The Influence of the Use of Learning Media and Learning Motivation on Social Science Learning Outcomes

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ABSTRACT

Photographic image learning media is said to be able to arouse students' learning motivation so they can understand the teaching material better. Meanwhile, for computer learning media, students are asked to look at pictures to increase motivation in learning. This research uses a quasi-experiment with a 2x2 factorial design. The learning material in the experiment is social science problems for grade 11, with a sample of 80 students who already have adequate initial knowledge. This study uses a two-way analysis of variance, and the Tukey test is used to test data analysis. The research results reveal an interaction effect between learning media and learning motivation on social science learning outcomes. Learning media using computers is better used in groups of students with high motivation, and learning media using photographic images is better used in groups of students with low learning motivation.

1. INTRODUCTION

To improve the quality of education, the government has made many innovations regarding the learning process at the primary and secondary education levels. These innovations include all aspects, including the quality of social science learning. (Anshori, 2014; Masnah, 2018; Sukadi & Angraeni, 2019). The 2004 competency-based curriculum is one part of the government's efforts to improve the quality of learning. With an emphasis on competency, it is hoped that students will truly master the material, be able to use their understanding of life, develop it to become more advanced, and also be able to use it in living together in society (Blilat & Ibriz, 2020; Fadillah, 2014). Previous research argues that the low quality of learning can be caused by several factors, including (a) differences in students' backgrounds and learning styles, (b) learning processes that tend to be verbal, and (c) initial concepts that already exist in students' minds in learning attempts to interpret the events they encounter every day (Maesaroh, 2013). According to other research, the teacher's teaching style can cause learning difficulties, making the learning process less enjoyable (Saifulloh & Darwis, 2020; Suprathatn., 2015).

These problems usually originate from learning media, characterized by (a) the use of learning media that does not provide opportunities for students to link the concepts being studied with experiences
or facts encountered every day, (b) teaching and learning situations in the classroom, and (3) learning media used by teachers (Blilat & Ibriz, 2020; Jamal, 2020). The field's reality shows that secondary school social science learning outcomes still need to be higher. The learning outcomes of SMA Negeri 1 Tambun Selatan-Bekasi for the 2019 academic year for social science subjects were an average of 7.2. This situation is a problem of great concern, especially for social science educators. Efforts that can be made to improve social science learning outcomes using learning media and learning motivation need to be considered.

Learning outcomes refer to something a person achieves after making an effort. Learning outcomes are students' mastery in participating in teaching and learning programs by the stated educational objectives (Mulyadi & Ahmad, 2022; Patmawati et al., 2018). Learning is carried out to try to change the behavior of the studying individual. This change is an acquisition that is the result of learning. The measured learning outcomes reflect the teaching objectives. Previous research states that learning outcomes are all skills and everything obtained through the teaching and learning process in the school (Ichsan et al., 2021; Sari & Harjono, 2021). The cognitive domain concerns intellectual learning outcomes, consisting of six aspects: knowledge or memory, understanding, application, analysis, synthesis, and evaluation (Bidayah, 2019; Sinambela, 2017). The first two aspects are low-level cognitive, and the next four are high-level cognitive. The affective domain concerns attitudes, consisting of five aspects: acceptance, answer or reaction, assessment, organization, and internalization (Magdalena et al., 2021; Sinambela, 2017). The psychomotor domain concerns the learning outcomes of skills and acting abilities, which consist of six aspects: reflective movements, basic movement skills, perceptual abilities, harmony and precision, complex skill movements, and expressive and interpretative movements (Azmi et al., 2017; Eliza et al., 2019).

Learning media assists teachers in facilitating and simplifying students' learning activities, so its use should pay attention to accuracy with the material or teaching materials according to time. Learning media can enhance the student learning process in teaching, which is expected to enhance the learning outcomes (Blilat & Ibriz, 2020; Lestari & Fathiyah, 2023; Priatna, 2018). Furthermore, it is said that several things about learning media can enhance the student learning process: (1) learning will attract more students' attention so that it can foster learning motivation, (2) the meaning of learning materials will be clearer so that students can better understand it, (3) teaching methods will be more varied, not just verbal communication through the teacher's saying of words so that students do not feel bored, and (4) students do more learning activities, because they do not just listen to the teacher's explanations, but can observe (Fitra & Maksum, 2021; Sefriani & Sepriana, 2022). Learning media indicates the use of learning media not only as a tool for presenting scientific information but also as a tool to help interact to achieve good learning results (Potter, 2018; Ratnathatmaja & Sujana, 2022; Suni Astini, 2020). The success of a learning process will be achieved if learning media can be used effectively. Learning media can provide a concrete picture of abstract materials and help children learn.

Developments in computer technology will influence the development of learning media. Previous research shows that using computers as a learning medium can improve students' learning (Hakim & Windayana, 2016; Wulandari et al., 2019). According to the opinion, using computer-based learning media will be more effective. According to previous research, teachers can use photographic images effectively in teaching and learning activities at every level of education and in various scientific disciplines (Artha et al., 2021; Windiyani, T. & Novita, 2018). Photographic images can change teaching stages from verbal to more concrete visual symbols (Artha et al., 2021; Fitriani & Betaubun, 2017).

According to previous research, motivation comes from the word motiv, which can be interpreted as a driving force that influences a person's readiness to start carrying out a series of activities (Karnoto, 2022; Simbolon, 2017). Previous research defines motive as a driving force to achieve goals (Ballantyne et al., 2008; Goldman, 2023). It implies everything that encourages someone to act and do something to achieve a certain goal. Motivation is an internal factor that inspires, moves, and integrates a person's behavior, which is driven by needs and desires and causes the emergence of a strong feeling to fulfill needs (Istiana et al., 2018; Pertwi, D & Sudarsono, A, 2015). Other research states that motivation is the basic force or power that moves people to behave (Astrini, 2021; Diyanto et al., 2018). Previous research states that learning is a change in a person due to experience (Haris, 2022; Suprihatin, 2015). By the opinion of previous research, learning contains elements: (1) changes in behavior in individuals, (2) changes that occur due to experience or training, and (3) changes that occur are relatively permanent for a certain time (Priatna, 2018). The previous opinion stated that learning is a process of change within an individual that is not determined by heredity but is determined more by external factors (Susilawati et al., 2020). Other research states that in the teaching and learning process, there will be a teacher and a person being taught, there will be material knowledge or skills presented, and tools and facilities used in delivering the material (Prasetyo et al., 2021; Wijaya et al., 2018).

Learning motivation is driven by achievement motivation. Students with high achievement motivation will only achieve high academic achievement if: (1) their fear of failure is lower than their desire...
to succeed, (2) the class assignments provide enough challenge, not too easy but not too difficult, thus providing an opportunity to succeed (Irawaty et al., 2021; Pradja & Tresnawati, 2018). According to other researchers, learning motivation is an encouragement and a value for learning (Karnoto, 2022). Every child born has the motivation to learn. As children age, their learning motivation changes from curiosity and awe to something integrated with their personality. It is further stated that the decline in learning motivation can be caused by (1) the design of the assessment system in schools, (2) the increasing complexity of advanced learning, and (3) the attraction and distraction of the very large environment. Based on this, this research aims to analyze differences in social studies learning outcomes using photographic images and computer learning media for students with high and low motivation.

2. METHODS

The research was carried out experimentally using a 2 x 2 factorial design. The dependent variable was social science learning outcomes, while the independent variables included the use of learning media as a treatment variable and learning motivation as an attribute variable. The research factorial design is presented in Table 1.

Table 1. Research Design

<table>
<thead>
<tr>
<th>Attribute Variables</th>
<th>Variable Treatment</th>
<th>Use of Learning Media A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Motivation B</td>
<td>High B1</td>
<td>A1B1</td>
</tr>
<tr>
<td></td>
<td>Low B2</td>
<td>A1B2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A2B1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A2B2</td>
</tr>
</tbody>
</table>

This research was carried out at SMA Negeri 1 Tambun Selatan-Bekasi, West Java Province, for four months, from September to December 2022. The research subjects were 80 students consisting of 40 students with low learning motivation and 40 with high learning motivation. Data collection regarding social science learning outcomes was carried out using objective test instruments with the answer choices Correct (B) with a score of 1 and Wrong (S) with a score of 0.

Data were analyzed using two-way analysis of variance (two-way ANOVA) after first fulfilling the requirements for normality and homogeneity between research subjects, followed by the Tukey test to determine the influence of interactions between independent variables on social science learning outcomes. Based on the Lilliefors test at an α level of 0.05, it shows that the overall group of research subjects has a normal distribution. Likewise, the results of the homogeneity test at an α level of 0.05 show that the overall group of research subjects has no different variance.

3. RESULT AND DISCUSSION

Results

The research hypothesis was inferentially tested using analysis of variance (ANOVA). The analysis results are shown in Table 2.

Table 2. Summary of Two-Way Analysis of Variance

<table>
<thead>
<tr>
<th>Sources of Variance</th>
<th>Dk</th>
<th>JK</th>
<th>RJK</th>
<th>Fh</th>
<th>Ft</th>
<th>Ft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>α= 0.05</td>
<td>α=0.01</td>
</tr>
<tr>
<td>Between Columns (A)</td>
<td>1</td>
<td>12.54</td>
<td>12.54</td>
<td>5.12*</td>
<td>2.84</td>
<td>3.41</td>
</tr>
<tr>
<td>Between Lines (B)</td>
<td>1</td>
<td>8.87</td>
<td>8.87</td>
<td>3.841</td>
<td>2.84</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>156.47</td>
<td>156.47</td>
<td>53.643**</td>
<td>2.84</td>
<td>3.41</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>342.30</td>
<td>4.503</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Differences in social science learning outcomes between students who were given photographic image learning media and students who were given computer learning media. Based on the analysis of variance (ANOVA) at α = 0.05, the results obtained were Fh5.12> Ft = 2.84. It means that H0 is rejected. So, it can be concluded that there are differences in social science learning outcomes between students who were given photographic image learning media and students who were given computer learning media.

Apart from that, there is an interaction between learning media and learning motivation on social science learning outcomes. Based on the analysis of variance (ANOVA) at a significant level of α = 0.05, the
results obtained were $F_{h} = 53.643 > F_{t} = 2.84$. It means that $H_{0}$ is rejected. So, it can be concluded that there is an interaction between learning media and learning motivation on social science learning outcomes. A graph is presented to clarify the occurrence of interactions. From the graph, it can be seen that two intersecting lines connect four points. These four points are the average score of each treatment group. With the interaction, the Tukey test is continued to see the simple effect to test the second and third hypotheses.

The difference between social science learning outcomes for students who were given photographic image learning media and social science learning outcomes for students who were given computer learning media for students with high learning motivation. The results of data analysis using the Tukey test show that the learning outcomes for social sciences given photographic image learning media are lower than the social science learning outcomes for students given computer learning media, giving a value of $Q$ count $= 5.71 > Q$ table value $(0.05: 4: 76) = 3.48$. It means $H_{0}$ is rejected. So, there are differences in social science learning outcomes that are given photographic image learning media and social science learning outcomes that are given computer learning media for students with high learning motivation.

Differences in social science learning outcomes between students who were given photographic image learning media and social science learning outcomes between students who were given computer learning media for students with low learning motivation. The results of data analysis using the Tukey test showed that the social science learning outcomes for students who were given photographic image learning media were higher than the social science learning outcomes for students who were given computer learning media, giving a calculated $Q$ value $= 6.25 > Q$ table value $(0.05: 4: 76) = 3.48$. It means $H_{0}$ is rejected. So, there are differences in social science learning outcomes between students given computer learning media and students with low learning motivation.

Discussion

Overall, the social science learning outcomes for students given computer learning media were higher than those given to photographic image learning media. According to previous research, using computer-based learning media will be more effective because learning attracts more attention from students and can foster learning motivation so that learning outcomes are better (Konijn et al., 2016). Meanwhile, in learning using photographic images, students are less interested in following the lesson because they are bored so the learning results could be more optimal (Fitrianto & Fahruddin, 2015; Suprapto et al., 2020).

In the study group with high learning motivation, social science learning outcomes for students given photographic image learning media were lower than those given computer learning media. Previous research shows that using computers as a learning medium can improve students’ learning (Dewi & Hilman, 2018; Hadi, 2017). Another view is that learning motivation is an encouragement to achieve learning outcomes. The greater the child’s motivation to learn changes from not knowing to know (Sumartini, 2016). If given learning using computers, students with high learning motivation pay better attention so that learning outcomes are more optimal. In contrast, if given learning about photographic images, students with high learning motivation pay less attention, so their learning results could be better.

In study groups with low learning motivation, social science learning outcomes that are given photographic image learning media are higher than those for students who are given computer learning media (Nirmayani & Dewi, 2021; Rahmawati, 2013). It refers to the previous view that teachers can use photographic images effectively in teaching and learning activities (Windi in, T. & Novita, 2018). Students with low learning motivation should be given lessons using photographic image learning media because they want to look more carefully at what they are learning to maximize learning outcomes. Meanwhile, if given computer learning, students with low motivation to learn pay less attention because they feel bored, so the learning results could be better.

There is an interaction between learning media and learning motivation on social science learning outcomes. By referring back to the view, if learning is carried out using computers, the learning results will be more effective because learning will attract more students’ attention so that it can foster motivation to learn (Hakim & Windayana, 2016; Sofyan et al., 2020). If given computer learning media, students with high motivation can easily accept learning material, improving their learning results. Meanwhile, students who have high learning motivation are less interested in being given photographic image learning media because they get bored more quickly, so their learning outcomes are less (Krismony, N., P. et al., 2020; Pertiwi, D & Sudarsono, A, 2015).

The research findings show an interaction between learning media and learning motivation on social science learning outcomes. It is proven that using learning media influences social science learning outcomes, both students with high learning motivation and those with low learning motivation. Students with low learning motivation should be given photographic image learning media because they take learning more seriously, so learning outcomes can increase. Meanwhile, students with low learning
motivation who are given computer learning are less interested and need more attention, resulting in better learning outcomes.

4. CONCLUSION

Overall, the social science learning outcomes for students given computer learning media were higher than those who received photographic image learning media. Furthermore, for the study group with high learning motivation, the social science learning outcomes for students who were given computer learning media were higher than those for students who were given photographic image learning media. On the other hand, in the study group with low learning motivation, the social science learning outcomes for students given photographic learning media were higher than those for students given computer learning media.

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