Journal of Harbin Engineering University
ISSN: 1006-7043
Vol 44 No. 7
July 2023

HOTSEP Based Inquiry Learning Model Development in Innovation of Sikatria, Geriatric and Fantasy Cosmetics

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Abstract: Many 21st century learning models focus on environmental stewardship. This study aims to develop a Higher Other Thinking Skills of Environmental Problem (HOTSEP) based inquiry learning model in basic beauty subjects. The method used is Research & Development. The sampling technique with purposive sampling in accordance with the research objectives. The number of respondents involved was 30 people. The instruments used were pre-test and post-test. Respondents were given treatment for eight meetings with a duration of 45 minutes multiplied by two. Based on the results of data analysis using the effectiveness test, it is evident that there is a significant increase in student learning outcomes after learning using the development of HOTSEP-based geriatric and fantasy makeup inquiry learning models.

Keywords: Inquiry learning, Fantasy, Makeup Technique Innovation

INTRODUCTION

Development in learning is a conscious, planned and directed effort to facilitate, and improve the quality of learning outcomes. The selection of models and strategies that are suitable for learning needs to be done so that the learning objectives reach the target well. Learning development carried out by teachers is very useful for increasing students' understanding and activity in learning activities so that the teaching and learning process takes place optimally(Ahmed & Indurkhya, 2020; Botturi, 2019; Szabo et al., 2020). The development of learning models is useful as a guide in making a good learning process plan so that it can improve students' thinking. On the other hand, (Becker & Eube, 2018) state that teachers need to have knowledge in integrating technology, pedagogical knowledge, and content in learning. Teachers need to carry out strategies that can improve students' problem-solving skills in dealing with technological developments in 21st century learning(An, 2018; Hurst et al., 2013; Mahmudah & Santosa, 2021; Slijepčević & Zuković, 2015; Star et al., 2013). Students are required to think systematically, critically, logically, and have an unyielding attitude to find solutions to problems faced. This is one of the learning approaches through problem solving. Students will learn to find solutions based on their experience and knowledge.

The inquiry learning model helps the learning process that provides opportunities for students to test and interpret problems systematically that provide conclusions based on evidence.(Cambridge Assessment, 2017; Radhamani et al., 2021; Wang et al., 2015) Basically, all forms of learning approaches are student-cantered, to be able to provide quality education. Education needs to be characterized by planned, place-oriented learning activities and social interaction in the classroom(Chen et al., 2020; Podolskij, 2020; Yamaç et al., 2020). However, the process of knowledge transfer in learning can be disrupted if the delivery of the learning model used is not appropriate. This will cause the information conveyed cannot be understood properly. If this is not resolved immediately, achievement and knowledge transfer will not go according to the predetermined goals. Efforts to improve learning are not a necessity, but a necessity. The inquiry learning model is the most appropriate learning model to be applied to solve problems in learning(Fatonah et al., 2020; Morrison, 2013; Shanmugavelu et al., 2020).

Teachers need to adjust curriculum changes according to the demands of the times and the conditions that exist in the environment by implementing the development of learning models to encourage learning for students. (Chu et al., 2016)states that the main characteristic of the inquiry learning approach is that it emphasizes maximum student activity to search and find (placing students as learning subjects), all activities carried out by students are directed to seek and find their own answers to what is questioned so that it is expected to foster self-confidence and develop the ability to think systematically, logically, and

critically or develop intellectual abilities as part of the mental process.

However, in reality, the implementation of learning with the inquiry learning model still has weaknesses and problems that students and teachers must face. The weaknesses in inquiry learning are shown by several research results, namely research conducted by (Silen & Uhlin, 2008). The research suggests that inquiry learning has weaknesses such as the existence of delinquency in adolescents because they have not understood the material from the teacher and have not been able to solve the problems faced today. In addition, (Mulyasa, 2007)argues that there are two shortcomings of the learning model. First, the complexity of planning education due to the habits of students in learning. Second, the difficulty in controlling the activities of students. Therefore, students must have the ability to learn actively. This requires students to carry out higher order thinking (HOTS). (Abosalem, 2016)stated that the measurement of HOTS uses a new level of thinking called Higher Other Thinking Skills of Environmental Problem (HOTSEP). Higher Other Thinking Skills of Environmental Problem (HOTSEP) is a new instrument developed for environmental learning.

Based on the description above, it can be concluded that HOTSEP-based learning is very useful for developing student competencies. This is related to the competence of students in the field of makeup creativity which requires complex development. In addition to professionalism in the field of skills, working also requires accuracy in analysing, evaluating and applying it in making a makeup work. On the basis of the weaknesses and advantages contained in previous studies, this research will solve the problems found in the learning model experienced by students in Vocational High Schools. Development of an inquiry learning model by integrating the theory and practice of makeup in basic beauty subjects in class XI.

RESEARCH METHODS

A research design is the plan and structure of an investigation that is organized in such a way that the researcher will be able to obtain answers to his research questions(Sylvia et al., 2014). In other words, the research design is a comprehensive scheme that includes the research program. The research design is useful for providing answers to research questions and controlling or controlling variance.

(Gall et al., 2016)stated that research and development is a process or method used to validate and develop products. The products referred to in this statement are not only objects such as textbooks, films for learning, and computer software, but also methods such as teaching methods and programs such as educational programs. Several types of research are used in education, one of which is R&D (Research and Development). (Sugiyono, 2016)states that research and development serves to validate and develop products. Validating a product means that the product already exists, and researchers only test the effectiveness or validation of the product. Developing products in a broad sense can be in the form of updating existing products (so that they become more practical, effective, and efficient) or creating new products, including R&D. Before producing a product, researchers first analyze the problem, which is indicated by empirical data obtained through various data sources, then the effectiveness of the product will be tested.

The respondents involved in this study were 30 people. The sampling technique used was purposive sampling. According to (Sugiyono, 2016), the sample is part of the number and characteristics possessed by the population, sampling is done with consideration of the limitation factor that does not allow the entire population to be studied. The data collection technique used in this research is field research. Researchers obtained primary data with pre-test and post-test instruments to respondents to obtain the information needed in this study so that the data made was really in accordance with the actual situation at the time of the research. Data analysis technique with t test to determine the effectiveness of the product developed.

RESULTS AND DISCUSSION

The results of the analysis carried out regarding the ability of students, especially in the competence of the affective, cognitive, and psychomotor levels of students are very diverse so that the problems that arise during inquiry learning of cosmetology, geriatrics, and fantasy are found and then processed and evaluated during learning by conducting problem solving that spurs on the mindset of students to process the ability to think critically, creatively and systematically with Higher Other Thinking Skills of Environmental Problems

(HOTSEP) in inquiry learning of cosmetology, geriatrics, and fantasy which are developed into questions.

The field trial was conducted with 30 children, which was adjusted to the number of children in SMK. The main trial process was carried out by giving a learning model and given an intervention with learning for eight meetings. This is done because to identify deficiencies or weaknesses in the learning model, both the material, instructional objectives and the results of cognitive skills that are expected to improve critical thinking skills, understanding of recognizing makeup techniques. In accordance with the main objectives of learning by using the inquiry learning module of cosmetology, geriatrics and HOTSEP-based fantasy in basic beauty subjects. In addition, the field trial criteria before the intervention was carried out, a pre-test was carried out to see the child's initial understanding of the introduction of the development of the inquiry learning model by integrating the theory and practice of makeup in basic beauty subjects and at the end of the learning process a post-test was given to measure cognitive skills towards learning by using the inquiry learning module of cosmetology, geriatrics and HOTSEP-based fantasy in basic beauty subjects. The results of the pre-test results of this field trial can be seen in table 1.

Table 1. Results of Pre-test and Post-test

No.	Respondent	Pre-Test	Post-Test
1.	Respondent-01	28	36
2.	Respondent-02	32	36
3.	Respondent-03	30	36
4.	Respondent-04	29	36
5.	Respondent-05	28	36
6.	Respondent-06	27	36
7.	Respondent-07	25	36
8.	Respondent-08	25	36
9.	Respondent-09	24	36
10.	Respondent-10	24	36
11.	Respondent-11	24	36
12.	Respondent-12	24	36
13.	Respondent-13	23	35
14.	Respondent-14	22	35
15.	Respondent-15	22	32
16.	Respondent-16	21	32
17.	Respondent-17	21	31
18.	Respondent-18	21	31
19.	Respondent-19	21	30
20.	Respondent-20	21	29
21.	Respondent-21	21	28
22.	Respondent-22	20	28
23.	Respondent-23	20	28
24.	Respondent-24	20	28
25.	Respondent-25	19	28
26.	Respondent-26	18	28
27.	Respondent-27	18	28
28.	Respondent-28	18	28
29.	Respondent-29	16	27
30.	Respondent-30	13	22
	Means	22,5	32

Before testing the effectiveness with the paired t test, the normality test is carried out first to find out the distribution of data. The results of the normality test can be seen in table 2.

Table 2. Normality Test Results

	Results of Pre-Test	Results of Post-Test
N	30	30
Mean	22.5	32
Std Deviation	4.273	4.060
Asymp. Sig. (2-tailed)	0.156	0.238

Based on the normality test results in table 2, the Sig value is obtained. 0.156> 0.05, it can be concluded that the data is normally distributed so it can be continued with the t-paired test as for the results of the t-paired test can be seen in table 3,

Table 3. Results of t-paired

Df 29	Results of Pre and Post-Test
Mean	-9,5
t- statistic	25.214
t- Table	1.703
Sig. (2-tailed)	0.000

Based on table 3, the t-statistic value is 25.214 when compared to the t table at df 29 that the t-statistic is 25.214> t table 1.703, meaning that the pre-test score is different from the post-test. It can also be seen by looking at the Sig. (2-tailed): 0,000<0.05. This means: there is a difference between before and after treatment. For the Mean value: -9.5 is negative, meaning that there is an upward trend in post-test scores after treatment. The average increase is 9.5. It can be concluded that, the learning model is effective to improve HOTSEP-based *sikatri*, *geriatri* and fantasy makeup techniques.

The findings of this study are that by providing training treatment for four months through HOTSEP-based cascade, geriatric and fantasy makeup techniques, there are changes in the improvement of makeup techniques. The product resulting from this development is a HOTSEP-based inquiry learning module for innovations in *sikatri, geriatri* and fantasy makeup techniques.

Based on the data from the analysis of the field trial results that the learning model is effective for improving the ability of HOTSEP-based *sikatri*, *geriatri* and fantasy makeup techniques so that the products developed can be implemented for the learning process at the State Vocational High School 1 Kemang, Bogor Regency.

Based on the results of the paired t-test, it is known that there is a significant difference between learning by using the HOTSEP-based makeup, geriatric and fantasy inquiry learning module and before using the module. Therefore, the development of the HOTSEP-based *sikatri, geriatri* and fantasy makeup inquiry learning module is declared effective. It can be interpreted that learning through the inquiry learning module of *Sikatri, geriatri* and fantasy makeup has a significant impact on student learning outcomes. This refers to the theory that it can be concluded that the HOTSEP-based *sikatri, geriatri* and fantasy makeup inquiry learning module is a new thing, but it can have a positive effect on learning both as teaching material for teachers and as a learning book for students, because this HOTSEP-based makeup inquiry learning module is a learning unit that is structured in a directed and systematic manner. Implementation using easy-to-understand delivery to support the learning process that is independent and conventional.

The development of the HOTSEP-based cosmetology, geriatric and fantasy makeup inquiry learning model is carried out through the steps of the Inquiry Learning Model. (Kuhn et al., 2000) states that the steps of inquiry learning consist of: (1) Orientation Stage. This stage is the first time students are introduced to the learning

environment, and teaching materials about learning (2) The stage of formulating problems. This problem formulation covers what to look for answers to related problems contained in learning. At the stage of formulating the problem, students are directed to a problem that requires solving. For example, demonstration is one way that attracts students' attention. Thus, students are challenged to find out what is happening and formulate in a question or statement that must later be answered by themselves. (3) The stage of formulating hypotheses. Temporary answers related to problems that are often encountered during learning in learning by asking several related questions. (4) Data collection stage. After students have temporary data found related to learning, then students are asked to look for supporting data as evidence in the hypothesis. Students can carry out activities to collect the information needed to test the hypothesis they have made. (5) The stage of testing the hypothesis, after obtaining and collecting the data needed, students can be able to test the hypothesis to get evidence of true or false about the hypothesis. This step is useful for training students' rationality by testing the hypothesis that has been made by comparing with existing data. (6) The stage of drawing conclusions, students conclude the results of the hypothesis data test and continue with communication with other students through presentations. Students are required to describe the findings that have been obtained based on the results of hypothesis testing so that they can reach an accurate conclusion.

(Wijaya et al., 2022)also stated that in the implementation of 21st century learning, a teacher is expected to have the ability and must understand TPACK (Pedagogical Content Knowledge). This is useful to make it easier to hone the 4C skills and master and understand the technology that is demanded in the 21st century. The 4C skills consist of critical thinking, communication, collaboration, and creativity in accordance with the demands of today. In addition, educators are also expected to understand about HOTS in 21st century learning to make it easier to hone their abilities.

Higher Order Thinking Skill (HOTS) is related to the concept of educational development based on taxonomy. According to (Ukobizaba et al., 2021), the New Taxonomy explicitly addresses the cognitive, affective, and psychomotor aspects of learning. According to (Goyal et al., 2022), Bloom's Taxonomy classifies educational objectives into three domains. These three domains consist of the cognitive domain, affective domain, and psychomotor domain. The Cognitive Domain contains various behaviors that emphasize intellectual aspects such as knowledge, understanding, and thinking skills. Then, the Affective Domain contains various behaviors that emphasize aspects of feelings and emotions such as attitudes, interests, appreciation, and ways of adjusting. Meanwhile, the Psychomotor Domain contains various behaviors that emphasize aspects of motor skills such as swimming, handwriting, typing, and operating machinery.

Bloom's taxonomy is all activities that involve the brain and this is divided into 6 levels according to the lowest to highest level symbolized by C (Cognitive). C1 (Knowledge) emphasizes memory, namely recalling material that has been learned. C2 (Comprehension / Understanding) is the ability to understand certain material that has been learned. C3 (Application) is the ability to apply information to real situations. C4 (Analysis) is the ability to decompose material into clearer components. C5 (Synthesis), which is the ability to produce and combine elements to form a unique structure, a complete plan or activity, and a set of abstract relationships, namely: the ability to produce and combine. Students are required to produce their own hypotheses or theories by combining various sciences and knowledge. C6 (Evaluation) is the ability to assess the benefits of something for a particular purpose based on clear criteria, the ability to produce and combine. Students are required to produce their own hypotheses or theories by combining various sciences and knowledge.

CONCLUSION

The development of the HOTSEP-based *Sikatri, Geriatri*, and Fantasy Makeup Inquiry Learning Module, gives implications to teachers and that the learning module, student learning outcomes improve in a better direction, because with the module, it can facilitate learning and assignments. The results of the review of media experts and material experts show that the learning modules that have been tested, need, and deserve to be developed for use as teaching materials. The results of data analysis show that the learning module for the development of an inquiry learning model for cosmetology, geriatrics and fantasy based on

HOTSEP is feasible and effective for improving learning.

The limitations of this study are that the HOTSEP-based inquiry learning model in the subjects of cosmetology, geriatrics and fantasy, the research time is very limited because schools are still in the pandemic transition period.

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