The Effectiveness of Posters as a Learning Media to Improve Student Learning Quality

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Abstract
The aim of the study is to identify the importance of poster as a learning media that can be utilized in learning activities. It also aims to explore the learning outcomes of students who use poster as learning media. In Indonesia, high school students are not allowed to carry a mobile phone, while the school on the other hand, does not provide enough computers for all students. The school computer laboratory could only cater for students need interchangeably. Therefore, teachers in schools choose other media that they think are effective, such as poster media. The poster media was seemed very relevant and appropriate to improve the quality of learning and student achievement. This study involved both qualitative and quantitative research method through Four-D model (Define, Design, Development, and Dissemination) that used for the learning material development. The data was collected through an interview with two experts and experimental research design among two groups of students. The qualitative data were analyzed and the experimental data was tested using T-test statistical analysis. The learning outcomes with poster as learning media showed the mean values of the control and experimental groups were, respectively, 60.97 and 85.86. It indicated the difference in learning outcomes of 24.89. The produced poster was also assessed by media experts and curriculum experts. This study recommended that poster is very feasible and relevant to be utilized as a form of learning media in improving quality of learning and engagement with students.

Keywords: Learning; Learning media; Learning quality; Poster.

1. Introduction
The current conventional learning activities are deemed to be less productive (Arifin, 2012), the traditional lecture process is not effective (Rindaningstih, 2018), and the output is lower (Mamad, 2015) in which they are lacked of innovation and intellectuality (Baba, 1998). The development of interactive learning media is increasingly important (Ali, 2009) to support optimum learning outcomes. In fact, it is generally acknowledged that conventional learning must be improved continuously in order to promote effective learning, one of which is by utilizing media-based learning that requires particular competence from educators.

Learning media defines as a communication channels (Heinich et al., 2002). It is an intermediary that conveys a message from the source to the recipient (Susilana and Riyana, 2009). Furthermore, Rusman (2012) argued learning media as a potential messenger technology to be employed in learning purposes and as a physical means to deliver subject matter. Learning media is one of the communication tools in the teaching and learning process (Indriana, 2011). Innovative learning media in teaching and learning activities evokes students’ enthusiasm, which eventually motivates and stimulates them in learning (Haryoko, 2009).

Learning media can be utilized to support the quality of education and simultaneously to facilitate students in understanding the materials conveyed by teachers easily (Suprapto, 2006). It is an assistance or tool to ease human tasks towards a more efficient, effective learning process that will enhance the student’s creativity. This is also supported by Purwono et al. (2014) that emphasized the selection of media as an alternative to improve student learning outcomes must consider its conformity with teaching material and the condition of students.

In Indonesia, there is a prohibition of carrying gadgets for students because the learning process in schools should be more better and improved students’ concentration. In addition, the schools in Indonesia still do not have sufficient computers for all students in the classroom and computers in the laboratory space are still limited to be used by them for alternating learning (Makoe, 2012; Nuffic, 2015; Omodara et al., 2014). Besides, the selection of digital media is limited because of lacking funds to purchase devices such as personal computers, and laptops which are still expensive (Sittichailapa et al., 2015). Therefore, to improve the quality of learning in the classroom, teachers can choose the appropriate learning platform or media, such as posters. Posters are made in accordance with interesting subject matter, seen to be able to create an increase in learning effectively.

Studies carried out in favourite schools in Indonesia seem to be an interesting task. The teacher tends to perform a teacher-centred model and discussion thus learning activities are relatively monotonous. Here, media can be an...
alternative to improve the process of quality learning in Indonesia. Posters as a form of media are expected to enhance students’ understanding of the subject matter conveyed by teachers (Ali, 2009). Poster can highly effective in humanities sources and have been shown to improve metacognitive practice too (Logan et al., 2015). In addition, the poster can act as a teaching aids in generating more effective learning activities and increase students learning performance (Ogbulogo, 2014). Thus, using poster as learning platform to deliver the knowledge to students can be an alternative to improving the quality of the learning process.

Al-Samiraa’I in Yasmaruddin (2008) stated that the comprehension level of knowledge through the sense of sight is approximately 75%, the sense of hearing is 13%, while the rest (taste, touch, smell and knowledge) is 12%. Images in poster as learning media have significant impact, even three times better than others. Moreover, the combination of images and text will create a stronger impact. The combination of texts and images in learning media platform is estimated and proven to provide an important role in supporting the effectiveness of learning that delivered by the teacher (Mahnun, 2012). Larasati (2017), reported that the right, suitable and attractive learning media selection is crucial to ensure the learning system works effectively and efficiently. In the study conducted by Larasati (2017), revealed the difference between the pre-test before the intervention of poster media (55.69) and the post-test (85.21), which implies the effectiveness of poster as learning media.

Poster is an information channel or tool that persuades, suggests, or introduces something to people who view it (Rahmaniati, 2015). Hartini (2017), defines poster is made with a large size to be displayed to the public and to attract their attention by combining images, colours, and words. It is a potential learning media since it integrates theory, sketches, images, graphics, and other ideas with attractive design. Based on the discussion discussed above, this study thereby aims to identify the importance of poster as a learning media that can be utilized in learning activities. This study also aims to explore the learning outcomes of students who use poster learning media with the theme of International Economic Cooperation.

2. Literature Review

2.1. Learning Media

Learning is one of the most complex and remarkable of human achievements (Ponari et al., 2018). Learning is also the interaction and process of expressing knowledge (Hakim, 2009), which obliges both physical and mental involvements (Siroi, 2004) of teachers and students, in a reciprocal situation related to processes and progress (Sihes, 2011). In overall, it is a process in which interaction between teachers and students is conducted with the content of teaching material, aiming at achieving progress.

Learning is a component of education. Education is a continuous learning process to improve one’s abilities. It takes place in schools and within family and community (Roqib, 2009). It is aimed at generating people who have intellectualty and character so as they have a broad insight of the future and an ability to adapt to the environment appropriately (Suwija, 2012), excellences (Masoang, 2012) and capacity as reliable leaders (Usman, 2013). The quality of learning as a process of acquiring learning objectives in terms of increasing knowledge and skills, and character building through the learning process in the classroom (Prasetyo, 2013).

The term of media or medium allude to a way of correspondence that began from the Latin word signifying “between”. Media are the methods for transmitting or conveying messages and in educating learning point of view conveying content to the students, to accomplish compelling guidance. Media can be utilized successfully in formal circumstance where students are working freely or teacher is working with other group of students (Said et al., 2018).

Media are everything that transmitted data from the source to the receiver. Meanwhile, the term of learning media can be considered as a medium which aims to deliver the knowledge and learning material to students (Smaldino et al., 2014). The occurring of learning media is mainly to improve the interaction and learning between teachers and students (Sittichailapa et al., 2015; Smaldino et al., 2014). According to Buckingham (2007), learning media have a potential to be a significant instrument of learning programs either in the classroom or outside which can be utilized in the context of interaction, communication of teachers and students in the learning procedure. Additionally, learning media can be utilized in mass, either in large groups, small groups or individually (Noor, 2016).

There were several advantages of learning media that pointed out by Kemp and Dayton (1980) included (1) conveying learning as per the norms; (2) make learning to be more fascinating; (3) make learning more intuitive; (4) the time span of the class session can be shortened; (5) The value of learning results can be improved; (6) teaching process can be given anywhere and whenever; and (7) encourage students’ inspirational frame of mind towards the learning process. Many scholars provide different categories of learning media (Chandra et al., 1998; Kemp and Daylon, 1998; Mehra, 1992). However, usually the types of learning media included print media (e.g. newspaper, magazines and poster), graphic media, photographic media, audio media, television/video, computers, simulation and games (Naz and Akbar, 2008). Since this study focuses on schools in the context of Indonesia and based on several issues discussed earlier in the introduction, the selection of poster as the learning media is much suitable to be studied.

2.2. Poster Learning

Posters are frequently used to share data and are an essential piece of numerous meetings, workshops and shows. They might be utilized to exhibit very comprehensive material, thus it is imperative that the data on them is well spread out, intelligible and appealingly exhibited (University of Leicester, 2009). Poster introductions were first
acquainted with logical social events in 1970s and from that point forward they have turned out to be a prevalent methods for delivering contents at conferences (Gosling, 1999). For example, in excess of 200 poster presentation were conveyed in TESOL International Convention and English Language Expo held in the USA, in 2017 (TESOL, 2017).

Despite the fact that poster presentations are broadly favored in logical gatherings such as conference, they are now relatively being utilized as a teaching tool in a numerous field of study (Otzurk, 2017). Posters are viewed as dismissed sort of learning media in delivering the contents to students (Osa and Musser, 2004). Nevertheless, Berry and Houston (1995) highlighted several benefits of posters in facilitating learning process and summarized as follow:

i. Poster was an excellent alternative medium for improving communication and interaction skills,
ii. Poster could engage students in the appraisal procedure,
iii. Poster could urge students to examine a theme altogether,
iv. Poster could give chances to peer-learning,
v. Poster could boost a positive attitude among students.

Even there were many forms of learning media, few studies revealed the educational potential of the poster (Osa and Musser, 2004). The features of colorful and attractive poster as the learning media can improve the learning environment very well. Besides, posters can promote an unintentional learning and enhance a more inspiring and attractiveness condition in facilitating learning and education system (Osa and Musser, 2004). The study conducted by Chabeli (2002), in the context of nursing education discovered that the usage of poster as learning media encouraged to more imaginative, analytical and reflective thinking skills, and also problem solving skills. Another study by O’Neill and Jennings (2012), recommended that posters are a well-known methods for appraisal since they enable teachers to have an alternate methodology regarding evaluation. In addition, Koshy (2011), stressed that the application of poster as learning media among large group of students were found to be effective and efficient way in developing their verbal and presentation skills. Moreover, using the poster also can change students’ attitudes towards lessons in a positive way. The posters also can promoted a productive learning experience for students (Otzurk, 2017).

3. Material and Method
3.1. The Four D Model

The learning material development model used in this study is the Four-D model with four stages of Define, Design, Development, and Dissemination that established by Thiagarajan and Semmel (1974), which shown in Figure-1.

![Figure-1. The Four-D model (Adapted from Puspitaningayu et al. (2018)).](image-url)
The first stage of Four-D model is defining problems by analyzing both teacher’s and student's current situation, and studying the need of poster as learning media for learning activities. In this research, this stage started by identifying the characteristics of poster and objectives of the poster in accordance with learning material agreed upon with economic subject teachers.

The second stage is designing the poster that has been agreed. The initial design of the poster then needs to be evaluated by experts, tested in the development stage, and get feedback from those processes. Researchers consulted with economic subject teachers by interviewing them regarding poster as learning material. This interview was conducted to provide input for poster improvement.

The third stage is the development stage where the material was developed based on the basic needs and also feedbacks from other parties. In this research, the material was referred to the posters that have been improved in Stage 2 are consulted in an interview with media experts. The poster evaluation by the media experts included the structure, layout, color comparison, font size, and other relevant things. Then, the poster would be improved based on those feedbacks.

The final stage is the launch or disseminate stage where the improved poster as learning media is tested, validated, and evaluated until it can be launched as the final product. Along with the development of the final learning material, students’ response and their learning outcome also been observed. In this study, the posters that had been improved are tested in the experimental class at school. There are two groups were divided which were learning experimental class using posters and the control class did not use posters. The results of the study revealed that experimental class better than the control class in improving learning outcome of students.

3.2. Research Method

In achieving the purpose of the study and using Four-D model as based of research material development, both of qualitative and quantitative method were involved. The data collection techniques included interview and experimental testing. The first stage of research method was started with the qualitative research approach. The interview involved economic teachers with the main concerns related to the instructional methods, and questions from the assessment of curriculum experts and media experts. This interview involved in define and develop stage of Four-D model.

Then, the next stage of methodology is the quantitative approach through experimental testing which involved in disseminate stage of Four-D model. The test was in the form of question sheets containing the materials that had been conveyed with the assistance of poster as learning media for the experimental group. Meanwhile, the test was also distributed to the control group that received materials through conventional process without any learning media. The control groups for this experimental testing were 35 students of class of XI-IPS 1 and 36 students of XI-IPS from Senior High School State Kartasura. These question sheets were intended to disclose to the extent the students understood the material conveyed by the teacher after the intervention of poster as learning media. Subsequently, data obtained from interview was used to improve the former learning media. Test results were processed with a quantitative analysis technique through SPSS software using T-test statistical analysis.

4. Results and Discussion

4.1. Interview With Experts

The first methodology stage for this study is qualitative method through interview conducted with the experts. Prior to its utilization, the poster generated from the preparation of learning media had been assessed by media experts and curriculum experts with certain criteria, which resulted the produced poster was feasible to be tested on sample. Media experts claimed that the poster had an attractive display, precise color contrast, accurate image editing, high/sharp image quality, precise font composition and font size, standard size, as well as systematic and sequential hence the teachers will easily employ it to convey the material.

Furthermore, based on the assessment from the curriculum experts, there was a suitability between the poster and the material, as well as between the content and the learning objectives. In addition, it was adjusted to the needs of students and had comprehensible explanatory material, high quality images, chronological illustrations, communicative language, and useful for the learning process.

4.2. Experimental Design

The next methodology stage of this study is quantitative approach through conducting experimental testing on two groups of students. The subsequent stage was to test the poster as a learning media, which is expected to improve student’s learning outcomes. The present study involved as many as 35 students of class of XI-IPS 1 as the experimental group, and 36 students of XI-IPS 2 as the control group. The results of this testing showed the difference between the outcome of learning activity between the experimental group and the control group. The post-test demonstrated the mean score of experimental group was higher than the mean score of control group. The mean difference between the control groups (mean value = 60.97) and the experimental groups (mean value = 85.86) with standard deviation value of 24.89 was tested with t score of 4.23 which was greater than t table at the confidence level of 5% at 2.048, so this study showed that the posters used to improve the quality of learning were declared successful. Student learning achievement can increase with learning using posters rather than conventional learning.

The result confirmed Freiberg et al. (2009), that good class management will augment the students’ achievements, and that media successfully motivated student to learn and learn (Mariage and Garmon, 2003). Former study carried out by Larasati (2017), also concluded that there were differences in the results of pre-test and
post-test. The score of the pre-test was lower compared to the score of the post-test, implying the score was higher after the intervention of poster as learning media. The results of the t-test also showed that the value (sig) was 0.000<0.05 which implies there is a difference between the pre-test and the post-test. The utilization of poster media was very effective as evidenced by the increase in the value of 55.69 (of the pre-test) to 85.21 (of the post-test).

Similarly, Primavera (2017) verified the difference after the utilization of poster to convey information about the flood disaster mitigation. The results indicated the significance of <0.005, namely 0.000 which implies there was a significant difference in the understanding about flood disaster mitigation knowledge before and after the additional media in the form of using poster. The score of the pre-test was 74 while the score of the post-test was 90.6. Likewise, Mandasari (2016), declared the effectiveness of poster as learning media in influencing the learning interest of students. It has been proven by the increase in the results of student outcome after the application of poster as learning media in the classrooms.

Furthermore, D’Angelo (2012) concluded that by the innovation in preparing posters, including by changing the display and presentation, can be a constructive model for academics. Posters will highlight communicative strategies in accordance with the objectives of the poster, in which it can be employed in various fields. In addition, this form has various advantages, including time-saving due to its explanatory feature. Students will see the images contained in the poster and conclude on their own.

Essentially, the use of poster as learning media has been informed to be effective in learning activities. It can be seen from the differences in the scores gained by students, which is 85.86 after using poster as learning media and 60.97 in the absence of learning media.

5. Conclusion

Several conclusions can be formulated from the results of the present study, they are:

1. The poster tested in the present study is feasible to be utilized as a form of learning media. It is intended to improve the quality of student outcomes.

2. The poster in this study was developed with the Corel Draw application, which produced a poster with the theme of International Economic Cooperation. It is designed with attractive illustration hence the students will understand the material and have more interests and enthusiasm to t

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