



An Experiential Learning Model to Facilitate the Professional Development of Batik Instructors Through Teaching Videos

Minhatul Ma'arif^(✉), Suyitno Muslim, and Mochammad Sukardjo

Universitas Negeri Jakarta, Jakarta, Indonesia

MinhatulMaarif_tp18s3@mahasiswa.unj.ac.id, {suyitno,
msoekardjo}@unj.ac.id

Abstract. Batik education tourism is one of the educational tours that is starting to be favored by the people of Indonesia, especially people in Pandeglang Regency. Unfortunately, this learning has a number of problems that hinder the achievement of learning objectives. This study uses a mix method consisting of quantitative and qualitative. Quantitative using bibliometric analysis and qualitative using interviews and documentation. In the bibliometric analysis, researchers collected 500 articles related to batik and 1003 articles related to experiential learning using the Seforra dan Vosviewer application. Furthermore, the data from the bibliometric analysis were triangulated using qualitative research. The selected batik workshop is Batik Cikadu Tanjung Lesung. Interviews were conducted with 15 batik instructors and 201 students who had participated in batik education tours. The results of the research are in the form of solutions that are used to overcome problems in the professionalism of batik instructors. The results of the study proved that based on bibliometric analysis or interviews with batik instructors and students that the problems faced in batik education tourism were that the instructors had difficulty in conveying learning either in the depiction of motifs, imitation of handkerchiefs or batik cloths, color measurement, and dyeing. For this reason, the use of experiential learning models and batik learning videos is present as a solution in overcoming the problems of batik instructor professionalism.

Keywords: batik learning · video · experiential learning

1 Introduction

Batik is one of Indonesia's intangible heritage based on the decision of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Initially, the Indonesian people were only interested in using batik at formal events. Then, in 2018 the Indonesian people began to be interested in using batik for daily clothing. Interestingly, at this time the people of Indonesia are also starting to like how to make batik. Thus, many batik workshops open batik educational tourism for anyone who wants to learn batik [1]. Although the majority of visitors are schools that implement arts or cultural subjects. In Banten Province, learning batik is one of the local content that must be taught to students.

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Batik learning has a variety of skills because the learning is a project. In making batik, students are taught how to draw motifs, canting, and dye batik colors. To draw a motif, it will be adjusted to the school level of students according to the theme of learning at school.

The enthusiasm of schools that want to implement batik learning can be seen in one of the batik workshops in Pandeglang Regency, namely the Cikadu Tanjung Lesung batik workshop. Based on the results of interviews in August 2022, 32 schools had come to take part in batik lessons from January to August 2022 with a total of 1,402 students. These students have been limited due to limited capacity and also batik equipment. In addition, the problem factor that occurs in batik education tourism is the lack of instructor skills in teaching batik. Based on the results of interviews, 9 out of 15 instructors find it difficult to teach students to practice batik even though they already have a batik competency test certificate. However, in teaching students, instructors need special models and media to facilitate the learning process.

Through this article, the researcher will present a bibliometric analysis related to problems in batik learning that occur such as in the Cikadu Tanjung Lesung batik workshop. Researchers also analyzed models and media that can be used to facilitate batik learning both in the Cikadu Tanjung Lesung batik workshop and also in other non formal learning locations. Non-formal learning locations such as workshop locations require digital media to facilitate the learning process [2].

Learning using video can help instructors in facilitating teaching problems [3]. Learning using video simulations can support skill mastery because it can be used as an authentic practice [4].

However, everything will be maximized if it is done with Experiential Learning (EL). Thus, the instructor will feel that learning using video simulations can support the mastery of skills in teaching batik because it can be used as an authentic practice [4]. So, the instructor will have a learning experience like in a learning video. EL is an experiential learning process. The EL model offers a simple learning cycle by systematically describing the step-by-step process [5]. The most popular EL model is the Kolb model. Kolb's offers systematic hands-on learning according to needs [6].

Several articles researching EL explain that this model can develop cognitive, interpersonal and intrapersonal competencies [7]. EL is also able to manage the content taught into real practice in the field [8], encourage maximum engagement [9], improve skills [10], establish effective communication both with the team [11] and so on. This model can form a sense of empathy, honesty and trust [12]. EL can also provide an opportunity for the instructor to move past the lowest level of Bloom's taxonomy [13] because instructors can see more clearly what and how the learning process is carried out. EL can be used by formal education, informal education, outdoor education, adventure education, environmental education, executive and organizational development [14].

The cycle can also be started from anywhere following the needs in the field [15]. EL can make it easier to learn batik at educational tourism sites. Based on these problems, this research will describe the Pedagogies model to facilitate the professional development of Batik instructors through experiential learning supported by learning videos. The purpose of this study is to find out the factors of problems that occur in batik learning

and how to develop professional batik instructors through EL supported by batik learning videos.

2 Methods

This study uses a mix method consisting of quantitative and qualitative. Quantitative using bibliometric analysis and qualitative using interviews and documentation. Bibliometric analysis is used to compile articles, select the type of documents needed, normalize incorrect data, analyze required indicators, calculate collaboration trends and carry out indicator evolution [16]. In addition, bibliometric analysis is used to analyze research based on time spans either quantitatively or qualitatively [17]. In the bibliometric analysis, researchers collected 500 articles related to batik and 1003 articles related to experiential learning using the Seforra application. All published data obtained were visualized using the vosviewer application to simplify calculations and describe. The data obtained were first selected according to the needs of the study.

Furthermore, the data from the bibliometric analysis were triangulated using qualitative research. The selected batik workshop is Batik Cikadu Tanjung Lesung. Interviews were conducted with 15 batik instructors and 201 students who had participated in batik education tours. The results of the research are in the form of solutions that are used to overcome problems in the professionalism of batik instructors. The solution is the application of experiential learning models and batik learning videos to assist instructors in teaching students at batik educational tourism sites.

3 Result and Discussion

3.1 Analysis of Batik Learning

Based on meta data in scientific publications that were collected through the seforra.com application and analyzed using VosViewer, Fig. 1. The visualization of the image was collected through the keyword batik in the 2018–2022 range by collecting 500 articles, but according to this study only 48 articles just. The entire article is divided into several sections, starting from publications on Scopus Q1, Scopus Q2, Scopus Q3, Scopus Q4, SINTA accredited journals of the Ministry of Research, Technology and Higher Education and SINTA accredited journals. All of the data is then analyzed based on needs, which only focuses on the problem of batik. Thus, it was found that the problems that occur in batik learning are problems in making motifs (Rangkuti, Harjoko, & Putra, 2021), coloring, the process of embroidering, technology that has not been developed,



Fig. 1. Bibliometric analysis of batik learning

Table 1. Analysis of the percentage of research on learning batik

Dimensions of analysis	Categories	Numbers of studies	%
Research problems	motif	265	0.47
	pattern	63	1.07
	color	39	1.37
	dye	25	0.94
	technology	33	0.40
	production process	25	0.37
	training	53	0.36
	method	54	1.34
Research targets	students	46	1.30
	workers	34	0.94
Research method	quantitative (experiment)	30	0.81
	qualitative	19	0.60
	case study	18	0.27

batik learning methods and understanding related to batik learning. All the problems that the researchers get through bibliometric analysis are in accordance with the problems that occur in the field.

From the results of interviews in August 2022, the problems that occurred to students during the program were the difficulty of drawing motifs, the difficulty of attaching firmly without dashing, the difficulty of pressing the stamp correctly during the tasting process and the difficulty of measuring the size of the color. The coloring is done using synthetic dyes because it is easier and faster [18]. In addition, although batik instructors already have competency certificates, in practice they have difficulties in teaching students. Here is the dimension of analysis that the researcher did (Table 1).

3.2 Analysis Experiential Learning

The model used in this study is experiential learning developed by David Kolb. In this section, the researcher analyzes the keywords of experiential learning from 2018 to 2022. Based on bibliometric analysis through meta data in scientific publications, 1,003 articles are obtained that discuss experiential learning, but only 103 articles are suitable for research needs. Here is a visualization of experiential learning.

From the Fig. 2, it can be understood that previous researchers focused on four categories, namely how the model is used, how to use it, how to evaluate it, and what are the results of using the experiential learning model. Furthermore, the researchers analyzed the percentage of the visualization results in Table 2 below.

From the Table 2, it can be understood that the purpose of implementing the experiential learning model is as a companion to the use of technology 0.43%, applications 0.42%, and innovation in learning 0.40%. The research methods used by the researchers



Fig. 2. Bibliometric analysis of experiential learning

Table 2. Analysis of the percentage of research on experiential learning

Dimensions of analysis	Categories	Numbers of studies	%
Purpose of using the model	technology	63	0.43
	application	55	0.42
	innovation	25	0.40
Research method	study group	10	3.24
	case study	43	0.29
	present study	11	1.45
	survey	36	0.23
	experiment	13	1.19
	literature	31	0.51
	simulation	43	0.69
Evaluation	exercise	30	1.01
	question	29	0.25
	assessment	60	0.70
	task	20	0.54
	questionnaire	30	0.50
Research result	creativity	23	1.78
	emotional	20	1.46
	idea	23	0.55
	motivation	39	0.31
	attitude	42	0.30
	communication	22	0.27
	competency	44	0.40

are study group 3.24%, case study 0.29%, present study 1.45%, survey 0.23%, experiment 1.19%, literature 0.51% and simulation 0.69%. All of these studies must have gone through learning evaluation employing 1.01% exercise, 0.25% question, 0.70%

assessment, 0.54% task, and 0.50% questionnaire. So that the results obtained are an increase in creativity y 1.78%, emotional 20%, ideas or creative thinking 0.55%, learning motivation 0.31%, attitude 0.30%, communication 0.27% and user competence 0.40%.

Based on the bibliometric analysis, many benefits can be obtained through the use of experiential learning models, especially in increasing competence and being able to use learning technology. This model focuses on creating independent learning experiences without explicit external intervention because this model can control and guide the knowledge acquisition process [19]. So, batik instructors can understand the material faster because they are directly involved in the field. That way, knowledge retention will be generated more quickly. Experiential learning can manage emotions, build concepts in depth, introduce complex learning environments, reflect, and form fast and precise ways of thinking and working [20].

That way, to facilitate research problems, experiential learning is carried out with the help of technology in the form of learning videos to improve the professionalism of batik instructors in providing teaching materials.

3.3 An Experimental Learning Model to Facilitate the Professional Development of Batik Instructors Through Batik Learning Videos

Based on the results of bibliometric analysis and also the problems in interviews at the Batik Cikadu workshop, the main target of this research is how to develop the professionalism of batik instructors through experiential learning. The use of experiential learning models is supported by the use of batik learning videos. Through the experiential learning model, batik instructors can guide students according to batik learning videos. That way, batik instructors no longer feel anxious because they are unable to explain the stages of batik. So, the role of the instructor changed to that of a facilitator. While learning to make batik starts from Reflective Observation (RO).

1. Observation (RO) Cycle

In this cycle the instructor will ask students to observe batik learning videos that have been made sequentially starting from the drawing stage, tracing motifs on batik cloth or batik handkerchiefs, canting, stamping, measuring colors and dyeing colors. The following is a video learning to make batik step by step.

The first stage is the creation of motifs. To produce a batik motif, the instructor must teach students the most basic things, namely from preparing drawing tools such as; pencil, ruler, eraser, marker and HVS paper. Next, start at the stage of drawing motifs on HVS paper. The process of drawing motifs starts from the easiest geometries such as circles, ovals and so on. After that, then thicken it using a marker and finally erase the rest of the pencil to make it neat. If everything has been done, it will enter the stage of tracing the motif on the cloth or batik handkerchief (Fig. 3).

The second stage is tracing the motif on the cloth or batik handkerchief. Tracing previously drawn motifs on HVS paper onto white batik cloth or batik handkerchiefs is a not-too-complicated process. Batik instructors can easily supervise students. Batik instructors only need to monitor the activities of students whether they are in accordance with the previously existing drawings. Plagiarism is carried out using a marker so that the colors look clearer and firmer (Fig. 4)



Fig. 3. Stage of drawing motifs

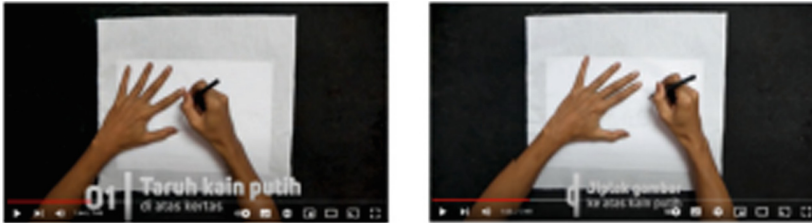


Fig. 4. The stage of tracing the motif on the cloth or batik handkerchief

The third stage is canting. At this stage, the batik instructor must make sure the wax is hot and liquid. The depiction of the motif must be in the form of a firm line without a dashed line. Also pay attention that there are no drops of wax that fall as a result of not being blown out first. Withdrawing the canting follows the pattern on the batik cloth or batik handkerchief by placing hot wax according to the pattern that has been made (Fig. 5).

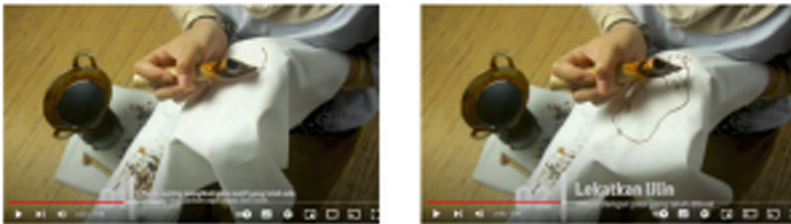


Fig. 5. Stage of canting

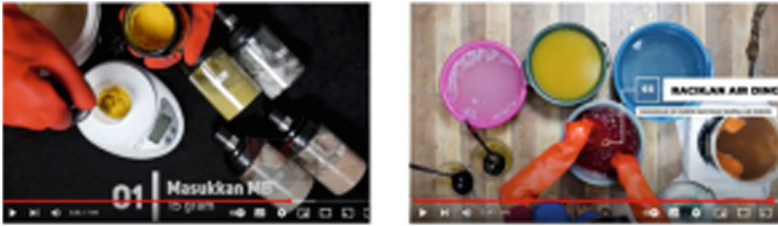


Fig. 6. The stage dyeing

The last stage of the batik learning video is the color measurement process for dyeing batik cloth or batik handkerchiefs. The instructor will guide students in determining the size of the color so that students are not wrong. The instructor will also be petrified in distinguishing which mixture is for cold water and hot water. And the instructor will also accompany the students in the immersion process (Fig. 6).

2. Abstract Conceptualization (AC)

After seeing the batik learning video, the instructor asked the students to think about what batik motifs would be drawn. The instructor also asked students to determine and take the tools that would be needed such as choosing the type of canting to be used, determining the color, calculating the size of the color and so on.

3. Active Experimentation (AE)

At this stage the batik instructor trains students to make batik according to the sequence in the batik learning video. All activities will be guided by learning videos so that teachers no longer teach one by one but change their function to become student facilitators. At this stage usually the teacher will have difficulty in teaching students, but because it is assisted by learning videos, students can practice independently.

4. Concrete Experience (CE)

At this stage the instructor asks students to feel the learning that is being carried out. Students also take tests to measure the learning outcomes that have been done. The tests carried out are divided into two; The first is seen from the results of batik performance and the second is seen from the cognitive results of batik (Figs. 7 and 8).

Then all of that becomes reflection material for instructors and students in batik activities. This needs to be done by the instructor as a benchmark for the achievement of batik learning to students, so that the instructor can find out where the deficiencies in the learning being taught are.



Fig. 7. Batik performance results

FORM PENILAIAN UJI PRAKTEK SENI RUPA MEMBATIK

Nama Mahasiswa : UFA, Dewi D
Dosen Pengampu : Sri Hartono, S.Pd, M.Pd
Dosen Pembantu : Bu RAIAN, Pgs. SMP

NO	PENILAIAN	SKOR
1	MOTIF	25
2	Mampu membuat motif yang sesuai dengan tema yang diberikan	10
3	Mampu membuat motif dengan jelas	15
3	Mampu membuat garis lurus	10
4	CANTONG	15
5	Mampu membuat garis tanpa penggaris	10
5	Mampu memilih jenis rauting yang tepat	15
6	CAP	10
7	Mampu membuat cap dengan tepat dan rata	10
8	WELERA	15
9	Mampu memilih cap yang sesuai dengan motif	10
9	Mampu menambahkan warna dengan tepat sesuai selera	15

Tentukan potongan kain yang sudah diberikan di atas!

Tentukan rumus warna batik!

Handwritten notes and a small red fabric sample are visible on the form.

Keterangan:
A: 81 - 90
B: 70 - 80

Fig. 8. Batik cognitive test results

4 Conclusion

Batik learning is a very complicated learning because it requires cognitive aspects related to batik knowledge starting from the type of batik, batik tools, color size and so on. Then on the psychometric aspect, the batik teacher must be able to ensure that students' skills during practice are in accordance with the learning videos that are played at the RO stage. In the affective aspect, students are required to be patient, responsible, teamwork and thorough. All stages of experiential learning that need to be done by instructors starting from RO, AE, AC and CE are an easy way to teach batik learning to students. For this reason, the instructor's professionalism is very influential on the success of learning. Thus, learning outcomes can be met even in non-formal education, namely in batik workshops.

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