

The Analysis of Needs for E-Job Sheet Development on Children's Attire Based on Tutorial Model

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Abstract—E-job sheet tutorial-based model is a practicum guide that contains work steps, clearly and systematically written text to avoid mistakes in practice. This e-job sheet was designed as a source of learning in the practice of making children's clothing patterns. This needs analysis is carried out as the initial stage for the development of children's fashion e-job sheet which will then be made into a children's e-job sheet with a tutorial model. The results of the needs analysis show that 91.84% of students think that using interactive software developed can provide a pleasant learning experience, making student practice activities clearer so they can achieve learning goals. The results of the analysis relating to the content and use of the interactive software format showed that 98.47% of students thought the work / practice step was presented systematically (per stage / per part), the interactive software developed must be easy to operate, the material presented in detail and clearly, the use color, letters not flashy. The results of the analysis showed that the e-job sheet development on children's fashion based on tutorial model is stated as a learning program that can help students in the practice to make children's clothing patterns, increase independent learning activities, and improve student learning outcomes.

Keywords—e-job sheet; tutorial-based model

I. INTRODUCTION

The development of science and technology is growing rapidly in various fields, including education and learning. As the development of ICT in the world of education, the learning process should be designed and managed in accordance with the needs of students who are the millennial generation as an active technology user. The learning process requires teaching materials that can accommodate learning needs. Teaching materials are all things used in the preparation of learning designs. There are several types of teaching materials such as printed teaching materials, visual teaching materials, audio-visual teaching materials, multimedia teaching materials, and real-life teaching materials. One of them is multi-media teaching materials in the form of job sheets that can be used in the learning process.

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the learning process. In line with the research conducted by I Gusti Bagus Mahendra Destiyanto on the Effect of Using Job sheets on Students' Learning Achievement in the Basic Welding Practices Training Short Course at Vocational School 2 Klaten shows that there are differences in psychomotor learning achievement between students who use job sheet media and who do not use job sheet [1].

The development of teaching materials in the form of job sheets has also been conducted by Dwi Septianingsih, entitled Interactive Job Sheet Development Using Computer-Based Applications on PC Care Materials in Class 10 TKJ Vocational School 1 Sawit which produces interactive job sheet product designs developed using Adobe Flash CS6 software Professional [2]. The average result of the assessment of the feasibility level of interactive job sheets by material experts was 88% in the very feasible category, the average rating of media experts was 83% in the very feasible category, user assessment (limited) with an average rating of 97% in the very feasible category and user ratings (expanded) with an average rating of 83% in the very feasible category. Those results showed that job sheets can improve students' competence and are also suitable for them to use.

The practice of making children's clothing patterns that has been done so far is to use a practice guide in the form of print-out worksheets with the help of projection media with power point programs. Learning is done using a guided approach when making children's clothing patterns, thus causing students to be less creative and less independent. Making children's clothing patterns requires guidance that can guide systematically in the practice process so that they can clarify the steps in the practice of making children's clothing patterns.

Based on these conditions, a practice sheet / job sheet is designed and developed as a learning component to provide student learning facilities. The making of tutorial model-based e-job sheet is able to clarify the practical steps that are presented electronically using computers and computer-based media, so that they can be accessed by students without limits of space and time. This can make students become independent learners so that they can foster creativity and problem-solving skills. With the learning e-job sheet it will be more interesting because it looks like it contains images, writing, animation, videos, so students are able to make children's clothing patterns with the help of e-job sheets as work guides in making

children's clothing patterns. In line with the research conducted by Dian Usna Astana Putra et al. on the Effectiveness of Independent Learning with Interactive Multimedia VCD Tutorials to Improve the Learning Achievement of Students in Class X of Class X of SMK N 3 Yogyakarta that the development results obtained by learning media products with eight main components [3]. The results of validation by instructional media expert lecturers in the category of "very feasible". Student assessment of learning media obtained by the media in the category of "feasible" is used as an alternative learning media. The implementation phase obtained an increase in control class learning outcomes by 8.58 and an increase in the experimental class learning outcomes of 21.19. The t-test analysis of the difference in the average of two classes was obtained $t_{count} (3.063) > t_{table} (2.008)$, so it can be concluded the learning outcomes of students who do independent learning using interactive multimedia VCD tutorials are greater than the learning outcomes of students who do conventional independent learning on subject's soil geometry.

Before the process of making a practice guide that is in accordance with the needs of students, a preliminary study or needs analysis of children's clothing learning is needed. Analysis of children's clothing practice needs is based on 2 (two) categories, namely a needs analysis of job sheets that should be developed in children's clothing courses, and which relates to the content and use of interactive software formats in children's clothing courses.

II. METHODOLOGY

The approach in this study is Research and Development (R & D) which aims to develop learning resources in the form of e-job sheet child fashion based on tutorial models. Research and Development research steps in this study include three phases, namely: (1) Preliminary Study, (2) Model Development and (3) Model Test (Model Validation) [4]. In this study conducted only in the first phase, namely Preliminary Study (needs analysis) through interviews and questionnaires. In this research, only in the first stage, namely Preliminary Study (needs analysis) through interviews and questionnaires.

This research was carried out in the Family Welfare Education Study Program, Universitas Pendidikan Indonesia, with the research subjects being 46 students of the 2016 class who had taken children's clothing courses.

The data analysis technique uses descriptive analysis. Descriptive statistics are statistics that function to describe or give an overview of the object under study through sample data or population as it is, without analyzing and making conclusions that apply to the public [5].

III. RESULTS AND DISCUSSION

Preliminary studies conducted on Family Welfare Education study program students, who carry out practical activities in making children's clothing patterns. Students state that the learning resources used in children's clothing learning are print out worksheets with the help of projection media with power point programs. Learning takes place with a guided

approach, causing students to be less creative and less independent. Therefore, the need for learning based on a scientific approach is with a student-oriented approach, so that students are motivated to learn independently and find out for themselves.

Based on observations, students often have difficulty in making children's clothing patterns. Making the basic pattern at the beginning is the most difficult thing, because the basic pattern is the basis for the development of the next child's clothing pattern. Errors in making archetypes lead to mistakes in making fashion patterns for sleeping, playing, and children's parties. The time to learn children's clothing 3x50 minutes is not sufficient for the practice of making children's clothing patterns. Practical activities are hampered because students do not understand the basic steps of making patterns. Based on these problems, we need teaching materials, learning resources, or practice guidelines that can help students in the practice of making children's clothing patterns, and also can motivate independent learning.

Similarly with the research conducted by Dias Triasih, that the results of the study are: (1) development of Job sheet Cake Product Variation in class XI Patiseri through 4 stages, namely define (needs analysis), design (design content and appearance), develop (development design), disseminate (spread), (2) Feasibility of learning media Job Sheet Variation of Cake Products class XI Patiseri by material experts by 66.5 (83%) in the category of "very feasible". Feasibility of learning media Job Sheet Variation of Cake Products in class XI Patiseri by media experts is 77 (96%) with the category "very feasible". Student assessment on a small scale is 105.6 (88%) in the category of "very decent" and on a broad scale of 101.5 (85%) with the category "very feasible" as a learning medium.

A similar study was also conducted by Annisa Nurhasanah, who used the worksheet at the right time, the average percentage of worksheet use was 85% with useful interpretations [6]. During the practical exercise the benefits of using worksheets were 83% with useful interpretations. The details for basic launchers for job worksheets tailored to the material that will be practiced at that time are also needed for work which is the current task.

Based on the results of a needs analysis of job sheets that should be developed in a children's fashion subject, the following can be explained:

TABLE I. RESULTS OF A NEEDS ANALYSIS OF JOB SHEETS

No	Indicator	Percentage
1	Students stated that interactive software can help students in practice	97,82
2	Learning resources (job sheets) using interactive software will make student practice activities more understandable	91,30
3	Students stated that the use of interactive software that was developed could provide a pleasant learning experience	86,95
4	Students stated that with the use of interactive software can influence the practice of child clothing so that learning objectives can be achieved	91,30
Average		91,84

In line with the content and the use of interactive software format in children's fashion subject, students gave the opinion as stated below:

TABLE II. RESULTS OF INTERACTIVE SOFTWARE FORMAT IN CHILDREN'S FASHION SUBJECT

No	Indicator	Percentage
1	The material explained in detail and example is also given	100
2	The writing and narration used are brief and clear	97,82
3	The fonts used are simple and clear	100
4	The color of the fonts used is clear and not too flashy	100
5	Material exposure followed by work / practice steps	100
6	Work / practice steps are presented systematically (per phase / per section)	100
7	Presented in straightforward and clear language	100
8	Interactive software that is developed must be easy to operate	100
9	Interactive software that is developed better presented in the tutorial model	100
10	Interactive software presented on the website	86,95
Average		98,47

Based on the results of the needs analysis, it can be concluded that in child fashion practice activities, students need interactive learning resources and can be used anytime and anywhere independently by themselves. Computer-based learning resources are preferred by students, because it can increase learning motivation and new learning experiences. E-job sheets should be worksheets with the use of ICT, one of which is through a computer-based interactive module system. This was stated by Susilana and Riyana, the tutorial model is learning through computers where students are conditioned to follow the learning path that has been programmed with the presentation of material and practice questions [7].

Students argue that interactive software is better developed in the tutorial model. This is in line with the results of Anwar Efendi et al. showing that the compilation of tutorial video-based learning media on soil mechanics courses with feasibility levels based on material expert assessment found that 79.58% included in the feasible category, media expert's assessment obtained a percentage of 77, 5% including the appropriate category, assessment of learning experts with a percentage of 86, 13% including the very feasible category. The results of the limited trial results obtained a percentage of 86.13% including the very feasible category. The results of extensive trials obtained a percentage of 75, 867% including the feasible category [8].

The same study was also conducted by Adang Sutarmen about computer-based learning interactive CD tutorial models concluded that computer-based learning tutorial models can improve student learning outcomes if followed by high interest and ability to operate computers [9].

IV. CONCLUSION

- The results of the analysis of student needs relating to the use of interactive software developed show that 91.84% of the interactive software developed must provide a pleasant learning experience, making student practice activities clearer so that they can achieve learning goals.
- The results of the analysis of student needs relating to the content and use of interactive software formats show that 98.47% of work/ practice steps are presented systematically (per stage / per section), the interactive software that is developed should be easy to operate with tutorial models, material presented in detail and clearly, the use of color is not striking, font size is clear and legible.

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