FamilyEdu:
Jurnal Pendidikan Kesejahteraan Keluarga

Journal homepage: https://ejournal.upi.edu/index.php/familyedu/index

Development of Shibori Technique E-Jobsheet Using Flipbook Application in Craft Engineering Course in PKK Study Program

Risa Salma Al Hanif, Yani Achdiani, Mirna Purnama Ningsih

Universitas Pendidikan Indonesia, Bandung, Indonesia
Correspondence: E-mail: risasalma@upi.edu

ABSTRACT

This research was motivated by the need for shibori technique jobsheets in the PKK study program which has implications for the development of shibori technique e-jobsheets using the flipbook application in the craft technique course in the PKK study program. The general objective of this research is to produce teaching materials in the form of e-jobsheet development of shibori techniques using flipbook applications in craft engineering courses in the PKK study program. This research uses the Mix Method method, which is a combination of descriptive and qualitative approaches. The development research model used is the ADDIE model (Analyze, Design, Development, Implementation, and Evaluation) The data collection technique was carried out by interview, documentation study, expert judgment validation test and questionnaire product trial of shibori technique e-jobsheet using flipbook application in craft engineering courses in PKK study program. The results of the validation test showed that the development of the shibori technique e-jobsheet using the flipbook application in the craft technique course in the PKK study program was declared very feasible. The results of the product trial of the shibori technique e-jobsheet using the flipbook application in the craft technique course in the PKK study program were declared very feasible to use.

ARTICLE INFO

Article History:
Submitted/Received 30 Apr 2022
First Revised 04 May 2022
Accepted 17 Jun 2022
First Available online 17 Jun 2022
Publication Date 01 Oct 2022

Keyword:
E--jobsheet,
Craft technique,
Flipbook application,
Shibori technique.

1. INTRODUCTION

The craft techniques course in the PKK study program studies the basic theory of the concept of craft techniques, elements of design principles, and knowledge of tools and materials. The theory outlines the overlapping sewing embroidery techniques, knitting techniques, fantasy suji embroidery techniques and lekapan, macrame techniques, jumputan techniques, plaiting and tapestry techniques. The learning achievement of the craft technique course is being able to design innovative craft products using appropriate technology used with craft techniques (Sugiyono, 2014). The shibori technique is a development of the jumputan technique that uses one of the dyeing techniques. Shibori is a fabric coloring technique by creating motifs from existing folds, besides that these activities can improve fine motor skills and can deepen new knowledge and experiences in the field of textile crafts and fashion (Irvan *et al.,* 2020; Julianti & Fatmawati, 2020; Yusrina & Ramadhan, 2018).

Based on preliminary studies, documentation and interviews regarding the existence of shibori technique jobsheets in the PKK study program are not yet available. The lack of guidance in the implementation of craft practice learning is in line with the results of research conducted. The problems that occur researchers try to provide solutions to these problems. Researchers took the initiative to develop an e-jobsheet based on the flipbook application. The development was carried out so that practicum learning was more effective and made it easier for students to understand the implementation of practicum activities. The existence of e-jobsheet in practical learning is needed so that students are interested in learning and understanding the work steps that must be done. The development of e-jobsheet uses flipbook application because considering that currently the world of education is closely related to the development of information and communication technology.

Flipbook is a form of presenting book learning media in virtual form, and one type of classic animation made from a stack of paper resembling a thick book, on each page a process about something is described which later the process looks moving or animated (Utomo *et al.*, 2021). The flipbook application supports as a learning media that will assist in the learning process because this application is not fixated only on writings but can be inputted into motion animation, video, and audio which can make an interesting interactive learning media so that learning becomes not monotonous.

The use of e-jobsheet in doing practice can provide practicum learning to students independently so that it is more practical and makes it easier for students to access e-jobsheet anywhere (Rachman, 2018). In addition, the addition of images to each work step on the e-jobsheet can make it easier for students to do each job listed.

2. METHODS

This research uses the Mix Method method, which is a combination of descriptive and qualitative approaches. The development research model used is the ADDIE model (Analyze, Design, Development, Implementation, and Evaluation).

The participants in this study served as validators of the development of shibori technique e-jobsheet using the flipbook application in the craft technique course in the PKK study program. Consisting of validators in the field of theory and media validators as many as two people each, and PKK students class of 2020.

DOI: http://dx.doi.org/10. 17509/xxxx.xxxx
p-ISSN:1979-6714 | e-ISSN:2503-4820

2.1. Research Instruments

The research instruments used in this study were interview guidelines, expert judgment validation sheets, and questionnaires. The interview guide is in the form of questions that will be asked by researchers to obtain information about the availability of shibori technique jobsheets in the craft technique course in the PKK study program.

Expert judgment validation sheet. The expert judgment validation sheet was used to determine the feasibility of the shibori technique jobsheet in the craft technique course made by the researcher to be shown to the material expert in the aspect of the suitability of the material contained in the jobsheet (Mindarta *et al.,* 2018).

2.2. Data Analysis Technique

(i) Data Reduction

Conducted to summarize the data from interviews and documentation studies as a needs analysis to provide a clearer picture and focus on the needs of shibori technique jobsheets in craft techniques courses in the PKK study program.

(ii) Data Display

Performed to describe in general the data obtained according to the field. The findings are then described to make it more systematic and easy to understand.

(iii) Data Validation

This stage is the stage of assessing the shibori technique e-Jobsheet using the flipbook application in the craft technique course in the PKK study program which is carried out by material experts and media experts using validation sheets and product trial questionnaires. The validator will provide feedback on the shortcomings of the jobsheet so that it can be improved.

(iv) Data Processing

Data processing in this study is seen from the frequency value of the answers on the validation sheet that has been filled in by the validator by calculating the percentage of answers. The formula used for the percentage of validation:

$$P = \frac{\sum x}{\sum xi} \; x \; 100\%$$

Description:

P = Percentage Score

$\sum \chi$ = Number of validator answers

$\sum \chi i$ = Number of ideal values

(v) Data Interpretation

Data interpretation is carried out to obtain an overview of the validity of the development of the shibori technique e-jobsheet using the flipbook application after conducting expert judgment. Data interpretation used in validation uses qualifications (see **Table 1**.)

Table 1. Data Interpretation

No.	Persentase	Categories
1.	81% - 100%	Very decent
2.	61% - 80%	Feasible
3.	41% - 60%	Feasible enough
4.	21% - 40%	Less feasible

DOI: http://dx.doi.org/10.17509/xxxx.xxxx
p-ISSN:2685-2489 | e-ISSN:2685-2535

No.	Persentase	Categories
5.	0% - 20%	Not feasible

The criteria in the table are used as a reference in accordance with the research to be carried out and explained as follows:

(i) 81% - 100%: Development of Shibori Technique E-Jobsheet Using Application Flipbook application that has been made is very feasible to use.

(ii) 61% - 80%: Development of the Shibori Technique E-Jobsheet Using the Flipbook Application that has been created is feasible to use. Flipbook application that has been made is feasible to use.

(iii) 41% - 60%: Development of the Shibori Technique E-Jobsheet Using the Flipbook Application that has been made is quite feasible to use. Flipbook application that has been made is quite feasible to use.

(iv) 21% - 40%: Development of the Shibori Technique E-Jobsheet Using the Flipbook Application that has been created is less feasible to use. Flipbook application that has been made less feasible to use.

(v) 0% - 21%: Development of the Shibori Technique E-Jobsheet Using the Flipbook Application that has been created is not feasible to use. Flipbook application that has been made is not feasible to use.

3. RESULTS AND DISCUSSION

The findings in this study refer to data obtained through several stages in the research, namely the Analysis, Design, Development, Implementation, and Evaluation stages (Suantara *et al.,* 2018).

3.1. Results of the Needs Analysis of the Development of Shibori Technique E-Josbheet Using Flipbook Application in Craft Engineering Course in PKK Study Program

Analysis of the needs for the development of shibori technique e-jobsheet was obtained from the results of interviews with lecturers in craft engineering courses and documentation studies conducted in the PKK Study Program (see in **Table 2**.)

Table 2. Interview Results

No.	Aspects Observed	Interview Results		Description
		Yes	No	
1.	Implementation of shibori technique practice		☐	
2.	Shibori Technique practice in the Craft Engineering course		☐	
3.	Guidelines for the implementation of Shibori Technique practice in		☐	
4.	Craft Engineering course		☐	
5.	The existence of the Shibori Technique jobsheet	☐		

Based on the results of the interview, the learning process during the practice of craft engineering courses has not actually used a special jobsheet, only using printed books or learning videos from YouTube. Shibori technique material is currently not included in the syllabus of the craft technique course, but can be added as material development.

DOI: http://dx.doi.org/10. 17509/xxxx.xxxx
p-ISSN:1979-6714 | e-ISSN:2503-4820

The results of the needs analysis that have been carried out will be used as guidelines and considerations in the development of e-jobsheet for students in craft engineering courses (see **Table 3**.)

Table 3. Interview Results

No.	Aspects Observed	Interview Results		Description
		Already	Not yet	
1.	Availability of Jobsheets in Craft Engineering courses		☐	
2.	Jobsheet has complete components		☐	
3.	Jobsheets are interesting for students		☐	
4.	Jobsheets are given to students as the beginning of learning before practice		☐	
5.	Jobsheets used are in accordance with student needs		☐	
6.	Students can use Jobsheets for self-study		☐	
7.	Jobsheets have complete material content		☐	

The results of the documentation study above show that the existence of the jobsheet is available but still very simple in appearance, therefore students are helped to rely on material from the internet and learning videos from YouTube. Practical material in craft engineering courses has been presented in the form of power points and printed books without detailed work instructions and clear working drawings so that it has not been able to facilitate students in carrying out practice (Samala *et al.,* 2021).

3.2. Results of Designing Shibori Technique E-jobsheet Using Flipbook Application in Shibori Technique Course in PKK Study Program

At this stage, it is done by collecting source material for making e-jobsheet. Sources of material can be obtained from various modules and some previous research results. The next step is to create a storyboard as a guide that will facilitate the process of making e-jobsheet. In making the storyboard, the content of the initial page (cover), menu pages containing practicum rules, general guidelines for occupational health and safety, instructions for using practicum tools, material, lecture identity, tools and materials, work procedures, and practicum observation data are made. Making this storyboard is done using the Canva application (Khaerani *et al*., 2020).

3.3. Results of the development of the Shibori Technique E-Jobsheet Using the Flipbook Application in the Craft Engineering Course in the PKK Study Program.

After the e-jobsheet design is complete, then the realization of the product to be developed is carried out. At this stage of development, it is carried out in accordance with the design that has been made previously. At the development stage, application-based e-jobsheets are made using the fliphtml5 application (Ripsul, 2012). E-jobsheet is made in accordance with the components that have been designed in accordance with the storyboard created. There are several stages that are passed when making e-jobsheet and the final result of making this e-jobsheet is a website that can be accessed via a smartphone using a URL (Uniform Resource Locators) (Maziyah *et al.,* 2019). Some of the software needed in making

DOI: http://dx.doi.org/10.17509/xxxx.xxxx
p-ISSN:2685-2489 | e-ISSN:2685-2535

this e-jobsheet includes Canva, Fliphtml5. After being developed, the e-jobsheet was then validated by material experts and media experts.

3.4. Results of Validation of Shibori Technique E-Jobsheet Using Flipbook Application in Craft Engineering Course in PKK Study Program

Validation is carried out with the aim of giving approval to the suitability or feasibility of the e-jobsheet. The validation process is carried out by parties who have expertise in accordance with their fields. Material expert validation is carried out to determine the feasibility of e-jobsheet in terms of material that has been adjusted to the needs of the basic competencies of the craft technique course. shows the material in the shibori technique e-jobsheet using the flipbook application in the craft technique course in the PKK study program gets an average percentage of 96% with very feasible criteria (Mulyadi *et al.,* 2016).

Media expert validation of the shibori technique e-jobsheet using the flipbook application in the craft technique course in the PKK study program was carried out by two validators, namely Visual Communication Design experts (Yahya, 2014). Media assessment covers aspects of visual communication and software engineering aspects of the validation results of the shibori technique e-jobsheet using the flipbook application in the craft technique course in the PKK study program. Craft technique courses in the PKK study program on all indicators get an average presentation of 96% with very feasible criteria (Oktavia & Hanesman, 2019).

4. CONCLUSION

Needs analysis through interviews and documentation studies shows that e-jobsheets in craft engineering courses are not yet available. The design of making shibori technique e-jobsheet using the flipbook application begins with collecting material, compiling a draft storyboard, and making e-jobsheet using the flipbook application. The stage of collecting material can be obtained from various sources, and the results of previous research. The next stage makes a storyboard as a guide to the process of making e-jobsheet, in making this storyboard is done using the canva application. The development of this e-jobsheet is carried out at the stage of realization of the product to be developed. The application-based e-jobsheet development stage is made using the fliphtml5 application.

The results of the trial of the shibori technique e-jobsheet using the flipbook application received a percentage of 92.7% with the criteria “Very Feasible” in terms of material, language, design, and usefulness. The shibori technique e-jobsheet using the flipbook application in the craft technique course can be used and studied independently by students.

In addition, feedback from students and instructors during the trial phase highlighted the importance of interactive features and multimedia elements in enhancing the learning experience. Integrating videos, animations, and quizzes into the e-jobsheet not only increases student engagement but also helps clarify complex steps in the shibori technique, making the learning process more effective and enjoyable. Future development efforts should focus on refining these interactive components and conducting broader trials to ensure the e-jobsheet meets the diverse needs and learning styles of students across different institutions.

AUTHORS’ NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

DOI: http://dx.doi.org/10. 17509/xxxx.xxxx
p-ISSN:1979-6714 | e-ISSN:2503-4820

REFERENCES

Irvan, M., Ilmi, A. M., Choliliyah, I., Nada, R. F., Isnaini, S. L., and Khorinah, S. A. (2020). Pembuatan batik shibori untuk meningkatkan kreativitas masyarakat pada masa pandemi. *Jurnal Graha Pengabdian, 2*(3), 223–232.

Julianti, E., and Fatmawati, F. (2020). Shibori skills to improve fine motor ability for children with autism. *Jurnal Penelitian Dan Pengembangan, 6*(2), 17–21.

Khaerani, M. D., Rohaeni, N., and Jubaedah, Y. (2020). Pengembangan job sheet making bed berbasis standard operational procedure di SMK Akomodasi Perhotelan. *Family Edu: Jurnal Pendidikan Kesejahteraan Keluarga, 6*(2), 108–112.

Maziyah, Si., Indrahti, S., and Alamsyah, A. (2019). Implementasi shibori di Indonesia. *Kiryoku, 3*(4), 214.

Mindarta, E. K., Irdianto, W., Kusuma, F. I., Putra, A. B. N. R., and Ihwanudin, M. (2018). The effectiveness of using e-jobsheet in teaching machine control system practice. *Erudio Journal of Educational Innovation, 5*(2), 65–69.

Mulyadi, D., Wahyuni, S., and Handayani, R. (2016). Pengembangan media flash flipbook untuk meningkatkan keterampilan berfikir kreatif siswa dalam pembelajaran IPA di SMP. *Jurnal Pembelajaran Fisika, 4*(4), 296-301.

Oktavia, V., and Hanesman, H. (2019). Pengaruh penggunaan jobsheet terhadap hasil belajar praktikum kerja bengkel dan gambar teknik. *Voteteknika (Vocational Teknik Elektronika Dan Informatika), 7(*2), 33.

Rachman, T. (2018). Pengaruh penggunaan media jobsheet terhadap hasil belajar membuat lenan rumah tangga dengan teknik jahit tindas siswa kelas XI SMK Negeri 1 Berastagi Tahun Pembelajaran 2015/2016. *Angewandte Chemie International Edition, 6*(11), 951–952., 10–27.

Rispul, R. (2012). Seni kriya antara tekhnik dan ekspresi. *Corak, 1*(1), 91–100.

Samala, A. D., Giatman, M., Simatupang, W., and Ranuharja, F. (2021). E-Jobsheet based on mobile pocket book as digital learning resources (DLRs*). Jurnal Teknologi Informasi Dan Pendidikan, 14*(2), 117–123.

Suantara, D., Oktaviani, E., and Siregar, Y. (2018). Eksplorasi teknik shibori dalam pengembangan desain motif tradisional indonesia pada permukaan kain sandang. *Arena Tekstil, 32*(2), 67–76.

Sugiyono. (2014). Metode penelitian kuantitatif, kualitatif, dan R&D. *Journal of Chemical Information and Modeling, 53*(9), 1689–1699.

Utomo, A. P., Mariana, N., Saefurrohman, S., and Lestariningsih, E. (2021). Pendampingan teknis pembuatan motif etnic dengan metode lipat shibori dengan pewarna alam indigofera. *Ikra-Ith Abdimas*, *4*(3), 95-99.

Yahya, M. (2014). Efektivitas penggunaan job sheet pada pembelajaran praktik jurusan pendidikan teknik otomotif FT UNM. *Jurnal Pendidikan Teknologi Dan Kejuruan, 15*(1), 30–37.

DOI: http://dx.doi.org/10.17509/xxxx.xxxx
p-ISSN:2685-2489 | e-ISSN:2685-2535

Yusrina, T., and Ramadhan, M. S. (2018). Pengaplikasian teknik shibori dengan eksplorasi motif dan tekstur taktil pada produk fashion. *Atrat, 6*(3), 1–12.

DOI: http://dx.doi.org/10. 17509/xxxx.xxxx
p-ISSN:1979-6714 | e-ISSN:2503-4820