reach of social relations and their existence. Personal competence, the competence of objective attitudes towards self-appreciation of values and attitudes towards social diversity which are the objectives of social studies education can be established. This shows that the process of inductive reasoning is an increase in reasoning through student-centered learning where they search for and find examples of examples or proof of evidence of a phenomenon, problems, social issues to foster student learning process activities to be more active, creative, effective and enjoyable in develop thinking skills, academic skills, research skills and social skills

V. CONCLUSION

Based on the results of the study, it can be concluded that:

1. Social science and character value values that can be obtained by students from subak are religious values, honesty, responsibility discipline, tolerance, mutual cooperation, economy, history and geography integratively.
2. With the application of the scientific process approach in social studies education, the thinking skills, academic skills, research skills and social skills of students are more developed because learning activities are directed to inductive reasoning.
- 3 Students can introduce and understand concepts related to the value of life values of society and their environment such as religious values, discipline, social / brotherhood, environmental care and social care, if real life-based social education materials can be explained logically and sensibly. .
4. By utilizing social life as a source of learning, students have the basic ability to think logically and critically, curiosity, inquiry, problem solving and social skills. Material is not based on predictions, predictions, imagination, lag or myth.
5. Commitment and awareness of student social values grow because abstract social value concepts learned from books (textual) are concrete in real life
6. Scientific approach in social studies learning by utilizing subak as a source of learning, students have social sensitivity and awareness as initiations and creations that can be applied in other social activities in different contexts and social spaces. Thus, social science material based on context and real life as a learning resource is more effective to achieve the expected learning competence of students.

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