

ADDIE MODEL THROUGH THE TASK LEARNING APPROACH IN TEXTILE KNOWLEDGE COURSE IN DRESS-MAKING EDUCATION STUDY PROGRAM OF STATE UNIVERSITY OF MEDAN

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*Corresponding Author, Received: 22 Augst 2016, Revised: 13 Dec 2016, Accepted: 13 Jan 2017

ABSTRACT: The realization of vision and mission of Dressmaking Education Study Program are determined by suitability and adequacy of policies, namely improving the competence of graduates in order to increase the students' capability. In order to achieve that, innovative strategies and learning models are designed. The textile knowledge course is a basic subject that must be mastered by students, but the reality shows that there are a lot of students who have not passed the standard competence. The purposes of the study are to (1) produce a learning model that is ADDIE instructional model with task learning approach, (2) determine the effectiveness of development of ADDIE instructional model with task learning approach. The development of the model was done in Dressmaking Education Study Program State University of Medan. The data is analyzed using qualitative descriptive technique. The data is validated by three experts: subject, instructional design, and media experts. The result shows the assessment points of the feasibility aspects of content, presentation, language, and graphical are feasible for use in study. The evaluation of the study by the experts shows the following results: 86.7%, 87%, and 89.5% from subject, instructional design, and media experts respectively. Analysis of the trial data were 58.7% in small class, 74.2% in medium class, and 92.9% in large class/field. The result of ADDIE instructional model using task learning approach is feasible to be used to improve learning results of students of dressmaking education study program.

Keywords: ADDIE Development Model, Approach to Task Learning and Knowledge Textiles

1. BACKGROUND

Student learning success is achieved based on lecturer's ability in delivering the lesson because of their role as a motivator and a facilitator in achieving the learning objectives. Textile Knowledge course is a basic course that provides students with knowledge and skills to know how to identify textile fibers to introduce textile products, to recognize textile raw materials, to know the process of making raw materials into fabric, and how to take care of the fabric.

The learning process will take place properly if it is supported by a good learning program and a conducive academic environment. To improve academic, intellectual, emotional, and spiritual quality of graduates, it is necessary to use the cognitive, affective, and psychomotor approach. Therefore, learning programs should not only be in one direction, lecturers should give students an opportunity to optimize their potential.

Learning material is a component in the curriculum that should be delivered to the students. This component comes in various forms: facts, concepts, principle, rules, procedures, and problems. This component serves as the material to be mastered by students in learning activities and systematically arranged in the organizational structure of the curriculum.

Textile knowledge learning material development needs to consider appropriate development models to guarantee the quality. The use of the development models of learning must also be systematic with theory to guarantee the quality of learning materials. This study was designed to solve the learning problems and produce a Textiles Knowledge learning model. In doing so, the researcher is to determine the steps of the development of textiles knowledge using the ADDIE model with task learning approach and improve learning outcomes of students using the ADDIE instructional model using task learning approach.

2. THE ORETICAL STUDY

2.1 Textile Knowledge Subject

The purpose of studying Textile Knowledge is so that students do not make mistake in choosing the textiles needed for a particular purpose because many of the common fabrics have different quality, usage, and maintenance. Students are also expected to be able to recognize clothing label. In addition, they are expected to know the basics of the textiles knowledge and understand the condition of the textile materials in the market. The Standard Competences demand the students to be capable of describing the definition of raw materials textile,

identifying the types of fiber textile in the market, and explaining textile manufacturing processes-starting from natural or artificial fibers into fabrics.

2.2 ADDIE Instructional Model

Reference [2] says ADDIE model is an abbreviation of the Analysis, Design, Development or Production, Implementation or Delivery and Evaluations. This model can be used for wide variety of products of development such as model, instructional strategy, learning methods, media and teaching materials. ADDIE model was developed by Dick and Carry were to design an instructional system [1].

2.3 Task Learning Approach in Learning

Task Learning is a learning approach, where a task is focused in learning not as a learning objective. The role of lecturer is not only as a facilitator but also a supervisor monitoring the students. Students can learn to find literature about learning content, formulate ideas, make inferences and solve problems. However, the research on development of students' critical thinking dispositions on active learning in the course of Textile knowledge has never been done. In this study, the researcher wants to know the effect of task learning to the development of students' critical thinking dispositions in textiles knowledge learning.

According to Rowland, task is an activity that occurs as a result of processing [3]. According to this definition, the task is defined in terms of what will be done in the classroom rather than outside the classroom. The task usually requires lecturer to determine what will be done to support the success of the task. The tasks need to have various forms so that the students are not bored. Furthermore, Molenda says that task is a part of classroom learning activities in understanding, manipulating, producing, or interacting in the target of attention concerning students, especially more focused on meaning [2]. So, the tasks performed by students in learning are more concerned with meaning. In the process of learning with the design of task-based learning, lecturers assign tasks in the form of learning activities in the textile knowledge that is more concerned with meaning and oriented to learning objectives.

3. RESEARCH METHODOLOGY

This research is the development research of ADDIE model using task learning approaches. The research subject is Textile Knowledge subject students with the sample of 42 students of the Dressmaking study program. The instruments to

collect the data were three types of a needs analysis questionnaire: a questionnaire for being validated by subject experts, instructional design experts, and learning media experts. Prior to the trial in field, the instruments were validated by three experts of subject, three instructional design experts, and three learning media experts. Data collected through the formative evaluation is grouped into two parts: (1) the first evaluation data which is the test result of subject matter, instructional design, and learning media experts; (2) the second evaluation data is the results of field trial, in the form of review from the students and lecturers in Textile Knowledge subject.

3.1 The Design ADDIE Model Development

This model uses five stages of development: a) Analysis; during this stage, needs assessment, problems identification, and tasks analysis are carried out. The out put are the characteristics of the participants, gaps identification, needs identification, and analysis of the detailed tasks based on the needs. b) Design; this phase is to formulate specific, measurable, applicable, and realistic learning objectives, devise tests, determine the learning strategies, the right media and learning resources and environmental learning. c) Development; d) Implementation; Implementation or delivery of learning materials is a concrete step to implement the learning system. At this stage, all of that has been developed in the development stage is implemented in real life. e) Evaluation; the evaluation phase can occur at any of the four stages above. When evaluation happens at any of the four stages above, it is called formative evaluation because its goal is to revise. Evaluation is the final step of the ADDIE model of learning systems design. Evaluation is a process done to evaluate and give score to the learning program.

3.2 Data Analysis Techniques

The data in this research is obtained from the validation test, beginning trial, and field trials involving the research subjects: three lecturers (subject expert) as reviewers, three instructional design and media experts, and dressmaking education students. There are both quantitative and qualitative data. Quantitative data is obtained from experts test or validation, trial run, and field trial. In the experts test phase, the quantitative data was obtained using a Guttman scale checklist [8]. This qualitative descriptive analysis technique was used to process data from the review of subject experts, instructional design experts, learning media experts, students, and lecturers. Data analysis techniques performed by classifying the information of qualitative data as feedbacks, comments, criticisms,

and suggestions for improvements. The results of the data analysis were then used to revise learning products.

The qualitative data in this research are the result of questionnaire review of product assessment, the results of field observations and interviews at the needs analysis phase, and the trial run. Qualitative data derived from observations serve to provide information about the problems that arise. The qualitative data obtained from interviews provided information about problems in learning outcomes, to complete the assessment of needs analysis and to fulfill all aspects in the product assessment instruments. The qualitative data obtained from the experts serves to determine the feasibility of product and to revise the product based on the corrections given in the assessment instruments.

4. RESULT AND DISCUSSION

4.1 Research Result of Product Development

The implementation of design development of ADDIE instructional model using task learning approach in the textile knowledge subject was done gradually. The initial stage of research and development is to analyze the needs of lecturers and students in the learning process. The result shows that 68.75% of the students stated that they really need the design development of ADDIE instructional model using task learning approach on textile knowledge subject in order to allow students to receive lessons well. 100% of lecturers stated that they require the development of media-aided learning model design in addition to modifications in the way of teaching and learning to make the learning process more effective and interesting.

Based on the results above, design development of the ADDIE learning model with task learning approach is needed by lecturers and students. The next step was to design and develop ADDIE instructional model design using task learning approach.

Some aspects that are used to revise the product includes feasibility, presentation, graphics, and linguistic aspects in order to produce a viable ADDIE instructional design with task learning approach used in Textile Knowledge subject properly.

The stages of product trials are as follows: (1) validation by subject experts, (2) validation by instructional design and media experts, (3) small group trial of 5 students, (4) the first revision from subject matter, learning design and media experts, (5) medium group trial of 17 students, (6) the second revision from subject, learning design and media experts, (7) large class trial of 42 students,

(8) the final revision of subject, instructional design, and media experts, (9) the final product.

4.1.1 Results of Trial Phase I (Validation by Experts)

Validation from subject matter experts to ADDIE instructional model design development using task learning approach is performed by subject matter experts of dressmaking study program lecturers. The validation results in the form of scores of the components of the ADDIE instructional model design development with task learning approach on textile knowledge subject on all aspects which include: the feasibility of the learning material contents, the learning presentation, and the language.

The validation of subject matter is in the form of scores of the components of the ADDIE instructional model design development with task learning approach on textile knowledge subject matter. Based on the validation from the subject experts, the feasibility of the product, including the quality of the material of textiles knowledge presentation and the tests, was considered very good. The other aspects, including the introduction quality, the involvement and the role of students in learning activities, the feedback quality, as well as the presentation time, were rated as good, as seen in Figure 1. Overall aspects of the learning presentation feasibility were rated "Very Good".

The instructional design experts assessed ADDIE learning model development design with task learning approach in the subject matter of textiles knowledge as follows: the feasibility of the content 86.6%, the presentation 86.7%, and the graphics 88%.

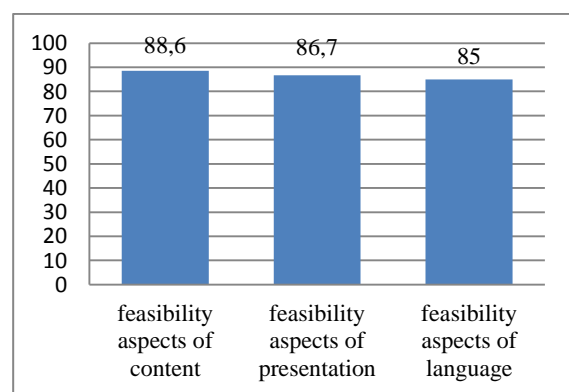


Fig.1 Diagram score of ADDIE instructional model development design by subject matter experts

Overall, the scores are in the excellent category, which can be interpreted to meet the demands of learning. The scores of instructional design experts assessment results can be seen in Figure 2 below.

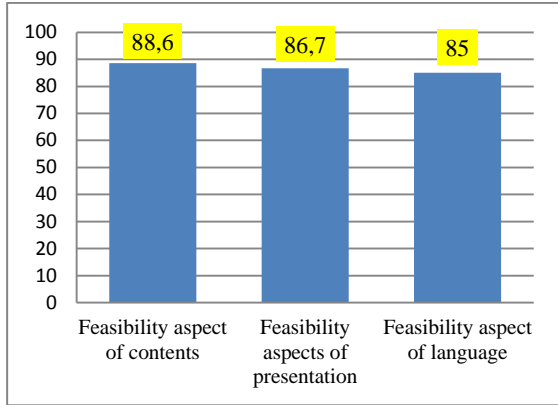


Fig.2 Score of ADDIE instructional model development design by learning design experts

The learning design experts say that ADDIE instructional design with task learning approach in textile knowledge subject matter was very good and acceptable in general but there were some suggestions and input to increase the feasibility of the product. The input from instructional design experts are as follows: 1) Understand the ADDIE instructional model, 2) Adjust with learning conditions, 3) Pay attention to every lesson plan.

Learning media experts assess that the ADDIE instructional model development design with task learning approach in the textiles knowledge subject based on three aspects: the feasibility of the content of 93.3%, the presentation of 88.6%, and the language of 86.7%. Overall, the scores are in the excellent category, which can be interpreted to meet the demands of learning. It can be seen in Figure 3, below.

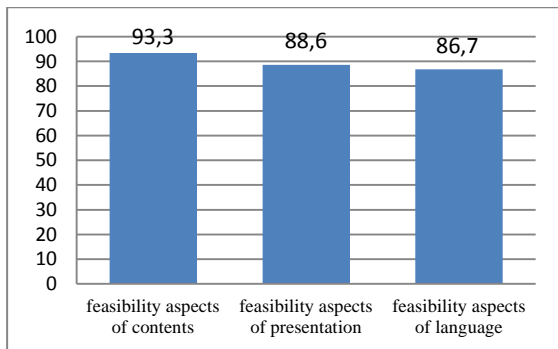


Fig.3 Empirical score of ADDIE instructional model development design model by learning media expert

Learning media experts asserted that ADDIE learning design using task learning approach in textile knowledge subject was generally very good and acceptable but there were some suggestions and input to increase the feasibility of the product. The feedback from the learning media experts is as follows: 1) Adapt the content to the learning objectives to be achieved, 2) Adjust the given task

to the level of of cognitive, affective and psychomotor ability to be achieved.

The analysis results of the small group trial are determined from the average score in each category of assessment from each reviewer. The assessment results were then analyzed to determine the shortcomings of the product of ADDIE model development design with task learning approach in the textiles knowledge subject. The average percentage is shown in Figure 4 below.

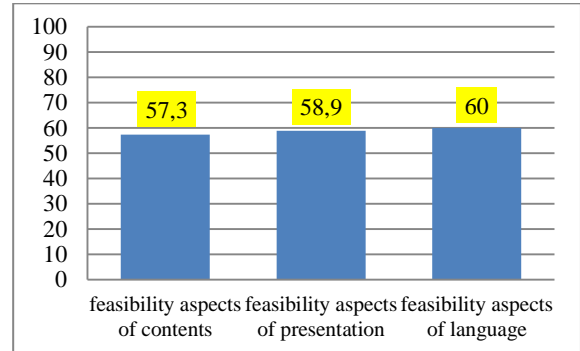


Fig.4 Average score of ADDIE instructional model development design in small group trial

The assessment results in small group trial of 5 students based on three aspects are as follows: the feasibility of the contents of 57.3%, the presentation of 58.9%, and the language of 60%. Overall, the result is in “adequate” category. The results of assessment of the ADDIE instructional model development design with task learning approach on textile knowledge subject indicated that the developed product is fit for use and there were suggestions for improvements. The development continues in the medium group trial was on the second revisions.

The data from the medium group trial on every aspect of the assessment is shown in Figure 5 below. It shows the percentage of the assessment results on the medium group trial of 15 students based on three aspects: the feasibility of the content of 70%, the presentation of 75%, and the language of 77.6%. Overall, the score is in “good” category.

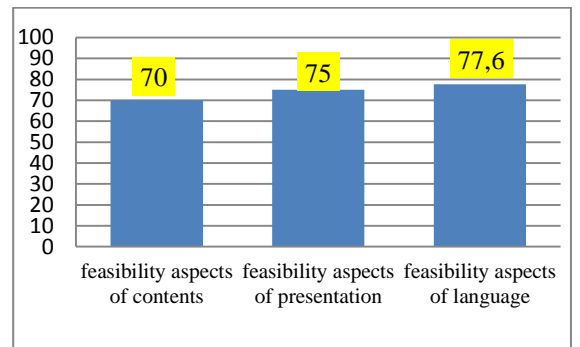


Fig.5 Score of ADDIE instructional model development design in the medium trial group.

The assessment results of the ADDIE instructional model development design with task learning approach in textiles knowledge subject in general were good. There were no suggestions for improvements and the study can be continued on a large trial group. The analysis results of data on a large trial group on any aspect of the assessment will be outlined in Figure 6 below.

The assessment results of large group trial of 42 students based on three aspects are as follows: the feasibility of the contents of 93.3%, the presentation of 93.8%, and the language of 91.6%. Overall, the score is "very good".

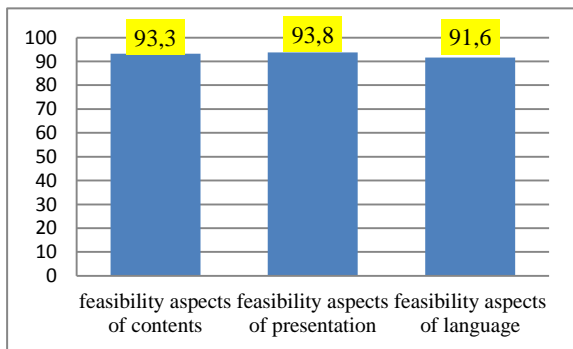


Fig. 6 Empirical score of ADDIE model development design on a large group trial.

The assessment results of the ADDIE instructional model development design with task learning approach in textile knowledge in general was excellent and there were no suggestions for improvement so there would be no fourth revision. This is evident from the rising overall score of trial results of small, medium, and large group.

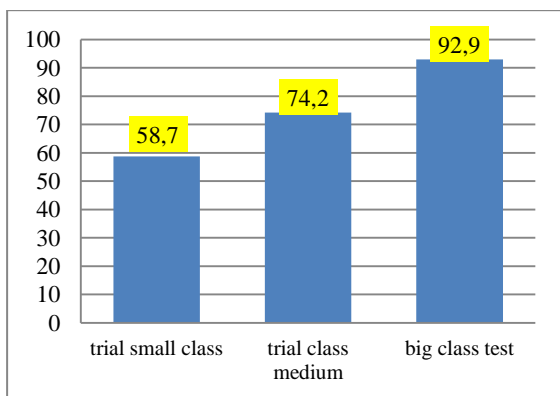


Fig. 7 Score of ADDIE instructional model development design in the small, medium, and large group trial on the overall aspect.

4.1.2 Effectiveness Test Data Analysis

The analysis of effectiveness test data results is performed to determine whether the products are

feasible to be used as a learning instrument. Effectiveness test is conducted on 3 lecturers' and 42 students in dressmaking study program. Based on the needs analysis of lecturers and students, the following results are obtained:

1. A statement on whether ADDIE instructional model design using task learning approach fits the purpose of learning: 100% of the lecturers stated strongly agreed while 90.6% students expressed strongly agree.
2. A statement on whether learning media appearance is very interesting to see: 66.7% of the lecturers stated strongly agreed while 96.9% students expressed strongly agree.
3. A statement on whether the ADDIE instructional model design using task learning approach on textile knowledge subject matter is easy to understand; 100% of the lecturers stated strongly agreed while 84.37% students said strongly agree.
4. A statement on whether the learning media increase students learning motivation and enthusiasm; as much as 66.7% of the lecturers stated strongly agree, while 93.7% of the students also expressed strongly agree.
5. In a statement about the images appearance on the media; the lecturers answered strongly agree as much as 100% while the students stated strongly agree 100%.
6. Statement on whether ADDIE instructional model design using task learning approach in textile knowledge subject was very helpful in the learning implementation; 66.7% of the lecturers stated strongly agree, while the students answered strongly agree as much as 96.9%.
7. On the statement of the assignment on task learning approach helps to understand the concept correctly; 66.7% of the lecturer stated strongly agree and 87.5% of the students stated strongly agree also.
8. In a statement about whether the material presented through ADDIE learning model design with task learning approach can be understood by students; 66.7% of lecturers stated strongly agree and 93.7% of students also expressed strongly agree.
9. In a statement about the ADDIE instructional model design with task learning approach; lecturers stated strongly agree of 100% and students also expressed strongly agree of 100%.

Based on the data analysis result of the effectiveness test can be concluded that the ADDIE instructional model design development using task learning approach is ready to use in textile knowledge subject in teaching and learning activity.

ADDIE instructional model development design using task learning approach in textile knowledge

subject was done based on the stage procedures. Further development was done by using the data from the feasibility test or validation by the experts. Based on the validation results, ADDIE instructional model development product using task learning approach was viable for use in learning activity. The subject experts provided score of 86.7%; the material is fit for use because it is suitable with competence standards and learning objectives to be achieved by the students. Instructional design experts responded that 87.1% of learning design was feasible for use in the learning process while learning media experts gave score of 89.5%; the learning media made is proper for use because it has been designed in such a way.

5. CONCLUSION

Based on the results of development research conducted and the discussions above, the conclusions of the study are as follows:

1. Research of learning media development of textile knowledge is conducted in seven phases: needs analysis, development of early product, experts validation and revision, a small, a medium, and a large group/field trial, and the final product.
2. Based on the research and review of ADDIE instructional model in textile knowledge from the assessment of media experts, overall the product is in the category "very good". Assessment from subject experts placed the product in the "very good" category, so that the ADDIE model developed is fit for use. Based on the assessment of validation, subject experts declared that ADDIE model using task learning approach in this study was viable for use in the learning process.
3. Based on students feedback questionnaire on the ADDIE model using task learning approach, students strongly agree that the learning media attracts the students, increases learning interest, motivates students, and has interesting appearance so that ADDIE model is effective to use in the textiles knowledge subject.

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