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Student facilitator and explaining learning: Its use to increase student learning outcomes

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Abstract: This research aims to determine the improvement in student learning outcomes through the application of the student facilitator and explaining learning. The method used in this research is Classroom Action Research. The subjects are students in Class V.1 MI Muhammadiyah Unggulan Gorontalo City with a total of 28 students. The instruments in this research are teacher and student activity observation sheets, and learning outcomes tests. The research results showed that there was an increase in student learning outcomes in cycle 1 for the first meeting by 25%, 29% for the second meeting, and 36% for the third meeting. At the first meeting of cycle II the increase was 67% and 92% for the second meeting. This research concluded that overall there was an increase and the criteria for learning completeness were met. Using the student facilitator and explaining learning optimally can familiarize students with presenting their ideas to friends and have an impact on their learning outcomes.

Keywords: Student facilitator and explaining learning, learning outcomes, social science

Student facilitator and explaining learning: Penggunaannya untuk meningkatkan hasil belajar siswa

Abstrak: Penelitian ini bertujuan untuk mengetahui peningkatan hasil belajar siswa melalui penerapan pembelajaran student facilitator and explaining. Metode yang digunakan dalam penelitian ini adalah Penelitian Tindakan Kelas. Subjek yaitu siswa di Kelas V.1 MI Muhammadiyah Unggulan Kota Gorontalo dengan jumlah siswa 28 orang. Instrument pada penelitian ini adalah lembar pengamatan aktivitas guru dan siswa, dan tes hasil belajar. Hasil riset menunjukkan terjadinya peningkatan hasil belajar siswa pada siklus 1 pertemuan pertama sebesar 25%, pertemuan kedua adalah 29%, dan 36% untuk pertemuan ketiga. Pada pertemuan pertama siklus II peningkatan sebesar 67% dan sebesar 92% untuk pertemuan kedua. Riset ini menyimpulkan bahwa secara keseluruhan terjadi peningkatan dan mnecakupi kriteria ketuntasan belajar. Penggunaan pembelajaran student facilitator and explaining secara optimal dapat membiasakan siswa dalam mepresentasikan ide mereka kepada teman dan berdampak pada hasil belajarnya.

Kata Kunci: Pembelajaran student facilitator and explaining, hasil belajar, ilmu pengetahuan sosial

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INTRODUCTION

Social science is a subject that plays a central role in providing students with an understanding of the complexities of social, economic, and political life. In this context, evaluating and increasing students' interest in social studies learning is important, given its positive impact on their understanding of society and the environment. Social science subjects develop students' interests, talents, and potential to respond well to environmental situations and social problems in the community. In learning social studies, the potential of each student is developed so that they are sensitive to social inequality to train their knowledge and skills to deal with social and daily problems (Nasution & Lubis, 2018).

All parties, including the school, must work together to solve social problems (Ginanjar, 2016). The school is an educational institution that functions to overcome students' social problems. The implementation of learning in schools must instill in students the ability to carry out their lives as a community, state, and nation that can grow knowledge and skills (Baransano et al., 2017; Koomson & Eshun, 2021; Nasir et al., 2020; Rumbekwan et al., 2018; Zannah et al., 2018). This can be done in the social science learning process, which prioritizes learning related to social problems in the student environment. Therefore, social science learning needs to be strengthened in its role so that it can develop students' knowledge and skills that can have an impact on their lives in the future (Achor et al., 2022; Permady et al., 2023; Ruto et al., 2021).

Social sciences materials have great potential to provide insight into social dynamics, history, and global challenges (Kurniawanti et al., 2023; Manni, 2023; Rahayu, 2022; Rusmawati et al., 2022). However, some students may need help seeing the connection between learning materials and their daily lives. Therefore, it is necessary to find strategies that can present social studies material in a relevant and interesting way to students. The application of social studies subjects is not only a matter-of-fact knowledge but also about the development of critical thinking skills (Hashemi, 2011), analytical (Pramesti et al., 2023), and decision-making skills (Slamet & Puspitasari, 2017). In line with Widianingrum et al. (2023), social science subjects are important in shaping and preparing students academically and in society. Social science subjects should not only present material or cognitive achievements, but students also must be able to master the psychomotor and affective aspects. Students should be able to know society's needs and develop these needs in real life in their own environment. Learning in schools should provide innovations to help students progress toward achieving it.

Social science as an educational program can connect children with the environment so that the child's social spirit can develop; it not only presents knowledge alone but can create students who have sensitivity to becoming good citizens and responsible for their country. The implementation of social studies learning has a goal to foster the values, skills, and knowledge of students who have a nationalist spirit in their country (Aslamiah et al., 2021), and they can have a democratic attitude by actively participating in their nation (Levy et al., 2023). Social studies knowledge emphasizes students' ability to think logically and critically, have curiosity, solve problems, and communicate, cooperate, and compete in social life (Nugraheni, 2022).

Students who study social science subjects can develop their skills and knowledge of social matters in the community environment and have a positive mentality when addressing social and everyday social issues. It is expected that students can master concepts, apply theory, be curious, creative, innovative, and collaborative, and think critically, logically, and skillfully to solve problems and apply them in society (Alti & Hasan, 2020). In learning and teaching activities, efforts are made to organize educational programs that equip students with skills in various subjects. The social studies learning process is carried out with the concept of developing skills, attitudes, and social knowledge to shape and develop the learning process (Ayu et al., 2021). Therefore, teachers need to present students with interesting and enjoyable learning in order to achieve a meaningful learning process. Thus, the learning process will run well, and the students can comprehend the lessons that foster optimal mastery of the material. Therefore, student learning can run well, and social science results will be improved.

Mulyono et al. (2018) said that in elementary schools, social science subjects have results to measure learning that has understood the material taught and has been able to solve evaluation questions properly and correctly. There are differences in learning outcomes when using other learning models with the student facilitator and explaining model where students using this model are more able to have good independence in carrying out the learning process. Therefore, students can express their ideas to friends in front of the class and within the scope of their group. Suppose the learning outcomes of elementary social studies learning are low. In that case, it will cause difficulties in comprehending learning materials, less active in discussion activities, and less participation in learning in the classroom. Social studies subjects that are implemented boringly and do not attract students' attention can result in low student learning outcomes (Budiwibowo, 2016). Teachers play a role in decreasing or increasing learning outcomes (Musdiani & Kistian, 2023). The inappropriateness of the learning carried out causes student results to be not optimal.

The lecture learning method is often used by teachers as an alternative to learning, especially in the implementation of social studies learning, the implementation of teachercentered learning so that students listen through the handbook or on the blackboard (Pambudi et al., 2022; Yurida et al., 2021). This makes students passive and bored, tends to be boring, and they tend not to be interested in social studies lessons given by the teacher (Anggarini et al., 2023; Sinambela et al., 2021; Welerubun et al., 2022). Teachers who are carrying out learning are cultivating an interesting, appropriate, and meaningful learning process for students (Vargas-Hernández & Vargas-González, 2022). Teachers must have special teaching strategies to create active learning. Using Students Facilitator and Explaining (SFAE) aims to increase understanding of concepts in social studies subjects in elementary schools (Rodiyana, 2018).

Based on the results of observations by researchers on October 05, 2022, in class V.1 Madrsah Ibtidiyah Muhamadiyah Kota Gorontalo in social science learning subjects, students still need to meet or have obtained learning completeness. This is evidenced by the number of 28 students in class V.1, namely six students who can meet learning outcomes above minimum standard or with a percentage of 21%, while 22 students who get learning outcomes below minimum standard or with a percentage of 79% with a minimum standard value of 85. So after taking action on the learning process, the researcher gets the results of Cycle I First Meeting 25%, Second, 29%, Third 36%, and Cycle II First Meeting 67%, Second 92%. So, students' learning outcomes in class V.1 MI Muhammadiyah Unggulan Kota Gorontalo Increased. This is because students are less enthusiastic about learning social

studies because they think it is difficult and boring, so using a learning model in the situation and conditions causes students to sit and take notes and listen to what the teacher says. Thus, students tend to be passive, ask few questions, and student mastery of learning materials that could be more optimal. Therefore, learning models can be used to support a meaningful learning process, such as the SFAE learning in social science learning.

The implementation of this SFAE learning can facilitate students in mastering the material both in terms of knowledge and skills because this model is one of the cooperative learning models (Anisa et al., 2019; Yanto & Juwita, 2018). The SFAE learning is a process of how in learning students can convey their ideas to others (Witarsa, 2017). The SFAE learning can encourage students to argue for the material learned to their friends in mastering the learning material (Sholeh & Khumairotuzzaro'ah, 2023). The SFAE learning can provide freedom to students in their opinion to solve problems (Aulia & Savitri, 2021). based on previous research findings, we can know that the SFAE learning can provide freedom and courage to students in thinking, expressing ideas or ideas to their friends.

Through this SFAE learning, students are directly involved so that they can develop their understanding of the material that has been learned. This is in line with the opinion, Sholeh and Khumairotuzzaro'ah (2023), and Witarsa (2017) conveying about the SFAE learning where students are directly involved in the learning process to create material that will be delivered to their friends. The SFAE learning is a learning model where students express their ideas to other students in the implementation of learning in the classroom. The application of the SFAE learning improves student learning outcomes because the learning process is student-centered (Ayu et al., 2021). The SFAE learning makes learning active, fun, and increases students' courage to explain material to their friends, especially students in elementary schools (Murtiningsih, 2018). This researcher further stated that social studies subjects are very relevant for improving learning outcomes through the SFAE learning. Therefore, the purpose of this study is to improve student learning outcomes through the application of the SFAE learning.

METHOD

CAR (Classroom action research) is actually defined as a research method in improving the learning process in the classroom. In CAR type research, researchers are required to fix problems in the classroom. There are 4 steps in implementing this type of CAR research as follows: (1) planning (2) implementation of action (3) observation (4) reflection. In the implementation of this research, there are process variables, input and output variables as the basis for conducting research. While the data collection techniques are observation, documentation of activities and tests of student learning outcomes with research procedures carried out in 2 cycles.

In the Observation analysis is a method used to see the results and learning activities of students and teacher activities while learning the things that are observed are the activities of students and teachers taking place during learning before implementing the action. Meanwhile, the research data analysis aims to analyze research data related to student learning outcomes. After the respondent gives an answer through the learning outcomes scale, it is necessary to analyze the data Research data analysis aims to analyze research data related to student learning outcomes. After the respondent provides answers through the learning outcomes scale, it is necessary to analyze the data.

RESULTS

Based on student learning outcomes and observations of activities both in terms of teachers and students carried out in cycle I and cycle II, it can be seen that after the research was carried out, it turned out that there was an increase, namely from the initial observation of 6 people or 21% of students who met the learning outcomes above the minimum standard, increasing after research in cycle I even though it did not reach the expected work indicators. The result in the research being continued in cycle II and the next meeting. Implementation of cycle II, experienced an increase in the achievement of student evaluation results. It is evidenced in students who meet the learning outcomes above the minimum standard as much as 92% or a total of 26 students out of 28 students (Figure 2). Teacher and student activities are presented in Figure 1.



Fig. 1. Teacher and student activities

Figure 1 explains that the observation of the results of teacher and student activities at the first and second meetings in cycle I has the same presentation. This is due to several factors, namely, the number of indicators of teacher activity is more than student activity. Based on the research results on student activity indicators, some aspects still need to be improved for students to meet. However, after the second meeting of cycle II, all aspects of the student indicators were met with the targets desired by the researcher. In observing the implementation of this class action, reflection, and evaluation are carried out in the cycle and meeting to improve student's learning outcomes. Therefore, the results of student evaluations can be presented in Figure 2.



Fig. 2. Students' learning outcomes

Figure 2 shows that the recapitulation of the initial observation of completeness reached 21%; in the implementation of the cycle I action, meeting 1 reached 25%, meeting 2 reached 29%, and meeting 3 reached 36%. From the implementation of cycle I, it has yet to reach the expected performance indicator of 80%. Therefore, researchers and partner teachers continued the action in cycle II, and obtained in cycle II, meeting 1 reached 67% and meeting 2 reached 92%. Based on the implementation of cycle II research results, it has reached the specified performance indicator of 80%.

DISCUSSION

Based on the findings of the learning results, improvements can be seen. After the research, there was an increase in Cycle I and II. Based on initial observations, six students, or 21%, who met learning outcomes needed to meet the minimum standards. Student learning outcomes increased after research in cycle I, although they did not meet the expected work indicators. This resulted in the research having to be continued in cycle II. In cycle II, student learning outcomes increased. Thus, class V.1 MI Muhammadiyah Unggulan Gorontalo City students experienced increased learning outcomes in social science subjects. Therefore, the action was no longer continued because the action research cycle II had achieved the expected performance indicators.

Research has revealed that student learning outcomes have increased drastically and cover the criteria for learning completeness. This aligns with the opinion of Murtiningsih (2018) that the increase in learning outcomes is good through applying the SFAE learning. Students can be trained optimally by presenting the results of their ideas to peers and actively participating in the learning process so that students learn. During the learning process, students are more active. Students who are passive in the learning process become active when learning takes place (Widianingrum et al., 2023),

The use of the SFAE learning causes an increase in student learning outcomes. The findings of this research indicate an increase in the quality of learning where the learning

process is carried out with enthusiasm and students' interest in learning increases. The use of the SFAE learning causes an increase in student learning outcomes. The findings of this research indicate that there is an increase in the quality of learning where the learning process is carried out with enthusiasm and students' interest in learning increases.

CONCLUSION

This research concludes that SFAE learning can improve student learning outcomes in social science subjects. It is proved from the provision of cycle I and II actions during the initial observation with a percentage of 39%. As described in cycle I, the first to third meeting reached 36% and further action was taken in cycle II, the first and second meetings of student learning outcomes greatly improved to 92%. Therefore, with the achievement of providing cycle I to II actions, it has met the expected performance indicators of 80% and is relatively acceptable.

REFERENCES

- Achor, S. Z., Zaria, L. I., & Achor, E. E. (2022). Perceived cognitive load and students' performance in social studies. *Journal of Research in Instructional*, 2(2), 129–140. https://doi.org/10.30862/jri.v2i2.74
- Alti, W., & Hasan, H. (2020). Pengaruh penggunaan pembelajaran student facilitator and explaining dan minat terhadap hasil belajar siswa. *JRTI (Jurnal Riset Tindakan Indonesia)*, 4(2), 48–52. https://doi.org/10.29210/3003463000
- Anggarini, D. J., Ramli, M., & Rahman, D. H. (2023). The effectiveness of guidance groups using educational cinema techniques to increase students' altruistic attitudes. *Journal of Research in Instructional*, 3(2), 219–230. https://doi.org/10.30862/jri.v3i2.274
- Anisa, R., Mustadi, A., & Wibowo, U. B. (2019). Student facilitator and explaining in improving student social skills: Assertive behavior in opinion and communication. International Conference on Social Science and Character Educations (ICoSSCE 2018) and International Conference on Social Studies, Moral, and Character Education (ICSMC 2018), 309–315. https://www.atlantis-press.com/proceedings/icossceicsmc-18/125910018
- Aslamiah, A., Abbas, E. W., & Mutiani, M. (2021). 21st-century skills and social studies education. *The Innovation of Social Studies Journal*, 2(2), 82–92. https://doi.org/10.20527/iis.v2i2.3066
- Aulia, H., & Savitri, E. N. (2021). The effectiveness of student facilitator and explaining learning model assisted by edmodo to enhanced students' problem solving ability. *Journal of Environmental and Science Education*, 1(2), 11–17. https://doi.org/10.15294/JESE.V1I2.49558
- Budiwibowo, S. (2016). Hubungan minat belajar siswa dengan hasil belajar IPS di SMP Negeri 14 Kota Madiun. *Gulawentah:Jurnal Studi Sosial, 1*(1), 60–68. https://doi.org/10.25273/gulawentah.v1i1.66
- Baransano, A. Y., Yohanita, A. M., & Damopolii, I. (2017). Penerapan model pembelajaran picture and picture untuk meningkatkan hasil belajar biologi siswa kelas XI IPA SMA YABT Manokwari. In *Prosiding Seminar Nasional MIPA II Universitas Papua Tahun* (pp. 273-280).

- Ginanjar, A. (2016). Penguatan peran IPS dalam meningkatkan keterampilan sosial peserta didik. *Harmony Jurnal Pembelajaran IPS dan PKN*, 1(1), 118–126. https://doi.org/10.15294/harmony.v1i1.15134
- Hashemi, S. A. (2011). The use of critical thinking in social science textbooks of high school: A field study of fars province in Iran. *International Journal of Instruction*, 4(1), 63– 78. https://dergipark.org.tr/en/pub/eiji/issue/5142/70071
- Kurniawanti, M. R., Wahyuni, A., & Saputra, M. A. (2023). Case method learning with multicultural approach: The implementation to increase students historical empathy and love for the country. *Journal of Research in Instructional*, 3(2), 176– 184. https://doi.org/10.30862/jri.v3i2.256
- Koomson, E., & Eshun, I. (2021). Knowledge and perception of senior high school social studies teachers on the teaching and learning for nation building. *British Journal of Education*, 9(9), 1-17. https://eajournals.org/bje/vol-9-issue-9-2021/knowledgeand-perception-of-senior-high-school-social-studies-teachers-on-the-teachingand-learning-for-nation-building/
- Levy, B. L. M., Busey, C. L., Cuenca, A., Evans, R. W., Halvorsen, A.-L., Ho, L.-C., Kahne, J., Kissling, M. T., Lo, J. C., McAvoy, P., & McGrew, S. (2023). Social studies education research for sustainable democratic societies: Addressing persistent civic challenges. *Theory & Research in Social Education*, 51(1), 1–46. https://doi.org/10.1080/00933104.2022.2158149
- Mandasari, F., Iwan, I., & Damopolii, I. (2021). The relationship between science process skills and biology learning outcome. *Journal of Research in Instructional*, 1(1), 23– 32. https://doi.org/10.30862/jri.v1i1.9
- Manni, G. L. (2023). Teaching social studies: Cultivating informed global citizens. *Journal of Educational Sciences Research*, *13*(1), 1–2. https://www.eduscires.com/articles/teaching-social-studies-cultivatinginformed-global-citizens-101828.html
- Mulyono, D., Asmawi, M., & Nuriah, T. (2018). The effect of reciprocal teaching, student facilitator and explaining and learning independence on mathematical learning results by controlling the initial ability of students. *International Electronic Journal* of Mathematics Education, 13(3), 199–205. https://doi.org/10.12973/iejme/3838
- Murtiningsih, M. (2018). Implementation of student facilitator and explaining model to support the active, innovative and enjoyable learning in social science learning in 2013 curriculum-based elementary school. Proceedings of the 1st International Conference on Early Childhood and Primary Education (ECPE 2018), 137–140. https://doi.org/10.2991/ecpe-18.2018.29
- Musdiani, M., & Kistian, A. (2023). Efektifitas model pembelajaran student facilitator and explaining (SFAE) terhadap hasil belajar ips siswa kelas V SD Negeri Krueng Itam Kabupaten Nagan Raya. *Jurnal Binagogik*, 10(1), 246–255. https://doi.org/10.61290/pgsd.v10i1.695
- Nasir, N. I. R. F., Damopolii, I., & Nunaki, J. H. (2020). Pengaruh pembelajaran inkuiri terhadap level berpikir siswa SMA. *Bioilmi: Jurnal Pendidikan*, 6(2), 112–119. https://doi.org/10.19109/bioilmi.v6i2.6948

Nasution, T., & Lubis, M. A. (2018). *Konsep Dasar IPS*. Samudra Biru.

Nugraheni, A. (2022). Model student facilitator and explaining untuk meningkatkan

aktivitas guru dan hasil belajar siswa. *Antroposen: Journal of Social Studies and Humaniora*, 1(1), 1–8. https://doi.org/10.33830/antroposen.v1i1.3142

- Pambudi, G. D., Winangsih, F., Nunaki, J. H., Nusantari, E., & Damopolii, I. (2022). Encouraging students' metacognitive skills through inquiry learning. *Inornatus: Biology Education Journal*, 2(1), 43–52. https://doi.org/10.30862/inornatus.v2i1.272
- Permady, G. C., Zulfikar, G., Siswanto, S., & Nanggala, A. (2023). Citizenship education courses are used as a means of implementing multicultural education at the Sorong Politeknik Pelayaran Sorong. *Journal of Research in Instructional*, 3(2), 207–218. https://doi.org/10.30862/jri.v3i2.262
- Pramesti, T. H. B., Suryanti, H. H. S., & Mustofa, M. (2023). Analisis kemampuan berpikir kritis peserta didik dalam menyelesaikan soal high order thinking skills (HOTS) pada pembelajaran IPS kelas V SDN Madyotaman No. 38 Surakarta tahun pelajaran 2022/2023. Jurnal Pendidikan Tambusai, 7(2), 17477–17483. https://doi.org/10.31004/jptam.v7i2.9132

Rahayu, S. (2022). Tantangan pembelajaran IPS terhadap isu global. *JESS : Jurnal Education Social Science*, 2(1), 40–50. https://ejournal.uinsatu.ac.id/index.php/epi/article/view/6091

- Rodiyana, R. (2018). Analisis model cooperative learning type student facilitator and explaining terhadap hasil belajar siswa sekolah dasar. *Jurnal Cakrawala Pendas*, 4(1), 87–97. https://doi.org/10.31949/jcp.v4i1.713
- Rumbekwan, Y. O., Yohanita, A. M., & Damopolii, I. (2018). Pengaruh model pembelajaran cooperative script terhadap hasil belajar biologi di kelas VIII SMP 11 Manokwari. *JIPVA (Jurnal Pendidikan IPA Veteran)*, 2(1), 25–35. https://doi.org/10.31331/jipva.v2i1.566
- Rusmawati, R., Muslimin, A. A., & Idawati, I. (2022). Dinamika sosial dalam pembelajaran IPS di masa pandemi COVID-19 terhadap peserta didik. *Gema Wiralodra*, *13*(1), 198–214. https://doi.org/10.31943/gemawiralodra.v13i1.211
- Ruto, R., Mema, A., Nduru, M. P., & Ota, M. K. (2021). Contextual teaching and learning approach in social science: its role to encourage pupils' cognitive learning achievement. *Journal of Research in Instructional*, 1(1), 43–52. https://doi.org/10.30862/jri.v1i1.11
- Sholeh, M., & Khumairotuzzaro'ah, K. (2023). Meningkatkan keaktifan belajar dengan model student facilitator and explaining (SFAE) dengan pendekatan saintifik disekolah dasar. Jurnal Review Pendidikan Dan Pengajaran (JRPP), 6(3), 324–331. https://doi.org/10.31004/jrpp.v6i3.18929
- Sinambela, C., Sirait, S. H. K. N., Nasir, I. R. F., & Damopolii, I. (2021). Enhancing student achievement using the fungi learning media supported by Numbered Head Together learning. *Journal of Physics: Conference Series*, 1918(5), 052053. https://doi.org/10.1088/1742-6596/1918/5/052053
- Slamet, D., & Puspitasari, R. (2017). Penerapan model klarifikasi nilai untuk meningkatkan keterampilan pengambilan keputusan tentang konflik sosial pada pembelajaran IPS Di MTsN 2 Cirebon. *Edueksos : Jurnal Pendidikan Sosial & Ekonomi*, 6(2), 217–230. https://doi.org/10.24235/edueksos.v6i2.3162
- Vargas-Hernández, J. G., & Vargas-González, O. C. (2022). Strategies for meaningful learning in higher education. *Journal of Research in Instructional*, 2(1), 47–69.

https://doi.org/10.30862/jri.v2i1.41

- Welerubun, R. C., Wambrauw, H. L., Jeni, J., Wolo, D., & Damopolii, I. (2022). Contextual teaching and learning in learning environmental pollution: the effect on student learning outcomes. *Prima Magistra: Jurnal Ilmiah Kependidikan*, 3(1), 106–115. https://doi.org/10.37478/jpm.v3i1.1487
- Widianingrum, R., Pradana, A. B. A., & Purwandari, S. (2023). Pengaruh model pembelajaran student facilitator and explaining terhadap hasil belajar IPS siswa kelas V. *Borobudur Educational Review*, *3*(1), 24–34. https://doi.org/10.31603/bedr.9518
- Witarsa, F. I. (2017). The effect of cooperative learning with student facilitator and explaining (SFAE) model on students' willingness to speak up. *International Journal Pedagogy of Social Studies*, *2*(1), 11–18. https://doi.org/10.17509/ijposs.v2i1.8658
- Yanto, Y., & Juwita, R. (2018). Penerapan model pembelajaran kooperatif tipe student facilitator and explaining terhadap hasil belajar matematika siswa. Jurnal Pendidikan Matematika: Judika Education, 1(1), 53–60. https://doi.org/10.31539/judika.v1i1.247
- Yurida, Y., Damopolii, I., & Erari, S. S. (2021). Hubungan antara kreativitas guru dengan motivasi belajar sains siswa selama pandemic COVID-19. *Prosiding SNPBS (Seminar Nasional Pendidikan Biologi Dan Saintek)*, 146–152.
- Zannah, N. L., Damopolii, I., Iwan, I., & Rahman, S. R. (2018). Examining student learning outcomes on the topic of invertebrates through problem-based learning. *Inornatus: Biology Education Journal*, 1(2), 69–74. https://doi.org/10.30862/inornatus.v1i2.251