LEARNING PROCESS EXPERIMENT THROUGH PEER TUTORING IN THE TYPOGRAPHY SUBJECT FROM STUDENTS LEARNING MOTIVATION OF ARTS DEPARTMENT FBS UNP

EKSPERIMEN PROSES PEMBELAJARAN MELALUI PEMBELAJARAN TUTOR SEBAYA PADA MATA KULIAH TIPOGRAFI DARI SISI MOTIVASI BELAJAR MAHASISWA DEPARTEMEN SENI RUPA FBS UNP

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Abstract

The goal of this study is to see how peer tutoring strategies and student learning motivation affect Typography learning outcomes at Fine Art Department Faculty of Languages and Arts Universitas Negeri Padang (FBS UNP), as well as how they interact with one another. A quasi-experimental design with a 2X2 factorial design was used in this study. To collect research data, a learning motivation questionnaire and learning outcomes tests were used. After that, the data was analyzed using the Analysis of Variance Test (ANOVA). The research findings show that: 1) students who are taught using peer tutoring strategies have different or higher typography learning outcomes than students who are taught conventionally or without using peer tutoring strategies, 2) High learning motivation students have different or higher typography learning outcomes than low learning motivation students. According to the study's findings, peer tutoring strategies and learning motivation improve student learning outcomes in Typography courses. In terms of influencing student learning outcomes, they are not mutually dependent. As a result, peer tutoring strategies are extremely effective, and lecturers must continuously improve learning motivation throughout the learning process in order to improve student learning outcomes, particularly in the Typography subject.

Keyword: peer tutoring, typography, learning motivation
Abstrak

Tujuan dari penelitian ini adalah untuk melihat bagaimana strategi bimbingan belajar teman sebaya dan motivasi belajar siswa mempengaruhi hasil belajar pada Mata Kuliah Tipografi di Departemen Seni Fakultas Bahasa dan Seni Universitas Negeri Padang (FBS UNP), serta bagaimana masing-masing variable berinteraksi satu sama lain. Rancangan penelitian dengan desain quasi-eksperimental yaitu desain faktorial 2X2 digunakan dalam penelitian ini. Untuk mengumpulkan data penelitian digunakan kuesioner motivasi belajar dan tes hasil belajar. Setelah itu, data dianalisis menggunakan Analysis of Variance Test (ANOVA). Hasil penelitian menunjukkan bahwa: 1) siswa yang diajar menggunakan strategi bimbingan belajar sebaya memiliki hasil belajar tipografi yang berbeda atau lebih tinggi dibandingkan siswa yang diajarkan secara konvensional atau tanpa menggunakan strategi bimbingan belajar sebaya, 2) Motivasi belajar yang tinggi siswa memiliki hasil belajar tipografi yang berbeda atau lebih tinggi daripada siswa dengan motivasi belajar yang rendah. Menurut temuan penelitian, strategi bimbingan teman sebaya dan motivasi belajar meningkatkan hasil belajar mahasiswa pada Mata Kuliah Tipografi. Dalam hal mempengaruhi hasil belajar siswa tidak saling bergantung. Oleh karena itu strategi bimbingan teman sebaya dianggap sangat efektif, dan dosen harus terus meningkatkan motivasi belajar selama proses pembelajaran untuk meningkatkan hasil belajar mahasiswa, terutama pada pembelajaran Tipografi.

Kata kunci: pembelajaran tutor sebaya, tipografi, motivasi belajar

Introduction

Many countries, including Indonesia, are currently pondering how to improve educational quality. Education quality is critical because it determines the rate of development. As a result, almost every country in the world is faced with the challenge of implementing education reforms to improve educational quality (Nelmira, W., Efi, A., Elida, Adriani; Sandra, 2022; Purwananti, 2016).

Education reform must be supported in order to improve educational quality. One way to improve learning quality is to renew the learning process itself. As a result, teachers or lecturers must be able to shift the paradigm, both in terms of lecture delivery strategies and providing guidance to students (Boland, Angela; Cherry, M. Gemma; Dickson, 2017; Ferreira, Camino; Vidal, Javier; Vieira, 2014).

In general, typography is the science of designing and applying letters and images for visual communication media (Wikarya, 2018). Typography is a required course for all Fine Arts department at Universitas Negeri Padang’s Faculty of Language and Arts (FBS). The Typography subject mainly consists of
discussions about the meaning of calligraphy and typography, as well as mastery of Latin and Arabic calligraphy writing skills and block letters. Writings or letters in the form of communication media and art are used to continue the exercise (UNP Academic Guidelines 2019/2020, 2019). This subject is more practical in nature. When the lecturer delivers the material in front of the class, students pay attention. Then the lecturer gives homework to the students. After the student completes the task, they are usually given guidance or assistance. Lecturers usually provide guidance or assignment assistance to each student. In this state, it seems that the expected result was not obtained. As seen in the previous semester, most of the student learning outcomes in this course were less encouraging or low. Specifically, of the 104 students who took the Typography course, most (60.58%) scored below 70, and only (39.42%) had a score above 70.

Low student learning outcomes in Typography courses can be attributed to ineffective lecturer strategies. This course contains a lot of practical information. Practicum material requires intensive guidance so that students are more confident (Syahroni, 2014). Despite the fact that it must be repeated. Without intensive and repeated instruction, it is difficult to master a skill. This is difficult for lecturers to do because the course enrollment frequently exceeds the ideal capacity for practicum courses, which is more than 30 students per class. As for practicum courses, ideally, a maximum of 20 students per class. It is clear that with this condition, the intensity of guidance cannot be realized, making it difficult for students to reach maximum potential.

Another problem encountered in Typography lectures is the low motivation for students to learn. Most of them are not diligent in completing tasks, get bored quickly, do assignments as soon as they are ready, do not work on time, do not want to do tasks outside of face-to-face hours, and often go out during lecture hours (Fatimah, R.D.P; Khotimah, 2018). Motivation is very important in the teaching and learning process, according to (Djamalah, 2002), because someone who is not motivated to learn will not be able to carry out learning activities effectively. Prayitno (1989), also states that no matter how good the child’s potential including intellectual abilities or talents, the material taught, and the completeness of learning facilities, if the student is not motivated to learn, the learning process will not take place optimally. As a result, motivation plays a strategic role in student learning activities. This means that a person who is not motivated to learn will not struggle to complete learning activities.
A typographic lecturer must search for alternative learning strategies that are more effective in improving learning outcomes and student motivation. One of the learning strategies used to overcome the problems mentioned above is peer tutoring. Peer tutors, according to Nurhayati (Suwanda, 2007), are students who are assigned as teacher assistants to guide their classmates. These peer tutors are typically bright students who can assist less intelligent students in their learning (Semiawan, 1987). This can occur when a more capable or intelligent student completes his/her work before assisting another underprivileged student. As a result, the peer tutor’s job is to help members or classmates who had difficulty understanding the teaching material. This assistance is available (Fernandez-Balboa, Tirado, L Jose; Francisco D; Fernandez, M; Miguel, 2011; Weller, 2009).

Peer tutoring refers to the acquisition of learning assistance by students in the same class as the lecturer. The peers are typically chosen by lecturers based on a variety of criteria including students with strong academic records and positive social connections. According to several studies, peer-tutor is more effective than teacher-led instruction (Suhadi, 2008). The peer tutoring system assumes that a group of students who are more open to their peers than to their lecturers (Setiawati, 2008). A pleasant learning environment is created by the peer tutoring strategy because students are not afraid to ask questions, and the tasks assigned by lecturers are no longer viewed as a compulsion/burden on students, but rather as fun (Sudjana, 2004). Furthermore, students will receive more intensive guidance than lecturers because the number of students used as tutors may be greater. This condition will almost certainly motivate students to learn and improve their learning outcomes (Suyanto, 2006).

The authors were interested in attempting to deliver lecture material in the Typography subject using peer tutor strategies for the reasons stated. The goal is to determine the impact of peer tutor learning strategies and student learning motivation, as well as the interaction of the two, on Typography learning outcomes at FBS UNP Padang. A good learning strategy will almost certainly generate high learning motivation; On the contrary, a low learning strategy will result in low learning motivation or not being able to grow at all. The two factors are interconnected and have the same influence on student learning outcomes. As a result, more research is needed to determine whether these two factors influence student learning outcomes and whether there is a link between peer tutor strategies and student learning motivation toward learning outcomes. Furthermore, this type of research has never been conducted in the field of typography. If the results of this study are positive, it could be used as an
alternative solution to lecture problems, particularly in the Typography subject at the Department of Fine Arts FBS UNP Padang.

**Method**

The research method used is experimental. The experimental design is a pseudo-experiment with a 2X2 factorial design, as seen in Tabel 1.

**Tabel 1: The 2x2 Factorial Design**

<table>
<thead>
<tr>
<th>Learning strategies</th>
<th>Peer tutor strategy (A1)</th>
<th>Conventional strategy (A2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Motivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High learning motivation (B1)</td>
<td>A1 B1</td>
<td>A2 B1</td>
</tr>
<tr>
<td>Low learning motivation (B2)</td>
<td>A1 B2</td>
<td>A2 B2</td>
</tr>
</tbody>
</table>

All Fine Arts FBS Universitas Negeri Padang students enrolled in the January-June 2020 semester were included in this study. The sample consisted of students enrolled in Typography classes during the January-June 2020 semester. In other words, the Universitas Negeri Padang student is taking Typography that semester. The purposive sampling technique is used when taking a sample (Arikunto, 2002).

This study's sample size was 60 people divided into two groups (each class of 30 people). The study's two sample classes had average scores that did not differ significantly based on pre-test results. This implies that the students in both classes are of equal ability. Using traditional learning strategies, one class serves as an experimental class, while the other serves as a control class. Then, each class or group (experimental and control group) differs in the level of learning motivation, with groups of highly motivated students and groups of unmotivated students.

The learning motivation questionnaire is distributed to both classes or groups to determine the level of learning motivation. The scores obtained are sorted from highest to lowest. Students who scored 27% of the highest score in the treatment class were classified as having high learning motivation in this study. Students with low learning motivation accounted for 27% of the treatment class's lowest score distribution.

The variables of this study include free variables and bound variables. Peer tutor learning strategies and learning motivation are free variables. The bound variable is student learning outcomes as measured by the final grades obtained by the students after treatment (Irianto, 2004).
In this study, data collection carried out by providing learning motivation questionnaires and learning outcomes tests. The data is collected, scored according to the assessment criteria, then organized into tables for easy verification for each variable. Meanwhile, data collection tools or instruments such as typographic learning outcomes tests and student learning motivation questionnaires are used. Bidirectional variance analysis was used to statistically analyze all data collected for this study (ANAVA).

Results and Discussion

Research Results
The results of the research can be seen in the data description, testing requirements analysis, and hypothesis testing that will be explained in this article.

1. Data Description
The information presented in this chapter includes test results or learning outcomes, as well as questionnaire results or learning motivation from two groups: experiment classes (using peer tutor strategies) and control classes (using conventional strategies). Each group is divided into two tiers: high and low. The mean, standard deviation, and variance of each class calculated from the resulting data.

a. Learning outcomes

Tabel 2: Student learning outcomes in Typography subject

<table>
<thead>
<tr>
<th>Number of students</th>
<th>Experiment Classes</th>
<th>Control Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>High</td>
</tr>
<tr>
<td>Mean</td>
<td>77.81</td>
<td>83</td>
</tr>
<tr>
<td>SD</td>
<td>6.49</td>
<td>2.78</td>
</tr>
<tr>
<td>Varians</td>
<td>42.16</td>
<td>7.71</td>
</tr>
<tr>
<td>Highest score</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>Lowest score</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>664</td>
</tr>
</tbody>
</table>

b. Learning Motivation Data
Data on the learning motivation of students taking Typography courses can be seen in Table 3.
Student learning motivation in Typography subject
Tabel 3: Student learning motivation in Typography subject

<table>
<thead>
<tr>
<th>Variant source</th>
<th>Experiment classes</th>
<th>Control classes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>High</td>
</tr>
<tr>
<td>Number of students</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Mean</td>
<td>94,69</td>
<td>113,5</td>
</tr>
<tr>
<td>SD</td>
<td>20,26</td>
<td>4,75</td>
</tr>
<tr>
<td>Varians</td>
<td>410,36</td>
<td>22,57</td>
</tr>
<tr>
<td>Highest score</td>
<td>119</td>
<td>119</td>
</tr>
<tr>
<td>Lowest score</td>
<td>67</td>
<td>107</td>
</tr>
<tr>
<td>Total</td>
<td>1515</td>
<td>908</td>
</tr>
</tbody>
</table>

1. Hypothesis Testing

Table 4 shows the results of the hypothesis testing that was conducted.

Tabel 4. Hypothesis testing summary with Anova

<table>
<thead>
<tr>
<th>Varians source</th>
<th>dk</th>
<th>SS</th>
<th>MS</th>
<th>F_hitung</th>
<th>F_table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column (A)</td>
<td>1</td>
<td>391,99</td>
<td>391,99</td>
<td>26,40</td>
<td>4,20</td>
</tr>
<tr>
<td>Column (B)</td>
<td>1</td>
<td>1035,12</td>
<td>1035,12</td>
<td>69,71</td>
<td>4,20</td>
</tr>
<tr>
<td>Interaction A x B</td>
<td>1</td>
<td>8,02</td>
<td>8,02</td>
<td>0,54</td>
<td>4,20</td>
</tr>
<tr>
<td>In cell</td>
<td>28</td>
<td>415,74</td>
<td>14,85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>1850,87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The summary table of ANOVA above shows that at a significance level of 0.05, $F_{\text{count}} > F_{\text{table}}$ is obtained on factor A (learning strategy), indicating that student learning outcomes differ depending on the learning strategies used (peer and conventional tutor learning strategies) Typography. In other words, when peer tutor learning strategies are used, student learning outcomes differ from when they are not used (conventional). Similarly, factor B (learning motivation) obtained $F_{\text{count}} > F_{\text{table}}$ at a significant level of 0.05 which shows that the level of learning motivation influences student learning outcomes in Typography subject (high learning motivation vs low learning motivation). In other words, in terms of learning outcomes, students with high learning motivation outperform students with low learning motivation. The calculation of $F_{\text{table}}$ at a significant level of 0.05 for the interaction between the use of peer tutoring strategies and learning motivation (AxB) in the Typography subject shows that there is no interaction between the use of peer tutoring strategies and learning motivation towards student learning outcomes.

Based on the calculations above, the following conclusions can be drawn:
1. Student learning outcomes in Typography differ depending on the learning strategies employed (peer tutor learning strategies vs conventional strategies).
2. Student learning outcomes in Typography vary depending on their level of learning motivation (high learning motivation vs. low learning motivation).
3. In the subject of Typography, there is an interaction between peer tutoring strategies and learning motivation toward learning outcomes.

**Discussion**

There are differences in student learning outcomes based on the learning strategies used, according to the findings of data analysis obtained through hypothesis testing. These findings imply that students who are taught using peer tutoring strategies have different learning outcomes than students who are not taught using peer tutoring strategies. In other words, in the Typography subject, students who are taught using peer tutor strategies outperform students who are not taught using peer tutor strategies. The average values of the two groups, as shown in Table 5, demonstrate this.

<table>
<thead>
<tr>
<th>Learning strategy</th>
<th>Using peer tutoring strategy</th>
<th>Not using peer tutoring strategy (Conventional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High motivation</td>
<td>83</td>
<td>77</td>
</tr>
<tr>
<td>Low motivation</td>
<td>72,63</td>
<td>64,63</td>
</tr>
<tr>
<td>Total (high and low)</td>
<td>77,81</td>
<td>70,81</td>
</tr>
</tbody>
</table>

Table 5 shows that students in the Typography subject who were taught using peer tutoring strategies outperformed students who were taught without using peer tutoring strategies (conventionally) in each learning motivation group (high and low) and overall. This means that using peer tutoring strategies can significantly improve student learning outcomes in Typography courses.

Each of the above findings will be discussed below:

1. **Student learning outcomes differ depending on the learning strategies used (peer tutor strategies and conventional strategies).**

   After data analysis and testing of the first hypothesis, it was found that students who were taught with peer tutoring strategies had learning outcomes that were different or higher than students who were taught without using peer tutoring (conventional) strategies.

   The findings show that using peer tutoring strategies affects student learning outcomes not only for students with high learning motivation but also for students with low learning motivation. Because of the use of peer tutoring strategies, each student finds it easier and more flexible to communicate his or
her problems to their own tutoring friends. In other words, students are more at ease and willing to ask questions, as well as be more open with their peers, than lecturers, so students are motivated to study teaching materials in a mastery learning. Less active students become more active as a result of the presence of peer tutors, as they are no longer afraid to ask questions and freely express their opinions.

According to Natawidjaya in Setiawati (2008), learning assistance by peer tutors generally gives good results because the relationship between students who are tutors and students who need guidance feels closer than the relationship between lecturers. Furthermore, it is important that the guidance provided is maximum and intensive so that the mastery of the student's material becomes maximal.

Based on the explanation above, it is clear that the application of peer tutoring strategies will create ideal conditions for students to understand the lecture material as a whole. Finally, students are eager to learn and can improve their academic performance.

2. The learning outcomes of students differ depending on their learning motivation (high learning motivation and low learning motivation).

Students with high learning motivation have different or higher learning outcomes than students with low learning motivation, according to the results of the second hypothesis test, both when taught with peer tutor strategies and when taught with conventional strategies.

According to the findings presented above, learning motivation has a significant impact on student learning outcomes. Students with high learning motivation outperform students with low learning motivation in terms of learning outcomes. This finding supports the statement (Riduwan, 2006) that people with high motivation learn better than people with low motivation. This is quite reasonable because someone with high learning motivation usually has greater attention and interest in learning than someone with low learning motivation. People with high learning motivation will be tenacious in facing difficulties, study hard, and continue to study continuously without knowing despair, and can put aside things that can interfere with their learning activities. Full attention and concentration in learning can be achieved (Sardiman, 2008). According to (Suryabrata, 2000) people with high learning motivation are attracted to teachers because they do not like or are indifferent to the subjects taught, are interested in the subjects taught, have high spirits, and always remember and repeat lessons.
Based on the explanation above, it is clear that students with high learning motivation outperform students with low learning motivation in the Typography course. As a result, to achieve the best learning outcomes, efforts must be made to increase student learning motivation.

3. There is no influence of peer tutoring strategies or learning motivation on student learning outcomes.

When the influence of one factor is dependent on another, this is referred to as an interaction (Irianto, 2004). This means that each factor (learning strategy and learning motivation) has an interdependent effect on student learning outcomes.

The two-way ANOVA test on the third hypothesis, the interaction of peer tutoring strategies with learning motivation (AxB), reveals that $F_{\text{count}}$ and $F_{\text{table}}$ are significant. This means that there is no interaction between the use of peer tutoring strategies and learning motivation in the Typography subject.

The average learning outcomes between the two levels of learning motivation (high and low) taught using peer tutor strategies and without using peer or conventional tutor strategies indicate that the use of peer tutor strategies does not affect learning motivation. In other words, there was no statistically significant difference in the average student learning outcomes of the two groups of learning motivation taught using peer tutoring versus traditional strategies. This demonstrates that, regardless of treatment, the students with high learning motivation outperformed the students with low learning motivation in terms of learning outcomes. This means that there is no link between using peer tutoring strategies and learning.

In the absence of such interaction, each factor (learning strategy and learning motivation) can be said to influence student learning outcomes independently of the other. To put it another way, the impact of learning strategy factors on learning outcomes is independent of learning motivation factors. This means that using peer tutoring strategies can improve student learning outcomes without relying on factors such as student learning motivation.

The lack of interaction between the use of peer tutoring learning strategies and student learning motivation is caused by two factors: 1) Peer tutoring learning strategies are effective because students are unfamiliar with them; and 2). Because only a few students who meet the requirements are used as tutors, the guidance provided is very effective. 3) Students serving as tutors have not provided complete guidance because they must also complete their assignments.
Peer tutor, on the other hand, are used effectively to help students master skills in Typography subject.

According to the findings of this study, the use of peer tutoring provides numerous advantages to students. Not only will this increase students' motivation to master the knowledge and skills of typography, but it will also improve learning outcomes. With peer tutoring, students are also actively involved to be able to share the knowledge they have mastered, especially as a provision to become a fine arts teacher. Although it is not easy to supervise movements during the work process, at least information has been summarized that makes it easier for students to gradually improve their abilities (Natalie, 2009). This finding certainly supports the findings of a previous study, which stated that peer tutoring allows students to share knowledge, particularly those who have higher abilities than their peers who have lower learning outcomes. They were hesitant to ask the lecturer at first, but with their friends, they would be more comfortable asking questions and discussing them.

Although not all researchers associate these findings with increased motivation, as some examine in terms of interests, talents, creativity, responsibility, and courage to express, the reference sources used tend to be the same as learning together (Falchikov, 2001). That guidance from lecturers who understand the course is required to optimize peer tutoring in the classroom. Although lecturers can inspire superior students to complete lecture assignments successfully. After all, the arrangement of the learning environment and learning resources in learning activities involving lecturers and students both contribute to the achievement of the stated learning objectives.

The relationship with learning typography is fluent reading cannot be achieved solely through good letter recognition. Recognition of word shapes, as well as lexical, grammatical, and contextual inference, are also required (MacKeben, 2000). However, as reading problems caused by visual impairments demonstrate, impaired letter recognition severely impedes reading. Reading performance will be hampered if vision is generally blurred due to uncorrected hyperopia or cataracts, which also affect word recognition. As a result, letter recognition is a critical component in enabling sighted people to read fluently.

Conclusions and Suggestions

Based on the research findings and discussion, it is possible to conclude that there are differences in the learning outcomes of typography students who are taught using peer tutor strategies versus those who are not taught using peer
tutor strategies. This difference also shows higher learning outcomes and motivation for classes taught using peer tutoring strategies compared to those taught without using peer tutoring strategies. As a result, lecturers should further optimize the use of this peer tutor strategy in the learning process so that students are even more enthusiastic about learning. It is hoped that the department head will conduct even more intensive socialization so that positive benefits can be derived from this research, particularly by developing more research directions in the study of increasing intelligence, interest, perception, and media improvement so that it is adaptable to the advancement of technology and information.

Reference


