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Development of Laundry Equipment Learning Handouts using the Flip PDF Professional application at the Hotel Accommodation Vocational High School

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ABSTRACT

The background of this study is the rapid development of digital technology that can be utilized in the field of education. The use of the Flip PDF Professional application can make handouts into digital form. The purpose of this study was to develop a laundry equipment learning handout using the Flip PDF Professional application at the Hotel Accommodation Vocational High School. This study used the Research and Development method with the Planning, Production and Evaluation (PPE) model. Data collection techniques were carried out by interviewing laundry subject teachers and expert judgment validation tests with two material experts and two media experts. The results of the validation test showed that the development of a laundry equipment learning handout using the Flip PDF Professional application was declared very feasible. The results of this study can be followed up by implementing a laundry equipment learning handout using the Flip PDF Professional application to test the effectiveness of learning and the achievement of learning outcomes.

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1. INTRODUCTION

The development of science is growing very rapidly so that it supports the creation of new technologies, one of which is digital technology (Lestari, 2018). Digital technology can make information transfer more efficient (Febrianti, 2017). Digitalization can change the format of information that was previously conventional information into digital information that is easy to produce, reproduce, and easy to share (Rumata, 2017). One of the properties of digital information is that it can be shared with many people simultaneously (networkable) (Karman, 2017).

The use of technology in the field of education in Indonesia is used as a learning medium, administrative tool, and learning resource (Lestari, 2018). This is in line with the school digitalization program initiated by the Ministry of Education and Culture so that schools can utilize digital technology in the learning process.

Vocational high school is a secondary education that prepares students primarily to work in a particular field. Vocational education can use technology to make learning more productive (Jubaedah et al., 2019). Handouts are one of the concise teaching materials, which contain basic materials that are relevant to basic competencies to facilitate students in the learning process (Ningtyas & Yunianta, 2014). The selection and determination of good handouts must be attractive and can help students achieve basic competencies. Digital technology can help compile handouts needed by students (Lestari, 2018). Handouts can be developed using various technologies or applications that can make handouts in digital form without printing or paperless.

The Flip PDF Professional application has many advantages, namely it is easy to use because it can be operated by beginners who do not know the html programming language. This application can create interactive book pages by inserting multimedia such as images, videos from YouTube, MP4, audio video, hyperlinks, quizzes, flash, and others (Seruni, 2019). The output from Flip PDF Professional can be accessed by students via a link or barcode shared by the teacher. Students can directly access materials from smartphones and laptops connected to the internet via the existing browser (without having to install other applications). The advantages of the Flip PDF Professional application are very suitable as one of the applications for developing laundry equipment handouts.

Laundry as one of the subjects in the Hotel Accommodation expertise competency that must be taken and mastered by students (Rohaeni, 2021). The laundry subject has basic competencies that discuss laundry equipment. These basic competencies require students to be able to understand and distinguish various laundry equipment and their uses.

2. METHODS

The method used in this study is the Research and Development method which is often known as R&D research. The model used in this study is PPE (Planning, Production and Evaluation). The participants in this study consisted of five participants. The first participant was a laundry subject teacher as a resource person. Furthermore, two expert material validators, and two expert media validators who will conduct expert judgment to assess the feasibility of the laundry equipment learning handout using the Flip PDF Professional application at SMK Accommodation Perhotelan.

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2.1. Research Instruments

The research instruments used in this study were online interview guidelines and expert judgment validation sheets. Online interview guidelines Interviews are in the form of questions that researchers will ask laundry subject teachers to obtain information on the availability of laundry equipment handouts and materials needed by students at SMK Accommodation Perhotelan. Expert judgment validation sheets. Expert judgment validation sheets are used to determine the feasibility of laundry equipment learning handouts made by researchers to be shown to material experts in terms of the suitability of the material contained in the handouts.

2.2. Data Analysis Techniques

2.2.1. Data Reduction

Conducted to summarize interview data as a needs analysis to provide a clearer picture and focus on the needs of laundry equipment learning handouts using the Flip PDF Professional application at SMK Accommodation Perhotelan.

2.2.2. Display Data

It is done to describe the general data obtained according to the field. The findings are then described to be more systematic and easy to understand.

2.2.3. Data Validation

This stage is the stage of assessing the laundry equipment learning handout using the Flip PDF Professional application at SMK Accommodation Perhotelan which is carried out by material experts and media experts using digital validation sheets. The validator will provide input on the shortcomings of the handout so that it can be improved later.

2.2.4. Revision

This stage is a stage of improvement carried out after there are validation results from media experts and material experts. This stage is to perfect the development of laundry equipment learning handouts using the Flip PDF Professional application at SMK Accommodation Perhotelan.

Data processing in this study is to calculate the percentage of answers from the validator in the validation format with the aim of seeing the frequency value of the answers. The answers in the validation sheet use the Guttman scale which consists of two intervals "Appropriate" and "Not Appropriate". Appropriate answers include the highest score, namely 1 and Not Appropriate answers include the lowest score, namely 0. The formula used for the validation percentage is as follows:

$$Presentase = \frac{Total\ Skor}{Total\ Maksimum\ Skor} \text{ x } 100\%$$

The interpretation of the data used in validation is the assessment qualification criteria as follows (Riduwan & Akdon, 2010)

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No.	Assessment criteria (%)	Validation Level
1.	81 – 100	Very decent with a little revision
2.	61 – 80	Worthy of revision
3.	41 – 60	Fairly decent with revisions
4.	21 – 40	Less worthy with many revisions
5.	0 – 20	Not suitable for use

Table 1. Assessment Qualification Criteria

The results of the analysis illustrate that laundry equipment learning activities at SMKN 3 Sukabumi still use printed handouts. Therefore, it is necessary to develop handouts using the Flip PDF Professional application according to the development of digital technology.

3. RESULTS AND DISCUSSION

The findings in this study are data processed through the planning stage based on needs analysis, handout development process, and expert judgment.

3.1. Analysis of the Needs for the Development of Laundry Equipment Learning Handouts Using the Flip PDF Professional Application

The needs analysis aims to explore data on the availability of learning handouts used by SMKN 3 Sukabumi. The results of the interviews that have been conducted can be seen in the table below.

No.	Aspects asked	Observation result	
		Not yet	Already
1.	Availability of learning handouts laundry equipment at school		√
2.	*Laundry equipment learning handout using technology assistance*	√	
3.	*Laundry equipment learning handouts are equipped with pictures, audio and learning videos.*	√	
4.	Availability of handouts in digital form	√	

Table 2. Interview Results Table

The results of the analysis illustrate that laundry equipment learning activities at SMKN 3 Sukabumi still use printed handouts. Therefore, it is necessary to develop handouts using the Flip PDF Professional application according to the development of digital technology.

3.2. Development of Laundry Equipment Learning Handouts Using the Flip PDF Professional Application

This study aims to develop a laundry equipment learning handout using the Flip PDF Professional application with the PPE (Planning, Production, and Evaluation) stage procedure. At the planning stage, it is necessary to develop the handout form which was initially printed

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into a digital form that is concise, attractive, and can be used by students for independent learning, namely using the Flip PDF Professional application. Development of laundry equipment learning handouts using the Flip PDF Professional application. Starting from determining the material, making a flowchart, and the process of making handouts. The laundry equipment learning handout material is adjusted to the basic competencies of the laundry subject at SMK Accommodation Perhotelan.

The contents of the material are 1) explaining the definition of laundry equipment, 2) explaining the definition of manual laundry equipment, 3) explaining the types and functions of manual laundry equipment, 4) explaining the definition of laundry machine equipment, and 5) explaining the types and functions of laundry machine equipment.

3.3. Results of Validation of Laundry Equipment Learning Handouts using the Flip PDF Professional application

The feasibility test of the laundry equipment learning handout using the Flip PDF Professional application was carried out by academics in the material field, namely lecturers in charge of housekeeping and laundry courses in the Family Welfare Education study program and laundry subject teachers at SMK Accommodation and Hospitality. The results of the validation of the development of the laundry equipment learning handout using the Flip PDF Professional application obtained an average feasibility percentage of 100%. So it is stated that this laundry equipment learning handout in terms of material is very suitable for use by teachers in laundry learning. The validation results of the development of the laundry equipment learning handout using the Flip PDF Professional application obtained an average feasibility percentage in terms of media of 100%. So it is stated that this laundry equipment learning handout in terms of media is very suitable for use by teachers in laundry learning.

4. CONCLUSION

The results of the needs analysis indicate that the development of laundry equipment learning handouts using the Flip PDF Professional application is very necessary for use in the learning process at SMK Accommodation Perhotelan

The development of laundry equipment learning handouts using the Flip PDF Professional application is very visible from the form of the handout which was previously printed and did not use technology so that it became a digital form. This handout can be used for independent learning which contains images and videos to increase students' understanding of laundry equipment material.

The feasibility test of the handout was carried out by two material experts and two media experts. The validation results obtained from all validators obtained very feasible criteria with a few revisions that had been corrected. This shows that the development of laundry equipment learning handouts using the Flip PDF Professional application is very feasible to use.

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