

# The Effect of Technology Utilization in Learning on Learning Motivation of Grade 11 PPLG Students of State Vocational Schools in Surakarta

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## Abstract:

Education is a field that continues to develop along with technological advances. One important aspect of learning is student motivation because high motivation can improve learning outcomes. The utilization of information technology is very relevant, especially in State Vocational Schools in Surakarta which focus on the field of software and game development. Learning activities and the relevance of the material are the two key aspects that affect students' motivation. High meaningfulness of subject matter can encourage students to learn because students feel that the material studied is relevant to their lives. Interesting and fun learning activities can also increase student motivation to learn. Information technology can be a powerful tool to increase student motivation. To help kids study more efficiently and reach their full potential, specially created technology may be adapted to each student's needs and skills. In this study, grade XI students at State Vocational Schools in Surakarta will have their motivation to learn about the impact of using information technology in the classroom examined. This research uses qualitative methods to explore this. Through qualitative data analysis with interview and observation methods, it is expected to find a comprehensive picture of the extent of the influence of information technology utilization on learning motivation.

**Keywords:** *Learning Motivation, Technology Utilization, Vocational Learning, Information Technology*

IJIE (Indonesian Journal of Informatics Education)

Vol 7, Issue 2, December 2023

DOI: <http://dx.doi.org/10.20961/ijie.v7i2.81712>

Received: 14/12/2023 Accepted: 24/1/2024 Online: 25/1/2024

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## Introduction

Education is a field that continues to develop along with technological advances. One important aspect of learning is student motivation, as high motivation can improve learning outcomes (Hasri, 2019). Especially at SMK Negeri in Surakarta, which has a focus on software and game development, the utilization of technology has become very relevant. In this digital era, learning approaches that involve the utilization of information technology have become increasingly common. The successful implementation of technology in learning raises questions about the extent to which it affects student learning motivation. According to Gonibala et al. (2022), student learning motivation also has an impact on how well students learn, therefore it follows that students who are highly motivated to learn will succeed in their pursuit of knowledge.

Motivation is the drive that moves a person to do something, so that an impulse arises from within a person and is characterized by the emergence of feelings and reactions to achieve goals (Pondaag et al., 2021). Motivation encourages a person to carry out an activity, including learning. Motivation also directs learning activities towards clear goals that are expected to be achieved. The significance of the educational materials and activities that students engage in are the two primary aspects that impact their motivation to study. The meaningfulness of high-learning

materials can encourage students to learn because students feel that the material being studied is relevant to their lives. Interesting and fun learning activities can also increase student learning motivation. There are at least six indications of student learning motivation, according to Andriana (2017). They are as follows: Desire and the will to succeed; 2) Needs and encouragement for learning; 3) Expectations and future objectives; 4) Appreciation for learning; 5) Engaging learning activities; and 6) A supportive and friendly learning environment. One of the many factors that typically contribute to this lack of motivation to study is the technology employed in education, such as teaching strategies, learning media, and procedures.

Technology can be a powerful tool to help students with low motivation to learn. To help kids study more efficiently and reach their full potential, specially created technology may be adapted to each student's needs and skills. The development of information technology has had a significant impact on human life, especially in the field of education. Practical access to information and knowledge has become very important, and information technology has given birth to various new features that can be utilized to improve the quality of education (Mirahyanti et al., 2022). The use of information technology in schools has many benefits, especially in the learning process. By using information technology, teachers can access the latest information and current events, and then connect them to the subject matter. In addition, teachers can also use information technology as a medium for delivering information to students so that students can be motivated to learn.

This study aims to investigate the Effect of Technology Utilization in Learning on the Learning Motivation of Grade 11 Students at State Vocational Schools in Surakarta. The specific focus on software and game development creates unique challenges and opportunities in the context of learning. In this context, the utilization of information technology as a learning technology is an interesting subject to explore.

With this background, this research uses qualitative methods to explore it. Through qualitative data analysis, it is expected to find a comprehensive picture of the extent of the influence of technology utilization on information technology on students' learning motivation. Thus, this study is expected to provide valuable insights in improving technology-based learning practices at State Vocational Schools in Surakarta as well as further contributions to the literature on learning motivation and technology utilization in the context of education.

## Related Work

The research by Sibuea (2023) titled "The Role of Educational Technology in Learning" is one instance of pertinent research from this article. The utilization of qualitative research methods in this study enables researchers to gain a comprehensive understanding of the impact of technology on the assessment of learning outcomes and student motivation for learning. In order to better understand how learning technology can be optimized to raise student learning motivation, this research will look into how technology-based learning media are used. It will also identify the factors that encourage and hinder the use of technology-based learning. Students should be more motivated to learn while using technology as a teaching tool in order to attain satisfactory learning outcomes. Given the current digital world, the study's findings may offer pertinent suggestions for enhancing instruction. Students' motivation to learn is influenced by their use of the internet as a learning medium, according to the analysis of this study.

The article entitled "The Effect of Learning Technology Utilization on Student Learning Motivation of SMPN 1 Lanrisang Pinrang Regency" by Azhari Zabir (2018) is a quantitative study that aims to determine the effect of learning technology utilization on student learning motivation of SMPN 1 Lanrisang Pinrang Regency. This study uses a survey method using a questionnaire instrument. The research sample amounted to 100 students in grades VII, VIII, and IX of SMPN 1 Lanrisang. A product-moment correlation test was used to assess the research data. Based on the findings, SMPN 1 Lanrisang Pinrang Regency students' motivation to learn was significantly impacted by the use of learning technology. Based on the results of the study, it can be concluded that the utilization of learning technology can increase student learning motivation. This is because learning technology can make learning more interesting, interactive, and meaningful for students.

Based on the results of research conducted by Euis Mukaromah (2022) with the title "Utilization of Information and Communication Technology in Improving Student Learning Passion", the use of ICT in learning at MTsN 4 Ciamis can increase student learning passion. This study uses descriptive research methods with a qualitative approach. The data collection techniques used were observation, interviews, and documentation. The results showed that the utilization of ICT in learning at MTsN 4 Ciamis can increase students' learning passion. Therefore, the utilization of ICT in learning needs to be improved to provide optimal results.

## Research Method

### Research Approach

This research uses a qualitative approach with a descriptive research type. According to Anggraini (2017), "By accurately portraying reality using language that is based on pertinent data gathering and analytic procedures gleaned from real-world circumstances, qualitative research discloses specific social situations". Research that generates descriptive data from people's written or spoken words as well as their observed behavior is referred to as qualitative research. Research with the goal of describing a situation, occurrence, or event is known as descriptive research. Descriptive qualitative research is employed in this study, and interviews and observation are used as data gathering methods. Descriptive research does not make comparisons of that variable in other samples, and look for the relationship of that variable with other variables.

### Location and Time of Research

The research location was at the State Vocational School in Surakarta. The research was conducted for 3 meetings starting from October 30 to December 1, 2023.

### Research Participants

Research subjects are people who have knowledge, relationships, or direct experience with the activities under study. The sampling technique used was purposive sampling. According to Turner (2020), purposive sampling is a sampling technique used when the researcher already has a target individual with characteristics that match the research.

Before starting the research, researchers need to conduct a preliminary survey to understand the conditions in the field. In this study, the subjects chosen are people who know and understand the problem under study, namely student learning motivation and student learning achievement. Therefore, the subjects of this research are teachers, PPL students, and 11th-grade PPLG students of State Vocational Schools in Surakarta.

### Data Source

This research data is qualitative data obtained from interviews, observations, and documentation. Data collection was carried out simultaneously or after the teacher carried out learning practices in Mobile Device Programming (PPB) class 11 PPLG.

### Interview

According to Rachmawati (2007), interviews are a method of data collection carried out by asking questions directly to sources to obtain in-depth information. In qualitative research, interviews are in-depth because they aim to explore information thoroughly and clearly from sources.

Interviews were conducted directly at the school with a sample size of 4 people consisting of 1 teacher, 1 PPL student, 1 male student, and 1 female student. Interviews were conducted starting from the day and date of Monday, November 20, 2023, to the day and date of Friday, November 24, 2023. The following is a table list of questions from the interview as follows:

Table 1. Interview Question

Teacher	Student Interns	Student
What is the state of students' learning motivation in class?	What is the state of students' learning motivation in class?	What kind of learning do you find enjoyable?
Is there any use of technology during learning?	Is there any use of technology during learning?	Do you often get bored during the learning process?
What technology is used?	What technology is used?	When learning takes place, does the teacher use technology?
Is there a change in students' learning motivation when using this technology?	Is there a change in students' learning motivation when using this technology?	In your opinion, by using technology in learning, does learning become fun?
What kind of changes have occurred? Is it effective if applied in learning?	What kind of changes have occurred? Is it effective if applied in learning?	Are you motivated to learn if lessons are fun?

### Observation

Observations are carried out when the class is in session, starting from hour 1 to hour 6 with a total of 6 lessons (jp) or 240 minutes (4 hours). The process of making observations involves observing the classroom and surrounding educational environment.

### Documentation

Documentation, according to Sugiyono (2015), is a technique used to gather data and information from written figures, books, archives, documents, reports, and photos in a way that suitably supports study.

Documentation in this study is used to collect data relevant to the research. The data can be in the form of notes, files, books, photos, and letters that have been documented so that they can help researchers understand the phenomenon under study, and strengthen the results of observations related to the problem of student learning motivation at State Vocational Schools in Surakarta.

### Data Analysis Technique

In qualitative research, data is collected from various sources, such as interviews, observation, and documentation. This research data will be collected using the Interactive Analysis Model from Miles and Huberman (Sugiyono, 2014). The analysis process is divided into four stages, namely: 1) Collecting data; 2) Data Reduction; 3) Data Display; and 4) Drawing/verifying conclusions. Qualitative data analysis is inductive, which starts from data collection and is analyzed to produce conclusions. Data analysis is very important in qualitative research because it is the next step after data collection. In qualitative research, data analysis is carried out in three stages, namely reducing data, displaying data or presenting data, and drawing conclusions.

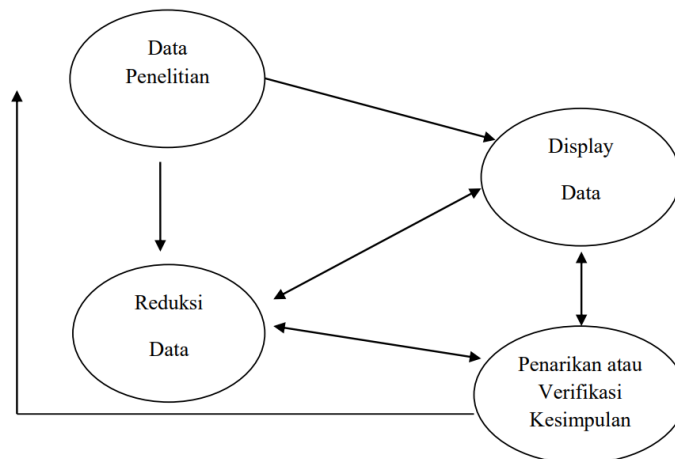


Figure 1. Data Analysis Process  
(Source: Sugiyono, 2014)

### Data Collection

Document gathering, interviewing, and observation were the methods used to acquire data. The information was captured in detailed field notes that detailed the research subjects' sights, sounds, and sensations.

### Reduction

Sugiono (2013) defines data reduction as selecting the most significant elements, concentrating on those that matter, searching for themes and patterns, and eliminating irrelevant information. As a result, the data that has been reduced will present a clearer picture. Data reduction is the process of summarizing, simplifying, and organizing data that has been collected in qualitative research. The aim is to facilitate understanding of the data and produce a more detailed picture of the phenomenon under study.

### Display data

The next stage is to convey the data, which in qualitative research takes the shape of a succinct description once it has been reduced (Rijali, 2019). Displaying data is the process of presenting data in an informative and easy-to-understand form, such as tables, graphs, or diagrams. The goal is to help researchers understand the data and draw conclusions.

### Conclusion

The conclusion in qualitative research is the essence of the answer to the problem formulation and its content is a crystallization of field data that is valuable for the practice and development of science (Pantow, 2021). Conclusion is the process of preparing conclusions based on the results of data analysis. Conclusions can be in the form of general statements or hypotheses. The conclusions resulting from qualitative data analysis must be supported by relevant and accurate data, besides that the conclusions must also be clear, concise, and easy to understand. In this activity, researchers try to show accurate and objective data.

## Result and Discussion

The findings of in-depth research can be presented in the following ways based on the findings of observations and interviews:

### Observation Results

Based on observations of observations in class 11 PPLG in one of the State Vocational Schools in Surakarta, there are differences regarding learning that begin with a pretest first through the use of web-based technology, namely Quizizz with learning that starts directly with the explanation of learning material. The difference is in student learning motivation, where when learning begins using a pretest, students look happy in taking the pretest through the Quizizz technology because in Quizizz formative assessment is wrapped interactively, good, and there is a point system when answering questions so that it can increase learning motivation in students (Saputro, 2022). If students are already happy and happy with the pretest that has been done, of course in subsequent learning activities students will be comfortable and motivated to continue participating in ongoing learning.

Second, there are differences in student learning motivation when teachers or educators deliver learning material monotonously or through writing on the blackboard with the delivery of material carried out by utilizing technology in the form of Canva which displays presentations as learning media, whereas when teachers deliver material monotonously students will look easily bored and pay less attention to the teacher, while when the teacher delivers with PowerPoint students will pay more attention because there are several images or animations that attract students' attention so that learning motivation will arise in these students.

Easy and fast access to information also affects student learning motivation, considering that learning in the Software and Game Development (PPLG) department is more often carried out in laboratories or labs so that students tend to be more comfortable to linger, because of the presence of computers with high specifications and smooth internet networks so that access to learning will run more effectively. Of course, this affects the learning style of students, because with the use of information technology like this, students will tend to be more comfortable, and happy which affects student learning motivation (Asiyah, 2018).

### Results of Interview with Teacher

The utilization of technology in learning has become an increasingly popular trend in education. This is because technology can provide various benefits to the learning process, one of which is to increase student learning motivation.

In an interview with Mrs. Kurniasari, S.Pd., S.Kom., as a guest teacher and PPLG department teacher at SMK Negeri in Surakarta, she revealed that the use of technology in learning has become common in the school. This is because the use of smartphones has become a primary need today. In addition, the school policy that requires teachers to maximize the use of smartphones also influences the application of technology in learning.

"The use of smartphones has become a primary need for today. In addition, the school policy that requires teachers to maximize the use of smartphones also affects the application of technology in learning," said Mrs. Kurniasari.

Mrs. Kurniasari also revealed that the use of technology in learning can help students learn more independently. Technology can provide wider access to learning for students. Students can learn anytime and anywhere.

"Technology can help students to learn independently according to their own abilities," said Mrs. Kurniasari.

Mrs. Kurniasari explained that the use of technology in learning can simplify the work of teachers and motivate students to learn. This can be seen from the students' enthusiasm when participating in the learning process in the school lab. However, there needs to be control by the teacher to prevent the misuse of technology by students. Teachers must be able to direct the use of technology that can be useful for the benefit of student learning.

"However, there is a need for control by teachers to prevent the misuse of technology by students. Teachers must be able to direct the use of technology that can be useful for student learning interests so that it can increase student learning motivation," continued Mrs. Kurniasari.

Ms. Kurniasari also explained that teachers must have skills in utilizing learning technology. Teachers must be able to choose the right technology for the material to be taught. In addition, teachers must also be able to use the technology in an effective and efficient way in order to grow learning motivation in students.

### **Interview Results with Student Interns**

On Thursday, November 23, 2023, I had the opportunity to interview a PPL student named Miss Tika (22 years old) at SMK Negeri in Surakarta. Miss Tika is a PPG UMS student majoring in PPLG who is conducting PPL at the school.

In the interview, Miss Tika expressed her opinion on the utilization of technology in learning. Miss Tika believes that the use of technology can provide great benefits for learning. Technology can help students to learn more independently and creatively.

"Technology can provide wider access to learning for students. Students can learn anytime and anywhere," said Miss Tika.

Miss Tika also believes that technology can enhance students' creativity. Technology can be used to create creative works, such as videos, animations, and applications.

"Technology can help students to express themselves creatively. This can increase students' creativity and innovation," continued Miss Tika.

Tika also revealed that the use of technology in learning can help students to be more active in learning. Technology can make learning more interesting and fun so that it can create student learning motivation (Rofiqoh, 2020).

"The utilization of technology can be used to make learning more interactive and multimedia. This can make learning more interesting and fun for students to foster student learning motivation," said Miss Tika.

However, Mbak Tika also revealed that the use of technology in learning must be done wisely. Teachers must be able to direct students to utilize technology appropriately. Teachers should also be able to ensure that students can use technology responsibly.

Overall, Mbak Tika thinks that the use of technology in learning is a positive thing. Technology can provide great benefits for learning and can increase students' learning motivation, but its utilization must be done wisely.

### **Results of Interviews with Students**

#### **Male Student**

On Tuesday, November 21, 2023, I had the opportunity to interview a male student named Burhan (16 years old) at SMK Negeri in Surakarta. Burhan is an 11th-grade student majoring in PPLG who is the class leader in the class.

In the interview, Burhan expressed his opinion on the utilization of technology in learning. Burhan believes that the utilization of technology can provide great benefits for learning. Technology can help students to learn more effectively and efficiently.

"Technology can help me to learn more complete learning materials. Technology can also be used to play while learning. This can help me to understand the material better," said Burhan.

In addition, Burhan also believes that the use of technology can increase students' learning motivation. Technology can make learning more interesting and fun. This can encourage students to be more active in learning.

"Technology can be used to make learning better and better. It can make learning more interesting for students," Burhan continued.

Burhan also revealed that the use of technology in learning can help students to be more independent. Technology can provide wider access to learning for students. Students can learn anytime and anywhere.

"Technology can help me to learn anything independently," said Burhan.

However, Burhan also revealed that the use of technology in learning must be done wisely. Teachers must be able to direct students to utilize technology appropriately. Teachers must also be able to ensure that students can use technology responsibly.

Overall, Burhan thinks that the utilization of technology in learning is a positive thing. Technology can provide great benefits for learning, but its utilization must be done wisely.

#### **Female Students**

On Tuesday, November 21, 2023, I had the opportunity to interview a female student named Veronica (16 years old) at SMK Negeri in Surakarta. Veronica is an 11th-grade student majoring in PPLG.

In the interview, Veronica revealed that the utilization of technology in learning can increase students' learning motivation. Veronica said that technology can make learning more interesting and fun. This can encourage students to be more active in learning.

"Technology can be used to make learning more fun. It can make learning more interesting for me," Veronica said.

Veronica also said that technology can be used to provide faster and more precise feedback to students. This can help students to understand the material better and increase their motivation to learn.

"Technology can be used to provide quizzes, assignments, and practice questions online. This helps me to learn more easily and motivates me to study harder," Veronica continued.

Veronica also revealed that the use of technology in learning must be done wisely. Teachers should be able to direct students to utilize technology appropriately. Teachers should also be able to ensure that students can use technology responsibly.

Overall, Veronica believes that technology utilization in learning can be an effective strategy to increase students' motivation to learn.

## Conclusion

Based on the interviews with these four people, it can be concluded that the use of technology in learning can increase students' learning motivation. This can be seen from several factors, including 1. Technology utilization can make learning more interesting and fun. Technology can be used to present learning materials interactively and multimedia, so it can attract students' attention and make them more motivated to learn. 2. Technology utilization can provide wider access to learning for students. Students can learn anytime and anywhere, thus increasing their motivation to learn independently. 3. Technology utilization can provide faster and more precise feedback to students. This can help students to understand the material better and increase their motivation to learn.

However, the utilization of technology in learning must also be done wisely. Teachers should be able to direct students to utilize technology appropriately and responsibly. Teachers must also be able to ensure that students can use technology effectively and efficiently in learning. The utilization of technology in learning can provide great benefits for students, namely: Helping students learn more effectively and efficiently, increasing student learning motivation, and increasing student creativity and innovation. In addition, the use of technology in learning can increase student learning motivation by making learning more interesting and fun, providing faster and more precise feedback, and utilizing interesting learning media.

## References

- Andriana, E., Vitasari, M., Oktarisa, Y., & Novitasari, D. (2017). Pengembangan multimedia pembelajaran IPA berbasis kearifan lokal di Sekolah Dasar. *JPSd (Jurnal Pendidikan Sekolah Dasar)*, 3(2), 186-200. <http://dx.doi.org/10.30870/jpsd.v3i2.2139>
- Anggraini, M. S. A., & Zulfiati, H. M. (2017). IMPLEMENTASI PENDIDIKAN KARAKTER MELALUI BUDAYA SEKOLAH DI SD N KOTAGEDE 3 YOGYAKARTA TAHUN AJARAN 2016/2017. *Trihayu: Jurnal Pendidikan Ke-SD-an*, 3(3). <https://doi.org/10.30738/trihayu.v3i3.1877>
- Asiyah, S., Budiyanto, C., & Tamrin, A. (2018). Technology acceptance model in the analysis of the influence of e-learning implementation to students' motivation. *Indonesian Journal of Informatics Education*, 2(1), 51-56. <https://doi.org/10.20961/ijie.v2i1.14496>
- Gonibala, A. S., Sumual, H., & Liando, O. E. S. (2022). Pengaruh Peran Orang Tua dan Motivasi Terhadap Prestasi Belajar Siswa SMK. *Edutik: Jurnal Pendidikan Teknologi Informasi Dan Komunikasi*, 2(4), 490-504. <https://doi.org/10.53682/edutik.v2i4.5810>
- Hasri, S., Basori, B., & Maryono, D. (2019). Game based learning effectiveness with the kahoot application viewed from learning interests and learning outcomes of learners in digital simulation subjects. *Indonesian Journal of Informatics Education*, 3(1), 31-38. <https://doi.org/10.20961/ijie.v3i1.32116>
- Mirahyanti, I. G. A., Sumual, H., & Palilingan, V. R. (2022). Pengaruh Pembelajaran Jarak Jauh dan Minat Terhadap Hasil Belajar Pemrograman Dasar. *Edutik: Jurnal Pendidikan Teknologi Informasi dan Komunikasi*, 2(1), 90-99. <https://doi.org/10.53682/edutik.v2i1.3412>

- Mukaromah, E. (2020). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Meningkatkan Gairah Belajar Siswa. *Indonesian Journal of Education Management & Administration Review*, 4(1), 175-182. <http://doi.org/10.4321/ijemar.v4i1.4381>
- Pantow, A. S., Manongko, A. C., & Lempas, J. (2021). ANALISIS KOMPETENSI PEDAGOGIK GURU EKONOMI DI SMA NEGERI 1 TOMPASO. *Literacy: Jurnal Pendidikan Ekonomi*, 2(1), 52-66. <https://doi.org/10.53682/jpeunima.v2i1.1882>
- Pondaag, R. A., Pardanus, R. H. W., & Togas, P. V. (2021). Pengaruh Minat Dan Motivasi Belajar Terhadap Hasil Belajar Kkpi Siswa SMK. *Edutik: Jurnal Pendidikan Teknologi Informasi dan Komunikasi*, 1(3), 284-296. <https://doi.org/10.53682/edutik.v1i3.1790>
- Rachmawati, I. N. (2007). Pengumpulan data dalam penelitian kualitatif: wawancara. *Jurnal Keperawatan Indonesia*, 11(1), 35-40. <http://dx.doi.org/10.7454/jki.v11i1.184>
- Rijali, A. (2019). ANALISIS DATA KUALITATIF. *Alhadharah: Jurnal Ilmu Dakwah*, 17(33), 81-95. <https://doi.org/10.18592/alhadharah.v17i33.2374>
- Rofiqoh, J., Sucipto, T. L. A., & Basori, B. (2020). Pengaruh Blended Learning Menggunakan Think Pair Share Berbantuan Google Classroom Dengan Traditional Learning Terhadap Hasil Belajar Dan Motivasi Belajar Siswa. *Jurnal Ilmiah Pendidikan Teknik Dan Kejuruan*, 13(1), 11-16. <https://doi.org/10.20961/jiptek.v13i1.22368>
- Saputro, Y. D., & Lestari, M. (2022). Evaluasi Penggunaan Quizizz Untuk Meningkatkan Motivasi Belajar Peserta Didik. *Journal of Informatics and Vocational Education*, 5(2). <https://doi.org/10.20961/joive.v5i2.68074>
- Sibuea, P., Harahap, M. K., Putri, P., Dalimunthe, F. A., & Marpaung, A. A. (2023). Peran Teknologi Pendidikan dalam Pembelajaran. *Jurnal Pendidikan Tambusai*, 7(3), 31611-31616. <https://doi.org/10.31004/jptam.v7i3.12163>
- Sugiyono. (2014). *Metode penelitian manajemen*. Bandung: Alfabeta.
- Sugiyono. (2015). *Metode Penelitian Kombinasi (Mix Methods)*. Bandung: Alfabeta.
- Turner, D. P. (2020). Sampling methods in research design. *Headache: The Journal of Head and Face Pain*, 60(1), 8-12. <https://doi.org/10.1111/head.13707>
- Zabir, A. (2018). Pengaruh pemanfaatan teknologi pembelajaran Terhadap motivasi belajar siswa smpn 1 lanrisang Kabupaten pinrang (Doctoral dissertation, UNIVERSITAS NEGERI MAKASSAR). <http://eprints.unm.ac.id/id/eprint/9823>