ABSTRACT

Semarang State University (Unnes) is a conservation university that has a strong determination in achieving a healthy university, competent and prosperous. It was stated clearly in the vision and mission and strategic plan of Unnes 2020 forward. To support and realize the Conservation of Unnes not only the fulfillment of infrastructure strategy or infrastructure but also the preparation of the mental attitude of the entire academic community, including students with quality learning, character, entrepreneurship development and conservation vision. The aims of this study are to develop authentic learning model based on competency and conservation to increase student interest and entrepreneurial attitude. Research and Development (R and D) Method was applied to reach the aims of the research. Based on analysis of the data indicates that authentic learning model based on competency and conservation effectively increase the academic activities, interest and an entrepreneurial attitude of the student, because the thoroughness of achievement and learning activities of students in the experimental class > 75%. Interest in entrepreneurship of the students reached 94%, and an entrepreneurial attitude of students reached 88%. Based on these results can be conclude that authentic learning model based on competency and conservation effectively applied in science entrepreneurship learning and successful to increase student interest and an entrepreneurial attitude.

Keywords - authentic learning, competency and conservation, interest and attitude of entrepreneurship

Introduction

Unnes (Semarang State University) as a conservation university has a strong determination in creating and managing renewable energy. It was stated clearly in the vision and mission and strategic plan Unnes 2020 forward. To support and realize the Conservation Unnes not only the fulfillment of infrastructure strategy or infrastructure but also the preparation of the mental attitude of the entire academic community, including students with quality learning and character. Lickona (2004) states that the formation of character and academic ability in the learning process can be done if a teacher / lecturer is able to select and use appropriate learning models.

The use of the learning model as a means of character education seems to be more effective and tend to approach the concept of character education really is. Through a problem-solving model, for example, a lot of the value of the character to be built, for example, honesty, hard work, discipline, curiosity, creativity, and several others. Similarly, through the constructivist model, the students will be built up value of character for example the character concerned about the environment, religious, recognize excellence, independent, and democratic. Similarly, through some other learning models (Abidin, 2012). Authentic learning (authentic learning) is a learning approach that allows students to explore, discuss, and build significantly concepts and relationships, which involves real issues and projects that are relevant to the student (Donovan, Bransford & Pallegrino, 1999). Authentic Learning Model potentially developed in science teaching and adapted to the existing lecture material, making projects, and learning outside the classroom to discuss solutions to environmental problems related to the
Previous research on the theme of conservation is on the development of learning modules integrated conservation science subjects to cultivate students who love the natural character (Sudarmin and Widiyatmoko, 2012). Expected with the theme of conservation can combine several subjects from the fields of physics, chemistry and biology which can shorten the time in the learning process. Referring to the results of research Taufiq, et. al (2014\textsuperscript{1}), that there is a significant relationship between the quality of science teaching and learning outcomes with attitude (character) environmentally conscious students. Lecturer or teacher can improve the quality of learning such as by learning innovation through the development of the model. This research will develop authentic learning model based on competency and conservation, which is adapted to the lecture material, create projects, and learning outside the classroom to discuss solutions to environmental problems related to the conservation with the aim to cultivate interest and attitude on entrepreneurship of college student.

**Theoretical Review**

Innovative learning is learning that applying the learning model and unique creative liveliness that tend to involve students in the learning process. Innovative learning created by paying particular attention to the characteristics of the student, the student environmental conditions and infrastructure are available, making it more challenging and exciting students to learn independently, and facilitate the achievement of the desired learning objectives. In general, learning approaches can be grouped into two expository and inquiry approach. Expository approach is learning that is centered on the lecturer. In this approach, students tend to act as an object of study, while the lecturer acting as an "agent" of knowledge that will be transferred to the students. Interactions that occur tend to be one-way and can be up to two-way. The learning method that is widely used is lectures, with possible variations debriefing. Inquiry approach that is also called discovery approach is a learning approach that is centered on students. In this approach, students tend to be actively involved as a subject of study, while the faculty to act more as a facilitator and at times can act as mediators (mediators and aligning). Interactions that occur tend to be multi interactions. Learning methods are used, among others, problem solving, discussion, question and answer, assignments, field studies, simulations, and demonstrations.

According to Taufiq, et. al (2014\textsuperscript{2}), Application of active learning models can support the internationalization of the curriculum readiness for supporting the readiness of learning and active learning models enhances the activity of the learning process so that student achievement can be increased and students are also getting active learning environment. With active learning through participation in each learning activity, will be trained and formed competence is the ability of students to do things that are positive that will eventually form a life skill as a provision live of his or her life. In order for the above to happen, professors should know how students learn and master various ways to educate learners. In other words, teachers/ professors need to know the different models of learning that discusses how students learn, and master a variety of learning models that discuss how to educate learners with different variations, so avoid the boredom and create a learning environment that is comfortable and fun . This is in line with research conducted by Taufiq, et. al (2014\textsuperscript{1}), that pleasure pupil / student in learning to use the media to follow a positive impact on student curiosity, so the learning activity increased notably reasoning that the independence of the students is also increasing. Contextual
learning is a learning environment that emphasizes life and experiences of students in the learning process, so that learning becomes more alive and more meaningful learning activities increased particularly reasoning that the independence of students also increased (Nurhadi, et al., 2004). Principles of contextual learning are expected to emphasize the following points:

1. Problem-based learning
   Learning should always be rooted in real problems as a context for students to think critically and find solutions strategy, in order to obtain a knowlege/new concept.

2. Teaching authentic (authentic construction).
   Learning should provide opportunities for students to learn the context of a meaningful life for him.

3. Inquiry-base learning
   Learning must use strategy and methodology of science meaningful and capable of weeks to train students to think critically, and were able to find and solve problems.

4. Project-base learning
   Learning should be able to design an environment so that students can conduct investigations / research on the object of study, and be able to carry out meaningful tasks.

5. The work-based learning
   Learning should allow students to use the context of the workplace to learn certain material, so that the material can be reused in the workplace.

6. Service learning
   Learning should emphasize the relationship between experience services-services that are practical and academic learning.

7. Cooperative Learning
   Learning requires the use of a small group to work together to maximize student learning conditions.

Authentic learning is a learning approach that allows students to explore, discuss, and build significantly concepts and relationships, which involves real issues and projects that are relevant to the student (Donovan, Bransford & Pallegrino, 1999). The principles of authentic learning are (1) student centered; (2) Students learn actively; (3) Using an authentic task.

The characteristics of authentic learning are (1) Learning centered on authentic tasks that arouse the curiosity of students. Authentic tasks such as solving real problems that are relevant to students' lives; (2) Students are involved in exploring and investigating; (3) Learning is interdisciplinary; (4) Learning is closely related to the world outside the walls of the classroom; (5) Students work on complex tasks that involve high-level thinking skills, such as analyzing, synthesizing, designing, process and evaluate information; (6) Students produce a product that can be distributed to an audience beyond the classroom; (7) Learning is active and is driven by the students themselves, while teachers, parents, and the speakers are helping or directing; (8) Teachers implement the provision of the strut (scaffolding), which provide the necessary assistance and let the students work independently when they can do it themselves; (9) Students have the opportunity to engage in public discourse; (10) Students work with many sources; 11. Students often work together and have ample opportunity for discussion in order to solve the problem.

In 2011, based on the Regulation of the Minister of National Education Republic of Indonesia Number 8 of 2011 on the Statute of the State University of Semarang, the vision of the University of Conservation increasingly Unnes as Resolute. Since then Unnes has a vision of "becoming a university of international conservation, healthy, superior, and prosperous 2020". Unnes campus-based governance is realized through the conservation of 7 (seven) main
pillars of conservation University. Seven main pillars of the University of Conservation include:
1. Conservation of biological diversity.
2. Green architecture and internal transport systems.
3. Waste management.
4. Policy paperless.
5. Clean energy.
6. Conservation, ethics, art, and culture.
7. Conservation Agent.

Conservation vision for the purpose of conservation as a way of looking at basing on seven main pillars of conservation in solving environmental problems and realize the goal. There are 11 conservation value character developed in Unnes, namely: religious, honest, intelligent, fair, responsibility, caring, tolerant, democratic, patriotism, tough, and well mannered.

Relevant research studies include Borthwick, et al (2007) declare that as the university is moving towards a more vocationally oriented programs, students hoping pedagogical practices that create a closer relationship with potential pedagogical approaches Workplaces. Authentic learning is suitable for this purpose because the proposed model of apprenticeship-type and model that brings simulated work tasks in the classroom. Rule (2006) asserted that the four themes that support authentic learning, which are identified through analysis of the contents of forty-five articles describing authentic learning in different disciplines: 1) activity involves real-world problems that mimics professional work in the discipline with the presentation of findings to an audience beyond the classroom; 2) open the investigation, thinking skills, and metacognition handled; 3) students engage in discourse and social learning in a community of learners; and 4) students are empowered through choice to direct their own learning in the work of the relevant project.

**Research Methods**

The research applied Research and Development (R and D) methods, which is directed to develop Authentic Learning Model based on competency and conservation. The subjects of the research are students majoring in Integrated Science Faculty UNNES 4th semester of the school year 2014/2015. The steps of research and development (Adapted from Sugiyono, 2009) are:
1. Identification of Potential and Problems
2. Data Collection
3. Design Model
4. Design Validation
5. Revised Design
6. Test Model
7. Revised Model
8. Field Trial
9. Completion of Final Products

Limited scale trials test using one-shot case study design, samples are first class. While large-scale trials using the design of the control group pre-test to post-test samples are 2 classes, experimental and control classes. The main focus of this research is to increase student interest and an entrepreneurial attitude. Data collection techniques used is documentation, assessment of student achievement, student activity assessment, assessment of students' interests and entrepreneurial attitudes. Analysis of data on research and development include: Qualitative analysis of a competency-based learning model and the conservation and study of entrepreneurial practice authentic tasks.

**Results and Discussion**

Student entrepreneurial interest calculation results indicate there is differences in the percentage of interest in entrepreneurship between experimental and control classes. Results can be seen in table 1. Differences
between the experimental class of entrepreneurial interest and control strengthened by comparisons between the study samples. Comparative test results showed no differences between the experimental class entrepreneurial interest, but there are significant differences between the experimental and control classes. The calculation and analysis show that authentic learning model based on competency and conservation can increase student interest in entrepreneurship.

Table 1. Student entrepreneurial interest

<table>
<thead>
<tr>
<th>Class</th>
<th>Criteria</th>
<th>Very high</th>
<th>High</th>
<th>Enough</th>
<th>Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.</td>
<td></td>
<td>18%</td>
<td>70%</td>
<td>12%</td>
<td>-</td>
</tr>
<tr>
<td>Con.</td>
<td></td>
<td>-</td>
<td>22%</td>
<td>72%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Increased interest in entrepreneurship on student self-learning due to be implemented to encourage students to understand more in matters relating to entrepreneurship through the delivery of teaching materials and practices directly. This is in line with the opinion of Atmono (2008) which states entrepreneurial education that emphasizes the direct practice have a major contribution to the success of students' increased interest in entrepreneurship. In addition to practical activities undertaken, other factors that can foster student interest in entrepreneurship is the personal encouragement of the students themselves (Purwaningsih & Ninggarwati, 2006). The increase in interest in entrepreneurship from within the students themselves after a learning experience that will impress them for their entrepreneurial activity. The calculation of student entrepreneurial attitude observations indicates that there are differences in entrepreneurial attitudes between the experimental and control classes. Results can be seen in Table 2. Based on these results it can be shown that learning to use a competency-based learning model authentic and conservation can improve the entrepreneurial attitude in students.

Table 2. The entrepreneurial attitude differences between the experimental and control classes

<table>
<thead>
<tr>
<th>Class</th>
<th>Criteria</th>
<th>Good</th>
<th>Enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp.</td>
<td></td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>Con.</td>
<td></td>
<td>-</td>
<td>100%</td>
</tr>
</tbody>
</table>

Increased entrepreneurial attitude on students is influenced by the quality of programs and educational planning (Muhadi and Saptono, 2005). Improving the quality of educational programs can be done by improving the quality of learning in schools, in this case the selection and planning learning activities undertaken by the students. Entrepreneurial attitudes of students are growing because of the learning activities undertaken to stimulate the students to behave positively. According to Bayu (2009) positive attitude of students, allow students to express the values it stands for. In other words, each student will attempt to translate the values he believed in a context more real attitude.

Based on all the authentic learning model based on competency and conservation are considered effective applied in science entrepreneurship lecture. In addition this model can also increase interest and entrepreneurial attitudes of students because of all the activities and learning tools that others are prepared to allow students to work directly in entrepreneurial activity based on science and conservation vision through authentic task completion, also a student can understand and love things related to entrepreneurship. These results underline the feasibility of authentic learning model based on competency and conservation to be used in the actual learning activities in the field.

Conclusions and Recommendations

Based on analysis of the data indicates that authentic learning model based on competency and conservation effectively
increase the academic activities, interest and an entrepreneurial attitude of the student, because the thoroughness of achievement and learning activities of students in the experimental class > 75%. Interest in entrepreneurship of the students reached 94%, and an entrepreneurial attitude of students reached 88%. Based on these results can be concluded that authentic learning model based on competency and conservation effectively applied in science entrepreneurship learning and successful to increase student interest and an entrepreneurial attitude.

Authentic learning model based on competency and conservation are considered effective applied in science entrepreneurship lecture. In addition this model can also increase interest and entrepreneurial attitudes of students because of all the activities and learning tools that others are prepared to allow students to work directly in entrepreneurial activity based on science and conservation vision through authentic task completion, also a student can understand and love things related to entrepreneurship. Authentic learning model based on competency and conservation recommended to be used in the actual learning activities in the field.

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