Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Blended Learning Synergized with School Tourism to Improve Interest in Learning Science among Middle School Students

Wilda Muhimmatun Nisa[1], Rizki Arumning Tyas[2]*, Andris Adhitra[3]

[1] SMP Negeri 2 Genteng, Banyuwangi, Indonesia
[2] Universitas Negeri Yogyakarta, Indonesia
[3] Naresuan University, Thailand
*Corresponding Author: rizkiarumningtyas@uny.ac.id

ARTICLE INFO

Article History
Submitted:
August 27, 2025
Revised:
March 1, 2026
Accepted:
September 5, 2026
Keywords
Blended Learning, School Tourism Studies, Science Interest, Middle School Students

ABSTRACT

Background: School-based tourism-enhanced blended learning provides a novel approach to developing context-based and meaningful science learning experiences by integrating local environmental resources into classroom instruction.
Objectives: This study aimed to determine the impact of school tourism-oriented blended learning on students' learning interest in science.
Method: A pre-experimental design with a one-group pretest-posttest approach was employed, involving 32 eighth-grade students of SMP Negeri 2 Genteng, Banyuwangi, Indonesia. Data were collected using a 23-item learning interest questionnaire based on four indicators: interest, enjoyment, attention, and awareness. Analysis was conducted using a paired sample t-test and n-gain test.
Result: The findings revealed a statistically significant increase in students' learning interest, with a Sig. (2-tailed) value of 0.000 (< 0.05) and an average n-gain score of 0.60, categorized as medium-range improvement. The greatest improvement was observed in the interest dimension (n-gain = 0.69), while the lowest was found in the attention dimension (n-gain = 0.51).
Conclusion: These results suggest that integrating local tourism resources into school-based blended learning can effectively promote students' interest and active engagement in science lessons. Future research is recommended to apply this strategy with larger samples and to investigate its effects on additional learning outcomes such as scientific literacy, critical thinking, and creativity.

INTRODUCTION

Science education plays a crucial role in connecting students with their natural surroundings, local environment, and the unique resources of their region.

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

To achieve this, learning materials must be designed to reflect local contexts and align with students' real-life experiences (Wilujeng et al., 2017). SMP Negeri 2 Genteng, located in Banyuwangi Regency, exemplifies a school rich in tourism potential and local resources that can be meaningfully integrated into science lessons. Leveraging these local assets not only strengthens students' emotional attachment to their environment but also nurtures a sense of shared responsibility to preserve it (Hastuti et al., 2022). Moreover, every region possesses distinctive cultural and ecological characteristics that hold significant educational value (Hastuti & Putri, 2022).

A key challenge for today's educators lies in transferring this local wisdom and potential to younger generations while ensuring its sustainability and revitalization. One promising solution is to embed local potential into science learning, utilizing it as both a medium and a source of knowledge (Wilujeng et al., 2024). When teachers incorporate local contexts into science content, students gain richer learning experiences, improved conceptual understanding, and increased motivation to explore their environment (Nisa & Tyas, 2022; Wilujeng et al., 2018, 2024). Such an approach also aligns with 21st-century science education, which emphasizes contextual learning, critical thinking, and the ability to apply knowledge to real-world situations. In reality, few educators have integrated local potential into learning, resulting in unmet educational goals, and many are unaware of the local potential in their surroundings (Lestari et al., 2024).

Based on observations at SMP Negeri 2 Genteng, science learning only uses learning resources from the government, whose examples of problems may not be suitable for the school environment, causing students to feel unmotivated because they are not interested in the learning process. Moreover, during the pandemic, only 50% of students can attend limited face-to-face classes with a reduced time allocation. This issue can be addressed through blended learning, where instruction is conducted both online (via the internet) and offline (outside the internet), to prevent learning loss among students. This situation should be an opportunity to highlight the school's local potential, as students cannot attend school daily and have limited time.

There are teachers who teach using lectures, even though the use of lecture methods emphasises teacher activity. When explaining material using words and sentences in the teaching and learning process, it will cause students to become passive, making them feel bored with the teacher's explanation of the material. Student passivity will result in a decrease in students' interest in the subject matter,

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

and students will have no desire to attend classes, as well as a lack of attention to the teacher's explanations during the learning process (Gan et al., 2021).

Interest is one of the most important internal factors that heavily influence students' successful learning outcomes as well as their total academic engagement. Interest of a high level will energize the learners to take the learning process with more concentration and long-lastingness (Safitri et al., 2023). From a psychological viewpoint, if the pupils are only interested in a subject matter, then they will allocate more attention to it and get intrinsic satisfaction from the learning process (Zhang et al., 2021). So, it becomes very necessary for the teacher to plan learning activities that are interesting and relevant to the students, if they want this interest to last.

Blended learning, especially when powered by school-based field trips, is an innovative way to engage students more deeply. This method gives pupils the opportunity to discover ideas through online platforms as well as through practical, on-site experiences in their school environment. Getting local potential involved in these activities not only deepens students' understanding of science but also helps them link knowledge, skills and attitudes, and evokes an emotional bond with their environment (Lase et al., 2016; Rahardini et al., 2017; Shufa & Khusna, 2018).

Achieving optimal performance requires more than intellectual ability; it demands that students develop a sustained interest in their studies (Huang et al., 2023; Nesi & Akobiarek, 2018). Active, inquiry-driven, and context-rich learning environments have been shown to enhance students' enthusiasm and motivation to participate in the learning process (Nisa & Tyas, 2022). Thus, integrating local potential into blended learning frameworks serves as an effective strategy to build long-term engagement and positive learning attitudes.

School field trips can facilitate students' science learning because they can directly observe the structure and function of these four trees, the shape of their leaves, and the shape of their trunks. There are four prominent trees at SMPN 2 Genteng, namely the majapahit tree, sukun tree, mengkudu tree, and oil palm tree. Students can also learn about the benefits of the majapahit tree (its fruit can be processed into natural pesticides), the sukun tree (its fruit can be processed into school-specific chips), the mengkudu tree (its fruit can be processed into natural herbal medicine), and the oil palm tree (its fruit can be processed into palm oil). These products can be further developed and marketed for sale, thereby increasing the school's income. Processing the school's local potential into marketable products requires several processes that can be discussed using scientific concepts.

Using the local potential for science learning not only keeps the students more active but also helps to develop science literacy. Science literacy involves the

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

ability to understand scientific concepts, present one's ideas effectively, and use the knowledge to solve real-life issues. The students through this method become more aware of the basic scientific principles, more sensitive to environmental issues, and they also learn to make decisions supported by evidence and scientific reasoning (Wulandari & Sholihin, 2019). Besides, contextual learning experiences based on local potential provide a good platform for students to link the abstract scientific knowledge to the concrete, real-world applications which in turn gives them a chance to develop their critical thinking, problem-solving abilities and also their feeling of being part of the community and environment.

METHODS

Research Design

The research method utilized in this study was pre-experimental research design, which was characterized by a one-group pretest–posttest format, thus, no control group was used. Participants were purposively selected to ensure their suitability for the study objectives. Data concerning students' learning interests were obtained through a questionnaire made by researchers, which comprises 23 items reflecting the main indicators of the learning interest. The responses were rated on a four-point Likert scale: strongly agree, agree, disagree, and strongly disagree. Data collection was done two times, before the intervention (O1/pretest) and after the intervention (O2/post test), to measure the change in students' learning interest. Table 1 shows the organization of the research design.

Table 1 Research Design

Pretest	Treatment	Post test
O1	Integrated learning of local potential	O2

Participants

The research subjects were 32 students aged 13–14 years old in the eighth grade at SMP Negeri 2 Genteng who were taking science classes in the first semester of the 2021/2022 academic year.

Data Analysis

Data analysis used a paired sample t-test to compare students' initial and final abilities after treatment, as well as an n-gain test to determine the extent of

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

improvement before and after treatment using SPSS 20 (using a significance level of less than 0.05).

The results of the n-gain calculation were then converted qualitatively using the conversion guidelines in Table 2 as follows.

Table 2 Students Science Interest Criteria

Criteria	n-gain
High	76 - 100
Moderate	56 - 76
Low	0 - 56

RESULTS AND DISCUSSION

Before performing the paired sample t-test, assumption testing was implemented which involved the normality and homogeneity tests. The Shapiro–Wilk test was used to check the data normality whereby the significance value of 0.952 was obtained and for homogeneity, a Levene's test was conducted giving a significance value of 0.841. Both values were greater than 0.05, thus the data were judged to be normal and homogeneous. After confirming these assumptions, the paired sample t-test was then conducted to see whether there were significant changes in students' learning interest. The outcome is shown in Table 3.

Table 3 Paired Samples Test

	Std. Deviation	df	Sig. (2-tailed)
Pair 1 Pre-Post	7.087	30	0.000

As illustrated in Table 3, the significance (2-tailed) value obtained from the paired sample t-test is 0.000, which is less than 0.05. This finding conveys that the administration of Blended Learning in the school tourism study has a significant effect on the increase of the junior high school students' interest in science learning. The study then continued with an N-Gain calculation to ascertain the extent of this improvement. Table 4 provides the N-Gain results.

Table 4 Gain Score for Student Science Interest

Indicator	**Pre Score**	**Post Score**	**Gain Score**	**Criteria**
Interest	616	772	0,69	Moderate
Enjoyment	228	315	0,66	Moderate

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Indicator	Pre Score	Post Score	Gain Score	Criteria
Attention	523	631	0,55	Moderate
Awareness	629	737	0,51	Moderate
Average			**0,60**	**Moderate**

Table 4 shows that the average overall N-Gain score of students' learning interest has reached 0.60, which is categorized as the medium improvement. The development of "interest" was found to be the highest among the four indicators screened with a score of 0.69 (moderate) meaning that students' excitement to learn science has considerably increased. On the other hand, the smallest gain was in the "attention" indicator with a score of 0.51 (moderate) that speaks about an improvement that can be noticed but still some more approaches can be employed to present students' focus during the lesson.

School learning efficacies are multiple interconnected factors that have a ripple effect on the characteristics of the students, the quality of the curriculim, the competence of the teacher, the availability of facilities and infrastructure, and the learning environment. If each of these elements is provided in an optimal measure, they will combine to form a supportive ecosystem, which will not only make the teaching–learning process more effective, but also help the facilitation of learning competencies and thus, an improvement in educational quality

SMP Negeri 2 Genteng exemplifies this integration through its distinctive identity as a “recreational school, child-friendly, pollution-free, and achievement-oriented.” The school boasts a well-maintained garden filled with diverse plant species, flowers, and trees, creating a lush and refreshing atmosphere. This natural setting not only contributes to students’ comfort but also serves as a living laboratory where science concepts can be explored directly, making learning more contextual, engaging, and meaningful.

Interest is a critical factor that influences the quality of students’ cognitive engagement with the subject matter being taught (Triarisanti & Purnawarman, 2019). Students who possess a strong interest in learning are more likely to invest effort, dedicate their abilities, and strive to achieve optimal learning outcomes in alignment with educational objectives (Luangrangsee & Ratsameemonthon, 2024). Higher levels of interest encourage students to study more actively and increase their learning frequency. Several factors contribute to fostering this interest, including the use of effective teaching methods, a supportive classroom atmosphere, and adequate learning facilities (Munna & Kalam, 2021).

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Achieving strong academic performance requires not only intellectual ability but also a well-developed interest in learning from the students themselves. In this study, students' learning interest was assessed through a 23-item questionnaire, which was developed to measure four key indicators: interest, enjoyment, attention, and awareness. The analysis of pretest and posttest data, as presented in Table 2, reveals a positive shift across all indicators. Furthermore, the N-Gain results confirm that students experienced measurable improvement in learning interest after participating in integrated local potential-based science learning activities.

Learning that incorporates local potential as a resource has been shown to provide significant benefits for students (Afkarina Izzata Dini & Febri Setiya Rini, 2024; Nisa & Tyas, 2022). Local potential can serve not only as a medium of instruction but also as a rich source of learning materials that reflect the surrounding environment (Sobiatin et al., 2020; Wilujeng et al., 2024). Its application offers students authentic experiences by engaging directly with resources available in and around the school setting (Afkarina Izzata Dini & Febri Setiya Rini, 2024). Moreover, connecting learning content with familiar, real-life contexts helps minimize conceptual difficulties and enhances comprehension (Adam et al., 2024). When students can relate scientific concepts to observable phenomena in their daily environment, their interest in learning increases significantly. This heightened interest, in turn, supports smoother and more effective achievement of intended learning outcomes (Tyas et al., 2021; Wilujeng et al., 2024).

At the beginning of the lesson, learning was conducted online via Google Meet to provide an overview of the structure and function of plants. Students were then asked to watch a video explaining why leaves are green, using visuals from the garden of SMP Negeri 2 Genteng, to stimulate their interest in learning about the structure and function of plants. Presenting a video at the beginning of the lesson can stimulate students' attention in learning something and clarify the presentation of the message so that it is not overly verbal, thereby making it easier for students to understand the message being conveyed (Kurniawan et al., 2021). During integrated learning that leverages the school's local potential, students actively participate in the lesson by asking questions to the teacher or their discussion partners. Students conduct school field trips outside the classroom by exploring the school environment (utilising the school garden as a natural laboratory), allowing them to directly observe, analyse, and examine the shapes of leaf veins and tree trunks. Observations outside the classroom are conducted in groups of two students to facilitate discussion and collaboration during the observation process. Collaborative learning requires students to learn together (teamwork), cooperate,

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

and take responsibility (Fahmi et al., 2020). Since it is not possible to uproot trees for root observation and not all trees are currently producing seeds, root and seed identification is conducted online using each student's Android device.

Through this lesson, students can conclude how dicotyledonous and monocotyledonous plants differ based on what they have identified. Additionally, students can also learn about which plants are suitable for the school environment, which can provide hands-on experience and make learning meaningful, opening up the possibility for students to apply this knowledge at home. This strongly supports scientific literacy, which involves understanding science and applying it to community needs (Pratiwi et al., 2019), applying scientific knowledge to recognize problems, analyzing them critically, and formulating evidence-based conclusions to better understand natural phenomena as well as the impact of human activities on the environment, thereby supporting informed and responsible decision-making (Organisation for Economic Co-operation and Development, 2023). Students are individuals and part of the environment (Ferdyan et al., 2021). Student engagement with the real environment through learning can facilitate understanding of lessons and also develop students' science literacy (Hadi* et al., 2020).

Learning that integrates the school's local potential allows students to be more flexible in exploring, investigating, and analyzing information comprehensively from the learning resources available (Anisa, 2017). One essential aspect of science literacy is the ability to describe everyday phenomena and draw evidence-based conclusions scientifically. This capability is strengthened when learning materials are closely connected to students' immediate environment, making them more engaged and curious to explore further—often prompting reflective questions such as, “What other local resources can be utilized in science learning?” (Cain, 2019).

Such inquiry-driven learning reflects a high level of curiosity, which is a key indicator of genuine interest in the subject matter. When students are actively involved and the learning context is meaningful, their engagement and participation increase significantly (Nisa & Tyas, 2022). Moreover, student-centered learning approaches have been shown to positively influence both students' interest and their overall learning outcomes (Salwan & Rahmatan, 2018; Tholibon et al., 2022). Conversely, without sufficient interest, students tend to show low enthusiasm and minimal involvement in learning activities, which may hinder knowledge acquisition (Huang et al., 2023; Leitão et al., 2022).

Blended learning that incorporates school field trips offers students direct and meaningful experiences by utilizing learning resources found within their immediate environment. Such experiential learning encourages active participation,

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

which is a key factor in enhancing knowledge acquisition and facilitating the construction of new concepts (Aithal & Mishra, 2024; Shanmugam & Balakrishnan, 2019; Singha & Singha, 2024). As students become more engaged in learning activities, their enthusiasm grows, leading to an increase in overall interest toward the subject matter. High levels of interest not only foster enjoyment but also contribute to positive changes in students' attitudes, behaviors, and skills development (Aithal & Mishra, 2024; Arlianty, 2017).

CONCLUSION

The findings of this study demonstrate that implementing blended learning integrated with school field trips significantly enhances students' interest in science learning at SMP Negeri 2 Genteng. Statistical analysis using a paired sample t-test yielded a Sig. (2-tailed) value of 0.000, indicating a significant difference between pretest and posttest results. Furthermore, the average n-gain score of 0.60, categorized as moderate, reflects a measurable improvement in students' engagement and enthusiasm for learning. These results highlight the potential of blended learning combined with local school resources to provide contextual, meaningful, and motivating learning experiences for junior high school students.

REFERENCES

Adam, U. A., Lameed, S. N., Owolabi, T., Onowugbeda, F. U., Oladejo, A. I., Okebukola, P. A., & Mustapha, G. A. (2024). The potency of culture, technology, and context in a biology classroom: Culturo-Techno-Contextual Approach in action. *International Journal of Science Education*, 1–26. https://doi.org/10.1080/09500693.2024.2405667

Afkarina Izzata Dini, N., & Febri Setiya Rini, E. (2024). Integration of Local Potential in Science Learning to Improve 21st-Century Skills. *IJCER (International Journal of Chemistry Education Research)*, 156–165. https://doi.org/10.20885/ijcer.vol8.iss2.art9

Aithal, P. S., & Mishra, N. (2024). Integrated Framework for Experiential Learning: Approaches & Impacts. *International Journal of Case Studies in Business, IT, and Education*, 145–173. https://doi.org/10.47992/IJCSBE.2581.6942.0340

Anisa, A. (2017). Meningkatkan keterampilan berpikir kritis peserta didik melalui pembelajaran IPA berbasis potensi lokal Jepara. *Jurnal Inovasi Pendidikan IPA*, *3*(1), 1. https://doi.org/10.21831/jipi.v3i1.8607

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Arlianty, W. N. (2017). An analysis of interest in students learning of physical chemistry experiment using Scientific approach. *International Journal of Science and Applied Science: Conference Series*, *1*(2), 109. https://doi.org/10.20961/ijsascs.v1i2.5130

Cain, J. (2019). We should pay more attention to student curiosity. *Currents in Pharmacy Teaching and Learning*, *11*(7), 651–654. https://doi.org/10.1016/j.cptl.2019.03.001

Fahmi, R., Tusa, H., & Sabri, A. (2020). *Natural Science : Jurnal Penelitian Bidang IPA dan Pendidikan IPA Pengembangan Keterampilan Kolaborasi Melalui Penerapan Modul Interaktif Berbasis TTI*. *6*(2), 197–210.

Ferdyan, R., Vauzia, Zulyusuri, Santosa, T. A., & Razak, A. (2021). Model Pendidikan Lingkungan Hidup: Kegiatan Pembelajaran pada Siswa Sebagai Bagian dari Lingkungan di Era New Normal. *Natural Science: Jurnal Penelitian Bidang IPA Dan Pendidikan IPA*, *7*(1), 51–61.

Gan, Z., An, Z., & Liu, F. (2021). Teacher Feedback Practices, Student Feedback Motivation, and Feedback Behavior: How Are They Associated With Learning Outcomes? *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.697045

Hadi*, W. P., Munawaroh, F., Rosidi, I., & Wardani, W. K. (2020). Penerapan Model Pembelajaran Discovery Learning Berpendekatan Etnosains untuk Mengetahui Profil Literasi Sains Siswa SMP. *Jurnal IPA & Pembelajaran IPA*, *4*(2), 178–192. https://doi.org/10.24815/jipi.v4i2.15771

Hastuti, P. W., & Putri, A. F. (2022). Development of science student worksheet containing local potential of geplak to realize problem-solving skill for junior high school students. *AIP Conference Proceedings*, 040005. https://doi.org/10.1063/5.0115349

Hastuti, P. W., Wilujeng, I., Susilowati, & Nurmadhani, T. (2022). Integration local potential "Ketingan Tourism Village" in science learning to improve critical thinking and scientific literacy based on the nature of science framework. *THE 3RD INTERNATIONAL CONFERENCE ON SCIENCE EDUCATION (ICoSEd 2021)*.

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Huang, X., Huss, J., North, L., Williams, K., & Boyd-Devine, A. (2023). Cognitive and motivational benefits of a theory-based immersive virtual reality design in science learning. *Computers and Education Open*, *4*, 100124. https://doi.org/10.1016/j.caeo.2023.100124

Kurniawan, A., Sari, M., & Jannah, R. (2021). Efektivitas Video Pembelajaran Fisika Berbasis Model Learning Cycle 5E Berbantuan Adobe After Effects terhadap Kemampuan Literasi Sains Peserta Didik SMA/MA. *Natural Science: Jurnal Penelitian Bidang IPA Dan Pendidikan IPA*, *7*(1), 12–21.

Lase, N. K., Sipahutar, H., & Harahap, F. (2016). Pengembangan Lembar Kegiatan Siswa (LKS) Berbasis Potensi Lokal pada Mata Pelajaran Biologi SMA Kelas XII. *Jurnal Pendidikan Biologi*, *5*(2), 99–107. https://doi.org/10.24114/jpb.v5i2.4305

Leitão, R., Maguire, M., Turner, S., & Guimarães, L. (2022). A systematic evaluation of game elements effects on students' motivation. *Education and Information Technologies*, *27*(1), 1081–1103. https://doi.org/10.1007/s10639-021-10651-8

Lestari, N., Paidi, P., & Suyanto, S. (2024). A systematic literature review about local wisdom and sustainability: Contribution and recommendation to science education. *Eurasia Journal of Mathematics, Science and Technology Education*, *20*(2), em2394. https://doi.org/10.29333/ejmste/14152

Luangrangsee, P., & Ratsameemonthon, C. (2024). Assessing the Alignment between Expected Learning Outcomes and Student Achievement in Research for Learning Development at a Higher Education Institution in Songkhla Province, Thailand. *Pakistan Journal of Life and Social Sciences (PJLSS)*, *22*(2). https://doi.org/10.57239/PJLSS-2024-22.2.00361

Munna, A. S., & Kalam, M. A. (2021). Teaching and learning process to enhance teaching effectiveness: literature review. *International Journal of Humanities and Innovation (IJHI)*, *4*(1), 1–4. https://doi.org/10.33750/ijhi.v4i1.102

Nesi, M., & Akobiarek, M. (2018). Pengaruh Minat dan Penggunaan Metode terhadap Hasil Belajar IPA Biologi Siswa Kelas VII SMP Negeri 2 Jayapura. *BIOEDUSAINS: Jurnal Pendidikan Biologi Dan Sains*, *1*(1), 80–94. https://doi.org/10.31539/bioedusains.v1i1.257

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Nisa, W. M., & Tyas, R. A. (2022). Local Potential Integrated Science: New Innovation to Support Student's Interest. *INOVASIA*, *1*(2), 1–6.

Organisation for Economic Co-operation and Development. (2023). *PISA 2022 Result: The State of Learning and Equity in Education*.

Pratiwi, S. N., Cari, C., & Aminah, N. S. (2019). Pembelajaran IPA Abad 21 dengan Literasi Sains Siswa. *Jurnal Materi Dan Pembelajaran Fisika (JMPF)*, *9*(1), 34–42.

Rahardini, R. R. B., Suryadarma, I. G. P., & Wilujeng, I. (2017). The effect of science learning integrated with local potential to improve science process skills. *AIP Conference Proceedings*, *1868*(August). https://doi.org/10.1063/1.4995192

Safitri, R., Hadi, S., & Widiasih, W. (2023). Effect of the Problem Based Learning Model on the Students Motivation and Learning Outcomes. *Jurnal Penelitian Pendidikan IPA*, *9*(9), 7310–7316. https://doi.org/10.29303/jppipa.v9i9.4772

Salwan, S., & Rahmatan, H. (2018). Pengaruh Lkpd Berbasis Discovery Learningterhadap Peningkatan Hasil Belajar Siswa. *Jurnal Pendidikan Sains Indonesia*, *5*(2), 25–31. https://doi.org/10.24815/jpsi.v5i2.9812

Shanmugam, K., & Balakrishnan, B. (2019). Motivation in information communication and technology-based science learning in tamil schools. *Jurnal Pendidikan IPA Indonesia*, *8*(1), 141–152. https://doi.org/10.15294/jpii.v8i1.16564

Shufa, F., & Khusna, N. (2018). Pembelajaran Berbasis Kearifan Lokal Di Sekolah Dasar : Sebuah Kerangka Konseptual. *Jurnal Ilmiah Kependidikan*, *1*(1), 48–53. https://doi.org/10.24176/jino.v1i1.2316

Singha, R., & Singha, S. (2024). *Application of Experiential, Inquiry-Based, Problem-Based, and Project-Based Learning in Sustainable Education* (pp. 109–128). https://doi.org/10.4018/978-1-6684-9859-0.ch006

Sobiatin, E., Tibrani, M., Aznam, N., Saputra, A. T., & Fatharani, M. (2020). The Integration of Palembang's Local Potential in Natural Science Learning Materials. *Journal of Physics: Conference Series*, *1440*(012106), 1–13. https://doi.org/10.1088/1742-6596/1440/1/012106

Jurnal Ilmiah WUNY, Vol 8, No 2 (2026)
Available online at:
http://journal.uny.ac.id/index.php/wuny
DOI: https://doi.org/10.21831/jwuny.v8i2.89450
Online ISSN : 2747-0547 Print ISSN : 0126-3854

Tholibon, D. A., Md Nujid, M., Mokhtar, H., Abd Rahim, J., Rashid, S. S., Saadon, A., Tholibon, D., & Salam, R. (2022). The factors of students' involvement on student-centered learning method. *International Journal of Evaluation and Research in Education (IJERE)*, *11*(4), 1637. https://doi.org/10.11591/ijere.v11i4.22314

Triarisanti, R., & Purnawarman, P. (2019). the Influence of Interest and Motivation on College Students' Language and Art Appreciation Learning Outcomes. *International Journal of Education*, *11*(2), 130. https://doi.org/10.17509/ije.v11i2.14745

Tyas, R. A., Pujianto, P., & Suyanta, S. (2021). Caring for Labuhan Merapi Tradition, One of The Local Wisdom-Based Disaster Risk Reduction Efforts. *Komunitas*, *13*(1). https://doi.org/10.15294/komunitas.v13i1.26335

Wilujeng, I., Prasetyo, Z. P., & Suryadarma, I. G. P. (2018). Integrating Local Wisdom in Natural Science Learning. *1st International Conference of Innovation in Education*, *178*, 182–186. https://doi.org/10.2991/icoie-18.2019.42

Wilujeng, I., Purwasih, D., Hastuti, P. W., Tyas, R. A., Susilowati, S., Widowati, A., Sulistyowati, A., Rahimmiditya, K. K., & Zakwandi, R. (2024). Reconstruct Local Potential as Learning Resources to Support Science Learning. *KnE Social Sciences*. https://doi.org/10.18502/kss.v9i19.16543

Wilujeng, I., Zuhdan Kun, P., & Suryadarma, I. G. P. (2017). Science learning based on local potential: Overview of the nature of science (NoS) achieved. *AIP Conference Proceedings*, *1868*. https://doi.org/10.1063/1.4995189

Wulandari, N., & Sholihin, H. (2019). Analisis Kemampuan Literasi Sains Pada Aspek Pengetahuan Dan Kompetensi Sains Siswa Smp Pada Materi Kalor. *Edusains*, *3*(2), 58–66.

Zhang, Q., Yu, L., & Yu, Z. (2021). A Content Analysis and Meta-Analysis on the Effects of Classcraft on Gamification Learning Experiences in terms of Learning Achievement and Motivation. *Education Research International*, *2021*, 1–21. https://doi.org/10.1155/2021/9429112