



A Model of Local Potential-Based Fashion Production Units for Troso Woven Fabrics

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Abstract

The development of a local potential-based fashion production unit requires the integration between the national curriculum and local values. This study aims (1) to find a model of local potential-based fashion production units for troso woven fabrics; (2) to test the validity of the local potential-based fashion production unit model for troso woven fabric; and (3) to test the effectiveness of the local potential-based fashion production unit model for troso woven fabrics. The research and development (R & D) design was employed in this study. The production unit management model developed in this study was a local potential-based management model by involving students not only in service unit but also in their management so that they can improve the competence of sewing and entrepreneurship. The results of the production unit model at Vocational High School 2 Jepara, Central Java, Indonesia showed that the model that has been validated by experts is very valid using the Critical Validity Ratio (CVR) all items get a value of 1 with a condition of 0.99 for 2 experts, so that according to the CVR, all items were categorized valid. The results of the limited trial also showed that the fashion production unit model was considered effective, which resulted from student's t-test with a significance of $0.001 < 0.05$. This indicated that the model could improve the competence of sewing and entrepreneurial competence of the students. The results of the local potential-based fashion production unit model of troso woven fabric were also seen from changes in student attitudes in entrepreneurship which are assessed by self-confidence, responsibility, leadership spirit, communication and enthusiasm in seeking business opportunities and increasing local potential. In addition to being able to become a reference in carrying out the activities of the production unit, the model can provide experience and entrepreneurial skills to students.

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INTRODUCTION

Vocational School aims to prepare graduates who are ready to work, skilled, have high competitiveness and become creative citizens to develop professional attitudes in their occupation that refers to the demands of the job market and industry in various fields of expertise. The vocational school as an educational institution can be seen as a system consisting of input, process and output. Therefore, processing the good input into a good quality output requires a good process.

The indicator of the success of vocational education is being able to work in line with their expertise as well as being able to become entrepreneurs. Various government efforts have been performed both through training and development programs. However, the results of the program have not been as expected. The training and development program has not produced the expected graduates. In addition, the graduates cannot fulfill the demands of the workforce. Therefore, the problems of unemployment and poverty are still major issues in the world of education, especially vocational education.

The production unit is one form of learning resources in a school environment that is deliberately prepared as a place for entrepreneurship practicum. The production unit is a means of entrepreneurial learning for students and teachers. It provides operational support for the school. The implementation of clothing production or service units in vocational schools becomes an alternative to foster an entrepreneurial spirit in students. As a consequence, the graduates of vocational schools with occupational skills and mid-level professional attitudes are able to establish businesses in line with their fields. School production units can be a source of learning and funding if it is managed professionally.

Vocational High School 2 Jepara, Central Java, Indonesia has provided a production unit and is intended for students as a place of training and learning to improve entrepreneurial competencies and interests. However, in reality, the management of the production unit is considered as less than optimal because the production unit is not managed with good management and it lacks of a clear organizational structure which can manage it in professionally. As a consequence, the utilization of the production unit as a place of learning in strengthening competence and interest in entrepreneurship becomes less effective. This is evidenced by the production unit which is only open in the school environment and is managed by students who have completed the internship on entrepreneurship subjects.

Another problem in the implementation of the production unit is the unavailability of buildings to carry out the production unit. In management team, the teacher is not directly involved in the management of the production unit and students are only involved as workers. In addition, Vocational schools have not been able to market products / services for instances: the results of students' production are not yet improper for sale, places of marketing the products are less strategic, the difficulty of marketing products or services, lack of capital, limited facilities and infrastructure and too many competitors.

Local potential can emerge from geographical conditions, natural resources, human resources, history and culture. The development of the local potential-based fashion production unit should combine the national curriculum and local values, including cultural values, natural resources, potential, and thoughts that can be preserved through formal education. Therefore, the formal education and local potential can improve their the quality to compete in the era of free market.

Troso is the name of one of the villages in the Pecangaan sub-district of Jepara Regency. The community of troso fabric craftsmen is located in this village. Troso Fabric is actually a gedok weaving technique. In a long period, it develops into a woven fabric. The people of Jepara Regency & its surroundings are more familiar with the term "Tenun Troso".

Utilization of local potential has also not been optimized in this production unit. The professionally – managed production unit can improve student competency both in their expertise and in business management. It can foster an entrepreneurial spirit. In this case, the head of the production unit has an important role in realizing the production unit's vision and mission.

Ganefri and Hidayat (2014) shows that the product-based learning model in Vocational Education and Training (VET) can help students prepare to work in their field of expertise, and develop critical thinking and have a good moral attitude. In addition, it can also motivate students to be more active in the learning process. Sari, et al. (2012), explains that the proper management of the production unit can foster students' interest in carrying out internship within the production to nurture a strong entrepreneurial spirit. Sutopo (2012) explains in his study entitled the evaluation of the effectiveness of the production unit in preparing occupational competencies for vocational students. Alamsyah's, et al (2013) argued that the creativity of the local community can change the economy of the region so that they can create original industries and crafts.

Alamsyah's (2014) added that the development of troso weaving in Jepara is able to survive even under any circumstances. The persistence of the people to market troso weaving is able to improve the economy of the Jepara people.

Santoso (2010) argued that self-concept through education based on local excellence as a model of character and national culture education in the global era. The study by Anisa (2011) concluded that the effectiveness of science learning based on Jepara's local potential to improve students' critical thinking skills was very effective.

The purpose of this study is to develop the model, to validate the model and to figure out the effectiveness of the model of production units based on local potential of troso woven fabric.

The benefit of this study is that the surrounding community can prioritize the existing local potential such as troso woven fabric in producing a craft. Therefore, the community becomes more aware and familiar with troso woven fabric from Troso Village, Pecangaan District, Jepara Regency. The benefits to science are 1) it can be used as a reference in running production units for vocational education institutions in the field of fashion, 2) it can provide knowledge and skills for students and financial benefits for schools, 3) it can also be used as an alternative practicum for students.

METHODS

This study employed Research and Development (R&D) design. This study aims to develop the model of local potential-based fashion production unit of troso woven fabric which includes three aspects: knowledge, attitude and skills. This study was conducted on students of class XI dress up in the 2017/2018 school year using a limited trial.

The procedures of conducting R & D were based on Borg & Gall (1983) developed by Sugiyono (2015). First, the preliminary study on the model reference product was conducted by observing the potential and problems. Then, literature study and information data were collected. Afterward, the design of fashion materials based on the local potential was developed. The design of the model was validated. Based on the result of the validation, revision or improvement of the design of the development of models for local potential-based fashion production of troso woven fabrics was performed. The limited trial of the local potential-based fashion production unit model for troso woven fabric was performed to assess its effectiveness.

The data of this study were collected using these following techniques: (1) expert validation, which was used to test the validity of the product. The experts provided assessment and input for the production unit model; (2) Validity and reliability of the production unit model were tested on the samples of students from class XI and (3) Pre-test and Post-test, which were used to assess the initial and final knowledge after obtaining product development. The instruments used to gather the data were questionnaires, pre-test and post-test, observation sheets.

The results of the validation of the two validators were obtained using the Aiken's V formula to obtain its content validity. The Aiken's V formula showed that content validity value of all items was more than 0.3. Therefore, it can be concluded that all items were valid. The content validity test was performed using Critical Validity Ratio (CVR) using 2 experts. The results of the CVR showed that all items obtained a value of 1 with a condition of 0.99 for 2 experts. As a consequence, based on the CVR table, then all items were considered to have the content validity.

Rater reliability was calculated using Kappa. The result showed that the value of 0.364. Therefore, the inter rater agreement was categorized as fair. The approx..sig value was 0.023 with a significant level of 5%. Therefore, the null hypothesis, there was no agreement between first and second expert, was rejected and, and the alternative hypothesis, the agreement between two experts was achieved was accepted.

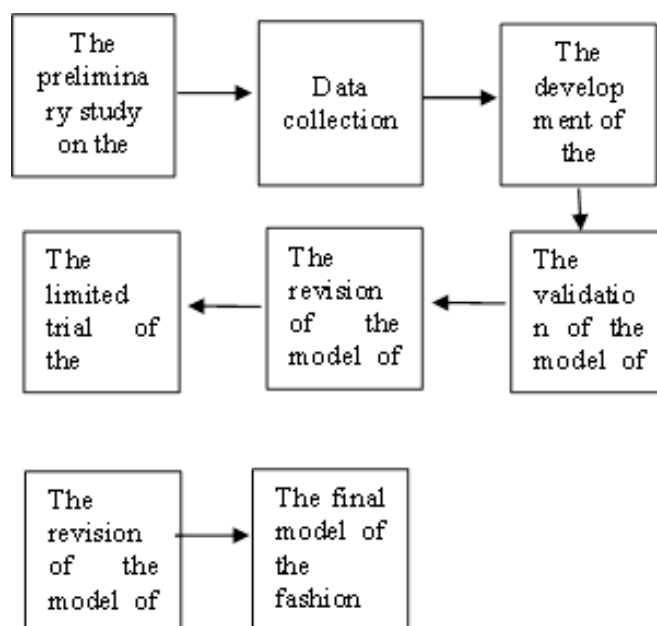


Figure 1. the procedures of conducting R & D on the model of fashion production unit based on the Troso woven fabric as the local potential

The item analysis of the pre-test and post-test data from 40 questions which were tested to 34 students showed that 30 items were considered valid. The item difficulty test showed that 19 items stated were categorized as medium, while 21 items had a level of difficulty of easy. The item differentiation test revealed that 10 items were classified as poor. Six items were classified as good. Twenty three items were classified as very good.

The mean value of students' score before treatment (pretest) was 70.1765. After treatment (posttest), the mean value of students' score was 79.1765. The mean values were obtained from the cognitive, affective and psychomotor domains.

RESULT AND DISCUSSION

Normality Test Results

The results of Normality test using Kolmogorov – smirnov and Shapiro – Wilk Test can be seen on the following table 1.

Table 1.

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.107	34	.200*	.953	34	.152
Posttest	.145	34	.068	.945	34	.087

Based on the result of the normality test on the scores of the pre-test and post-test, the sig value of the Shapiro Wilk on the pre-test was 0,152. In addition, the sig value of the post test was 0,087. Both of the sig. values were more than 0,05. Therefore, the data were normally distributed.

Homogeneity Test

The results of homogeneity test can be seen on the following table 2.

Table 2.

Levene Statistic	df1	df2	Sig.
.050	1	66	.824

Based on the homogeneity test on the data on pre-test and post-test, the sig value was 0,824 which was more than 0,05. Therefore, the data were homogenous and the variance of both data was similar.

Testing the Hypothesis

The hypothesis was tested using T test. The results of the T test showed whether the difference between the means of both data was significant. If the Tstat > Ttable, then the null hypothesis was rejected and vice versa. The results of the T test can be seen on table 3.

Table 3.

Pair 1		Mean	N	Std. Deviation	Std. Error Mean
		pretest	70.1765	34	14.35158
	Posttest	79.1765	34	14.61728	2.50684
	t				

The results of the T test on the pre-test and post-test data showed the mean pre-test was 70.1765 and the mean post-test was 79.1765.

The probability value of the paired samples T test is 0,000. The P value = 0,000 < 0.05 (95% confidence). Therefore, there is a difference in the means of both pre-test and post-test data. The above test results were taken from the final scores of cognitive, affective and psychomotor domains.

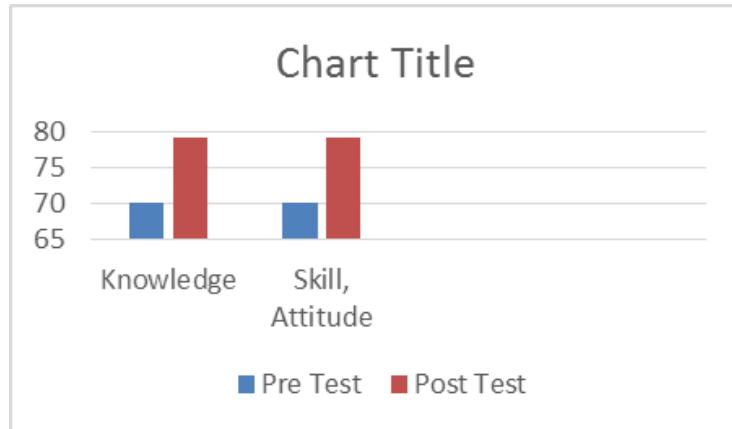


Figure 2.

The fashion production unit model is an integral part of a research process in learning, what is to be measured in learning process related to the availability of measuring instruments. Therefore, what will be measured in learning also determines the quality of learning. Improving aspects of knowledge, attitudes and skills that are compatible with competency requires an assessment whose results have a positive impact on learning outcomes. Therefore, it is necessary to develop models of local potential-based fashion production units for troso woven fabrics. Students' competencies were focused on certain abilities, the results of which can be seen from the learning outcomes of students through the production unit.

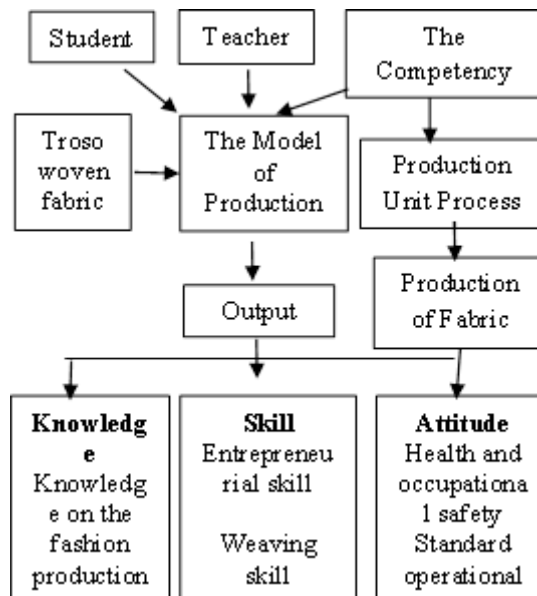


Figure 3.

The procedures of conducting R & D were based on Borg & Gall (1983) developed by Sugiyono (2015). First, the preliminary study on the model reference product was conducted by observing the potential and problems. Then, literature study and information data were collected. Afterward, the design of fashion materials based on the local potential was developed. The design of the model was validated. Based on the result of the validation, revision or improvement of the design of the development of models for local potential-based fashion production of troso woven fabrics was performed. The limited trial of the local potential-based fashion production unit model for troso woven fabric was performed to assess its effectiveness. Based on the result of the limited

trial, the product was revised. The model of fashion production unit based on troso woven fabric as local potential was tested again. The model was revised based on the results of the test. The final product of this study was the model of fashion production unit based on troso woven fabric as local potential.

The production unit in each school must have their own characteristics so that the community is familiar and attracted to come to the production unit. The utilization of the local potential in the local area can make the production unit more advanced and developed; indirectly the production unit can market the local potential in the area so that the local potential in the area can be known by the wider community, especially for students.

At the design and development stage, instrument items were developed. Instruments were developed to test the knowledge and were prepared in line with syllabus references, and lesson plans. The items of the instrument were in the form of multiple choice questions. The items were tested on the students. The attitude aspect was assessed using the a questionnaire that assessed the attitudes a character of students. The skill or practice assessment was assessed using the instrument, which refers to the syllabus. The instrument items were developed according to specifications that have been determined to be a practicum assessment sheet that matched their competence.

Based on the analysis of the validity, reliability and effectiveness of the model of fashion production unit based on the local potential of troso woven fabric, it can be concluded that the assessment of knowledge, attitudes and skills of the model were in accordance with these following principles of assessment: valid, educating, competency oriented, fair and objective, open and sustainable, comprehensive and meaningful. This finding was corroborated by Handayani and Wening (2016) which investigated the acquisition of competencies in cognitive, affective and psychomotor aspects by students about the procedure of making clothes in the production unit. This study is also relevant to Hidayat (2013) with the conclusion that the entrepreneurship training model based on local potential in improving entrepreneurship competency of independent business literacy learning (KUM) in Karawang regency has proven to be significantly effective in increasing the knowledge, attitudes and entrepreneurial skills of learning citizens. Aspects of knowledge, attitudes and skills showed that there are differences before and after attending entrepreneurship training based on local potential.

Handayani, et al (2014) also added that understanding the characteristics and factors that influence the development of existing local potentials is required so that the empowerment of economic activities based on local potential / resources becomes maximal.

CONCLUSION

The results of the local potential-based fashion production unit model of troso woven fabric were observed from changes in students' attitudes in entrepreneurship which were evidenced by self-confidence, responsibility, leadership spirit, communication and enthusiasm in seeking business opportunities and increasing local potential.

The local potential-based fashion production unit model of troso woven fabric was categorized valid and can be developed. The validation process was carried out by two experts using CVR. The validation process resulted in the value of 1 with a condition of 0.99. According to the CVR, all items were categorized as valid.

The test results of the effectiveness of the local potential-based fashion production unit model in troso woven fabric showed a value of > 0.05 (confidence interval = 95%). This shows that the local potential-based fashion production unit model is valid and effective to be used in the clothing production unit of SMK N 2 Jepara.

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