

## **Improvement of Learning Independence and Learning Outcomes on Textile Course through Hybrid Learning Model**

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**ABSTRACT:** This study was aimed to find out the relationship between learning independence and learning outcomes, as well as to determine the effect of hybrid learning on students' learning outcomes. The design used in this study was Non-Equivalent Control Group Design, consisting of four treatment groups with various proportions of hybrid learning, three of which respectively were 50%, 60%, and 70%, while another group was a conventional group. This conventional group performed as the control group. The sample of this study was 104 students of the 10<sup>th</sup> grade of Vocational High School majoring at Fashion study program. The data were collected using questionnaires and knowledge test, and analyzed using Anacova technique. The results of this study showed that (1) the significance of the relationship between learning independence and learning outcomes was 0.000, (2) the significance of the effect of hybrid learning on learning outcomes was 0.037, and (3) the highest average learning outcome was obtained by the treatment group with the proportion of hybrid learning of 60%.

**Keywords:** hybrid learning, learning independence, learning outcomes

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### **I. INTRODUCTION**

The development of information and communication technology has brought a great influence on the change of new paradigm in the sector of education. As both sectors continue to grow, there are various modern education tools and facilities supporting the optimization of the learning process. The form of information technology development applied in the education sector is e-learning – an innovation that has a great contribution to the change of learning process.

A successful learning is a learning that is able to help students to achieve the determined competence. Therefore, the selection and implementation of learning model design become one of the critical determinants of the student's competence mastery. One of the competencies that must be mastered by the vocational high school students majoring in Fashion program is the knowledge of Textile. A textile course is a basic course of vocational competence that requires the students' understanding before studying the vocational competence of Fashion. According to Depdiknas – Department of National Education (Setiarini, Y.F, 2009:71), one of the goals of Fashion study program is to educate the students with the skills, knowledge, and attitudes so that they can be more competent in selecting textile or fabric materials. The knowledge of textile or fabric is highly important because textile or fabric is the main ingredient in the manufacture of clothing or garment. Based on the data obtained from the discussion (with the teacher of textile course) and the classroom observation, it was found that the interest on textile course/learning of the 10th-grade students majoring at Fashion program generally was low, which indirectly also affected the students' learning outcomes. Grounding by this fact, it is possible that the learning model used by the teacher was less appropriate, affecting the students' learning outcomes. Besides, the inequality of the competence mastery owned by the students might also be the determinant of the students' learning outcomes.

Furthermore, this can happen because of monotonous learning activities and lack of innovative learning models which can construct the students' ideas and knowledge. The students' learning outcomes can also be improved by combining theory and practice, as well as optimizing thoroughly the material delivery leading students to be able to learn independently without having to wait for the presence of teachers. By the learning independence, students are expected to be able to construct their ideas and knowledge in improving their competence that eventually can enhance their learning outcomes. In another side, the existence of e-learning media is also expected to generate a more conducive learning process, increased students' interest, and improved students' learning outcomes. This is because e-learning requires students to be able to interact with the

internet, such as accessing a broader information and generating students' learning independence. Although e-learning can be used independently by students, the existence of teachers still becomes very meaningful – as adults who function to give supports in the learning process. In other words, the face-to-face learning process becomes greatly important and should not be left behind in learning process (Plummer, 2012:1).

Nowadays, the learning model required is by utilizing the element of information technology but without leaving the direct guidance pattern of teachers. This concept combines e-learning with conventional learning (face-to-face), called as “hybrid learning”. Hybrid learning is an approach combining the advantages of the ‘old’ and ‘new’ learning methods so that the constructed learning has an optimal quality that is better than the quality of face-to-face learning or online learning activities.

Vaughan (2007) and William (2008) suggested that hybrid learning refers to the combination of e-learning method with conventional learning method (face-to-face). Furthermore, Martyn (2003) also described a hybrid approach for online learning, which is characterized by face-to-face activities in the classroom and the use of online course. According to the study conducted by Ahmad and Ismail (2013), hybrid learning is a concept combining online learning and face-to-face learning. The results of the study indicated that hybrid learning must be implemented in the era of globalization that leads to the achievement factor of students' learning satisfaction.

This is supported by the statement of Wang, F.L (2008) in his article on a book of study results regarding hybrid learning. Wang wrote that the biggest single trend in education today is hybrid learning. By the existence of hybrid learning, there are a lot of educational advantages resulted from the combination of traditional learning and e-learning methods which are implemented collectively.

Hybrid learning was initially applied in North America in 2000 and today it is an ongoing trend. It is not just a simple combination of ongoing teaching and e-learning but consists of learning strategies and important elements for teaching and learning (Fong, J. et al., 2000). In hybrid learning, the learning process is focused on students, and the environment of learning science is also provided. Besides, students are also given many opportunities to be an active learner and able to carry out practical skills such as communication, collaboration, critical thinking, creativity, self-management, independent learning, analysis, and problem-solving. Allen, L.E. et al. (2007: 5) has provided a clear categorization of hybrid learning, traditional learning, web enhanced, and online learning. Based on the proportion of content delivered online, it can be seen that a learning can be considered as a hybrid when the portion of e-learning is in the range of 30-79%, combined with face-to-face learning. In another side, hybrid-learning models encourage teachers to change the educational paradigm of teacher-centered learning to be student-centered learning.

The hybrid learning model is also used as the alternative facility to optimizing the learning process. This optimization has implications on the increase in students' learning time, develops the students' self-regulation, as well as improves their critical, active, creative and innovative attitudes so that they can be motivated in improving their learning performance and outcomes. The implementation of hybrid learning model has made a new variation on the model, method, facility, and media of learning. This is also supported by the study of Zimmerman and Pons (1988) entitled Construct Validation of a Strategy Model of Student Self-Regulated Learning. The results of the study showed that the proportion of independent learning accounted for 80% and the correlation significance of structured independent learning strategy was 0.70.

Garnham, C. & Kalenta, R. (2002) created a hybrid course program involving University of Wisconsin of Milwaukee and other four campuses, UW-College (Sheboygan Washington, and Waukesha). This program adopted an online hybrid learning model of 25% up to 50% (of the learning time in the classroom). The result obtained stated that 80% students recommended a hybrid program.

Bernfanger, O. (2005) analyzed the environment of hybrid learning, and the survey showed that hybrid learning has many benefits, including: improving learning quality (90%), adding experience (87.9%), reducing learning time (82.1%), increasing learning utility (73.2%), reducing learning cost (71.1%), being learning map component (62.1%), and reducing the cost of program shipping (50.5%).

Meanwhile, according to Yendri, D. (2011), the benefits of hybrid learning are: (1) improving learning outcomes through distance learning; (2) providing ease of learning to students; and (3) reducing the cost of learning. With these benefits, it is expected that hybrid learning can overcome the problems emerging in the process of learning.

Considering its benefits, a hybrid-learning model was finally chosen as the learning supplement on Textile course, completed with a constructive approach. The selection of hybrid learning was grounded by several advantages owned by hybrid learning, including (1) enabling students to obtain up-to-date teaching materials; (2) making teachers able to control the students' material mastery both in the process of face-to-face learning and online learning; (3) leading learning activities to be more effective and efficient by optimizing the utility of information and communication technology; and (4) completing lessons/courses that have not been conveyed in face-to-face learning model.

Based on the explanation above, the researchers conducted this study with the aim to knowing that hybrid-learning model can improve the learning independence and learning outcomes on Textile course of Vocational High School students majoring at Fashion study program.

## II. METHOD

This study used Non-Equivalent Control Group Design. There were four treatment groups with various proportions of hybrid learning, three of which respectively reached the percentage of 50%, 60%, and 70%. Another group was a conventional group that was not given a treatment. This group was a control group. The sample of this study was 104 students of the 10<sup>th</sup> grade of Vocational High School majoring at Fashion study program. The data were collected using knowledge test, questionnaire, and observation. The data analysis used Anacova technique.

## III. RESULTS

The results of this study showed that (1) the significance of the relationship between learning independence and learning outcomes was 0.000 (relatively smaller (<) than 0.05), indicating that there was a significant relationship between learning independence and learning outcomes; (2) the significance of the effect of hybrid learning on learning outcomes was 0.037 (relatively smaller (<) than 0.05), indicating that there was a significant effect of hybrid learning on learning outcomes.

Moreover, the study results also suggested that (1) the hybrid learning of the first treatment group made an effect on learning outcomes with the significance of 0.277; (2) the hybrid learning of the second treatment group gave an effect on learning outcomes with the significance of 0.054; (3) the hybrid learning of the third treatment group made an effect on learning outcomes with the significance of 0.012; while (4) the hybrid learning of the fourth treatment group had an effect on the learning outcomes with the significance of 0.

The analysis results showed that the average learning outcome of the first group was 73.46. In another side, The second group reached the average learning outcome of 77.12, while the third group reached the average learning outcome of 69.81. Lastly, the fourth group obtained the average learning outcome of 53.65. Thus, it can be concluded that the second treatment group with the proportion of hybrid learning of 60% achieved the highest average learning outcome.

## IV. DISCUSSION

The results of this study showed that there was a significant relationship between learning independence and learning outcomes. Based on the analysis result of this study, the significance value of learning independence was 0.000, which is smaller (<) than the significance level of 0.05. Besides, there was also a significant effect of hybrid learning on learning outcomes with the significance value of 0.037, which is also smaller (<) than the significance level of 0.005. According to the results of the test conducted in all the treatment groups and control group, it was obtained that the highest average of the learning outcomes was in the second treatment group with 60% proportion of hybrid learning and the rest 40% proportion of conventional learning. The results of this study are in line with the Proportion of Content Delivered Online written by Allen, I.E. et al. (2007:5), which have explained a clear categorization on hybrid learning, traditional learning, web enhanced, and online learning. A learning can be called hybrid if the portion of e-learning is in the range of 30-79%, combined with face-to-face learning. On the other hand, hybrid-learning model encourages teachers to change the educational paradigm from teacher-centered learning to be student-centered learning.

This study is supported by the results of a study conducted by Aritonang, M. (2004) in Lancaster Wheatland Middle School, which has proven that 81% of the students experiencing hybrid learning can become well improved and proficient on Algebra Keystone exam, with a rate that was higher than the average rate of the country. The students' development was related to the positive change of their motivation and confidence in hybrid learning. The fact is that hybrid-learning model gives a positive impact on the students' motivation to participate in the learning process.

Linear with the results of several studies on hybrid learning that have been explained, Buzetto, N.A and Swear, R. (2006) in their article on Hybrid Learning Defined also stated that hybrid learning is an effective and efficient development method supporting in-depth analysis of knowledge, improving the students' satisfaction, and resulting in a paradigm change in higher education. The outside-class experience and other non-traditional learning methods can increase the learning experience in higher education; even develop the model of hybrid learning. The study carried out by Rahmatillah, H. (2013) on the implementation of hybrid learning to improve the quality of learning in vocational high school used a True Experimental Design method with pretest and posttest control group design, covering experimental and control classes. The results suggested that (1) the product was worthy to be used, in which the average result of media feasibility test to improve the learning quality reached 78.56%, (2) the average learning outcomes of the students increased by 29.96% for the control class and 48.72 for the experimental class, and (3) the students and teachers responses to the study on

experimental class were relatively good in which the results reached 81.50% and 80.00%. Furthermore, another article was written by Klimova, B.F and Kacetyl, J. (2015) on Hybrid Learning and its current role in teaching a foreign language. His study was aimed to explore the perceptions of the concept of hybrid learning and to describe its methodologies such as face-to-face and online instructional component integration. Additionally, the use of innovative technology, the reconceptualization of the learning paradigm, and the ongoing assessment or evaluation of mixed learning showed an additional point on its role in the teaching process of foreign language.

An article of Pintrich, P.R. and De Groot, E.V. (1990) on Motivational and Self-Regulated Learning Components of Classroom Academic was a correlational study that examined the relationship between the orientation motivation settled with self-regulated learning and the class academic performance of 173 students. With regression analysis method, a good result was obtained on self-regulation, self-efficacy, and anxiety test. The performance predictor of intrinsic value does not have direct effect on the performance but are strongly associated with self-regulation and cognitive strategies

Meanwhile, according to an article written by Maher, A. (2003) on Learning Outcomes in Higher Education: Implication for Curriculum Design and Student Learning, the colleges in the UK have undergone tremendous changes in the last thirty years. The government has successively tried to make this more efficient and accountable. Learning outcomes can perform as a benchmark to ensure the quality and efficiency of colleges, on how learning outcomes are used in colleges and its implication is evaluated for designing the students' curriculum and learning.

## V. CONCLUSION

Based on the discussion of the results of this study, it can be concluded that: (1) the learning on Textile course through hybrid-learning model can improve the learning independence and learning outcomes, (2) there is a significant relationship between learning independence and learning outcomes, (3) there is a significant effect of hybrid learning on learning outcomes, (4) Hybrid learning with the proportion of 60% is recommended as a learning model trend because it is most effective in optimizing the learning process, developing the independent, active, creative, and innovative attitudes of students so that it can motivate students in improving their learning performance and learning outcomes.

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