

| | | |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| P-ISSN: 2722 - 7138 E-ISSN: 2722 - 7154 | JSP: JURNAL SOCIAL PEDAGOGY (Journal of Social Science Education) Available online : https://e-journal.metrouniv.ac.id/index.php/social-pedagogy | Vol. 7, No.1, January–June 2026 Pages: 11 - 20 |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|

Utilization of Liveworksheet-Based Interactive Student Worksheets to Increase Student Engagement in Social Studies Learning

Khoirun Najmi Septiana^{1*}, Meri Herlina², Rahmad Hidayat³

^{1,2}University of Lampung, Jl. Prof. Dr. Ir. Sumantri Brojonegoro, Bandar Lampung City, Lampung

³State University of Jakarta, Jl. R.Mangun Muka Raya No.11, RT.11/RW.14, Jakarta

^{1*}k.najmi6994@gmail.com, ²meriherlina@fkip.unila.ac.id, rahmad.³hidayat@unj.ac.id

Received: 20 October 2025; Revised: 9 January 2026; Approved: 18 March 2026

Permalink/DOI: <http://dx.doi.org/10.32332/social-pedagogy.v7i1.11702>

Abstract: *This study aims to enhance student engagement in the social studies learning process by utilising interactive worksheets based on Liveworksheet. This study is motivated by the low level of student engagement in social studies lessons, characterised by a decline in students' activity, enthusiasm, participation, and critical thinking skills during the teaching and learning process. This study employs a quantitative descriptive research design. Sampling was conducted using the Purposive Sampling technique, resulting in Year 7 being selected as the sample class. Data collection techniques included observation of student engagement during the learning process and documentation. Data analysis utilised quantitative descriptive analysis using average percentages. The results of the study indicate that in the first session, student engagement was in the 'fair' category at 76% and improved to the 'good' category in the second session, reaching 84%. Students became more active in asking questions, completed tasks on time, and demonstrated higher levels of participation and interest throughout the learning process in the classroom. Consequently, it can be concluded that the use of interactive worksheets based on Liveworksheets is effective in enhancing student engagement in Social Studies lessons.*

Keywords: *Interactive Student Worksheet; Liveworksheet; Student Involvement; Social Studies*

Abstrak: Penelitian ini bertujuan untuk meningkatkan keterlibatan siswa dalam proses pembelajaran IPS dengan memanfaatkan LKPD interaktif berbasis Liveworksheet. Penelitian ini didasari oleh rendahnya keterlibatan siswa dalam pembelajaran IPS di kelas, yang ditandai dengan menurunnya keaktifan, antusiasme, partisipasi, serta kemampuan berpikir kritis siswa selama proses belajar mengajar. Penelitian ini menggunakan penelitian deskriptif kuantitatif. Pengambilan sampel menggunakan teknik Purposive Sampling, sehingga diperoleh Kelas VII sebagai kelas sampel. Adapun teknik pengumpulan data berupa observasi keterlibatan siswa selama proses pembelajaran dan dokumentasi. Analisis data menggunakan analisis deskriptif kuantitatif menggunakan persentase rata-rata. Hasil penelitian menunjukkan pada pertemuan pertama keterlibatan siswa berada pada kategori cukup sebesar 76% dan meningkat menjadi kategori baik pada pertemuan kedua menjadi 84%. Siswa menjadi lebih aktif bertanya, mengerjakan tugas dengan tepat waktu, serta menunjukkan partisipasi dan minat yang lebih tinggi selama proses pembelajaran berlangsung di kelas. Dengan demikian, dapat disimpulkan bahwa penggunaan LKPD interaktif berbasis Liveworksheets mampu secara efektif dalam meningkatkan keterlibatan siswa dalam pembelajaran IPS.

Kata Kunci: *LKPD Interaktif; Liveworksheet; Keterlibatan Siswa; IPS*

INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual religious strength, self-control, personality, intelligence, noble morals, and the skills needed by themselves, society, the nation and the state (Depdiknas, 2003). Based on this understanding, it shows that in education, especially the learning process, students are expected to be actively involved so that educational goals can be realized.

However, in reality there are still many students who are not actively involved during the learning process, especially after the implementation of distance learning (online). Even though face-to-face learning has long returned to normal, the effect of online learning has made student involvement in the learning process decrease (Gusrina et al., 2021). This condition is reinforced by research conducted by Triyaningsih & Ferosa (2023) where the results of their research showed that online learning that is too long causes students to feel bored, passive, and lack focus, especially due to a lack of collaborative activities in interactions with teachers and peers. In fact, students experience boredom, resulting in a loss of motivation in learning. The transition back to face-to-face learning has also presented challenges for both teachers and pupils to adapt.

The loss of basic knowledge and skills has become a major issue due to unequal access to the internet, devices and parental support during distance learning, particularly in remote areas (Jojo & Sihotang, 2022; Liovas et al., 2024). In Indonesia, this is exacerbated by high dropout rates and a rigid curriculum, leading to long-term learning achievement gaps. Students often experience anxiety, social isolation, and fatigue from a lack of face-to-face interaction, compounded by the stress of adapting to new post-pandemic routines (Saputra & Karsiwan, 2024). Teachers are less proactive in innovation, whilst students struggle to focus after becoming accustomed to unstructured learning at home. National assessments to map learning loss, hybrid teacher training, and flexible curricula are recommended, supported by government funding for devices and digital platforms. Models such as differentiated project-based learning are effective in restoring students' motivation and skills (Hamdayama, 2014; Pribadi, 2009). Collaboration between teachers, parents, and educational psychologists is crucial for holistic mental support.

This hall is filled with students who tend to use gadgets more often for entertainment than for learning activities, which has a significant impact on social behavior and a lower potential for involvement in school activities (Aswandi et al., 2023). And if it continues to be allowed to continue, it will have an impact on the low learning outcomes of students at school. This problem also occurs in Lubuk Pandan Junior High School, where student involvement is still quite minimal, where students are allowed to use gadgets in the form of tablets that are not used for the learning process but are only used for playing games, playing games, and doing other tasks, so it is necessary for students who directly use the tablet to be an interactive learning medium. Student involvement itself is an active participation, motivation, and student behavior in the learning process, which includes behavior, emotional, and cognitive aspects, thus reflecting the commitment and responsibility of students in the learning process (Fredricks et al., 2004; Reschly & Christenson, 2022). Based on the understanding according to these experts, it can be concluded that students' involvement in the learning process can be seen through three aspects, namely behavioral involvement, emotional involvement and cognitive involvement.

One of the steps taken to increase student involvement during the learning process is the use of digital learning media, namely the use of interactive student worksheets based on Liveworksheet. An interactive student worksheet is chosen because it is an interactive learning media, so that it can increase student involvement in the learning process. Interactive learning media is a medium that actively involves students in the learning process by providing opportunities to provide responses and direct feedback to the learning process (Arsyad, 2019). The use of interactive worksheets based on Liveworksheet in social studies lessons effectively improves pupils' learning outcomes through interactive elements such as quizzes and drag-and-drop exercises, which make the material more engaging (Karsiwan et al., 2023; Nurohmah et al., 2023). This platform supports online or hybrid learning, particularly for social studies topics such as the declaration of independence or economic activities, right through to geography.

In the post-pandemic digital era, conventional worksheets lack interactivity, making the use of Liveworksheet imperative to address low student motivation, participation and interest in learning, as well as stagnant social studies learning outcomes. The urgency is particularly high in primary and secondary schools with limited internet access, as this medium is paperless, time-efficient and enhances active student participation.

According to previous research, interactive student worksheets based on Liveworksheets can increase student engagement, motivation, and learning outcomes. This is due to the characteristics of interactive student worksheets, which are interactive, flexible, and allow teachers to provide direct feedback to students (Handayani et al., 2023; Amalia et al., 2022; Yulismar, 2023; Widiantho et al., 2023; Nurtanto & Suneki, 2024). The Liveworksheet digital platform was chosen because it is easy to use, facilitates access for students and teachers in learning, and its attractive visual displays provide additional motivation to students in the learning process in class (Parwatha et al., 2025). Thus, this research will focus on increasing student involvement in the social studies learning process by memorizing an interactive student worksheet based on Liveworksheet.

METHOD

This study uses a qualitative approach with a descriptive research type to determine the level of student involvement in social studies learning after memorizing interactive student worksheets through the Liveworksheet platform (Sugiyono, 2018). This study was carried out at Lubuk Pandan Junior High School. The research was carried out in the first semester of the 2024/2025 academic year, with two meetings in April 2025.

The research sample was determined using purposive sampling technique, namely the selection of samples based on certain considerations. The sample selected was class VII, with a total of 30 students. The measured variable was student involvement in social studies learning using an interactive student worksheet based on Liveworksheet. Student involvement was measured based on three aspects (Fredricks et al., 2004): (1) Behavioral engagement, (2) Emotional engagement, and (3) Cognitive engagement. The data collection techniques are in the form of observation of student involvement during the learning process and documentation. The analytical techniques of qualitative descriptive research are in the form of calculations of ratios and percentages, using the formula proposed by Sudijono, (2011) namely:

$$P = \frac{f}{n} \times 100\%$$

Description: f = student engagement indicator
 n = number of students
 P = percentage of questions

Table 1. Grid of Aspects and Indicators of Student Engagement

| No | Aspects | Observed indicators |
|----|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Behavioral Engagement | 1) Students actively open and access the interactive worksheet on Liveworksheet. 2) Students work on the worksheet independently. 3) Students follow the teacher's instructions well during the activity. 4) Students complete the interactive worksheet on time. 5) Students comply with the rules during the learning process. |
| 2 | Behavioral Engagement | 1) Students showed enjoyment while working on the interactive worksheet. 2) Students enjoyed learning activities using Liveworksheet. 3) Students were enthusiastic when receiving feedback from the teacher or the Liveworksheet system. 4) Students showed high interest in the material. 5) Students showed high curiosity about the content of the worksheet.. |
| 3 | Cognitive Engagement | 1) Students strive to understand the social studies material contained in the interactive worksheet. 2) Students ask questions related to the material. 3) Students demonstrate critical thinking skills while working on the worksheet. 4) Students develop strategies and can complete the worksheet. 5) Students can re-explain the material they have learned. |

RESULTS AND DISCUSSION

Results

The research conducted in the sample class yielded data on student engagement. This data was obtained through observations made by an observer throughout the research process. The study was carried out in two sessions using Liveworksheets-based interactive student worksheets, which could be accessed via smartphones. Students used these devices as a supporting medium in the classroom learning process. This was done so that, during the research, the researcher could facilitate student access to the worksheets, thereby making the research subjects easier to observe and assess. The following is the distribution of student engagement during the initial session using Liveworksheets-based interactive student worksheets for the introductory session of the Social Studies subject in Year 7 of lower secondary school, based on aspects and indicators

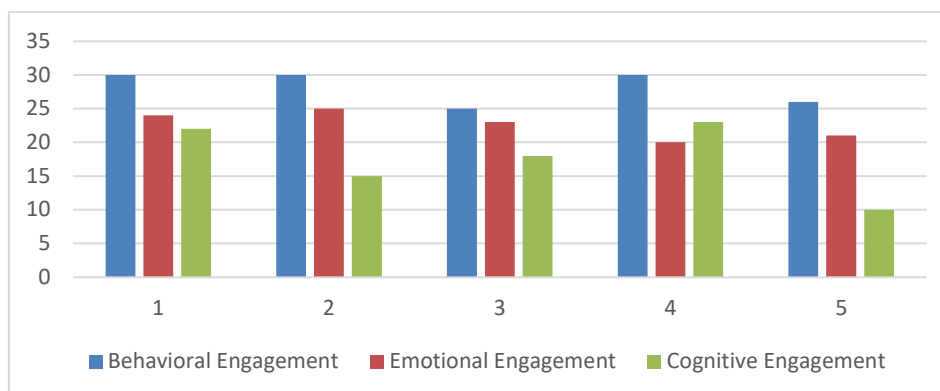


Figure 1. Distribution of student involvement in meeting I

At the start of this first session, it was evident that the students' behavioural engagement had shifted. Initially, it appeared that almost all indicators of behavioural engagement were met; however, cognitive engagement was still limited amongst students who were not actively involved. A lack of motivation and interest in completing the tasks was the main cause, with students finding the material difficult to understand or irrelevant to their daily lives (Fitriani et al., 2023; Lubis et al., 2022). Based on initial experience, the low level of student engagement, particularly cognitive engagement, was due to students using these Liveworksheet-based worksheets for the first time; consequently, many were confused whilst working on them and were therefore not fully focused on understanding the material provided.

Next, the following is the distribution of student involvement in the initial meeting using an interactive student worksheet based on the initial Liveworksheet for Social Studies in Junior High School at Class VII based on aspects and indicators:

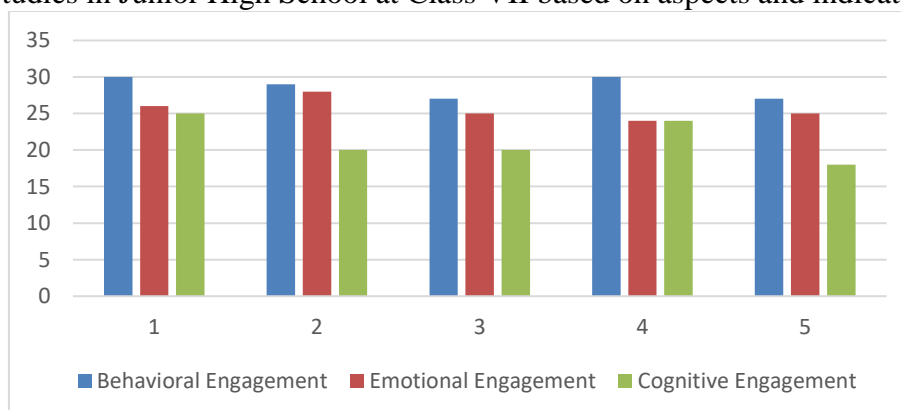


Figure 2. Distribution of student involvement in meeting II based on aspects and indicators

Table 2 shows the main thing in this second meeting, namely the aspect of student involvement, behavioral, emotional, and cognitive feedback, where students are actively involved in the learning process. This may be because students have started to understand the language using an interactive student worksheet based on Liveworksheets, so that they no longer focus on the learning process but also on the content of the student worksheet itself. This can be seen from the main aspect of cognitive involvement, where students have already discussed the material and are able to convey the material back. Student engagement in learning can be influenced by internal factors such as students' learning styles and motivation, which affect the level

of engagement, whilst external factors include teachers' teaching methods and school facilities (Bustami et al., 2023; Widiyani & Karsiwan, 2024). In the Indonesian context, low participation is often caused by limited resources and a lack of teacher-student interaction. Given that student participation in learning is crucial to the success of the learning process, as it encourages active engagement, critical thinking, and better academic achievement.

Based on the analysis of the involvement of students throughout the learning process, the following percentages were obtained:

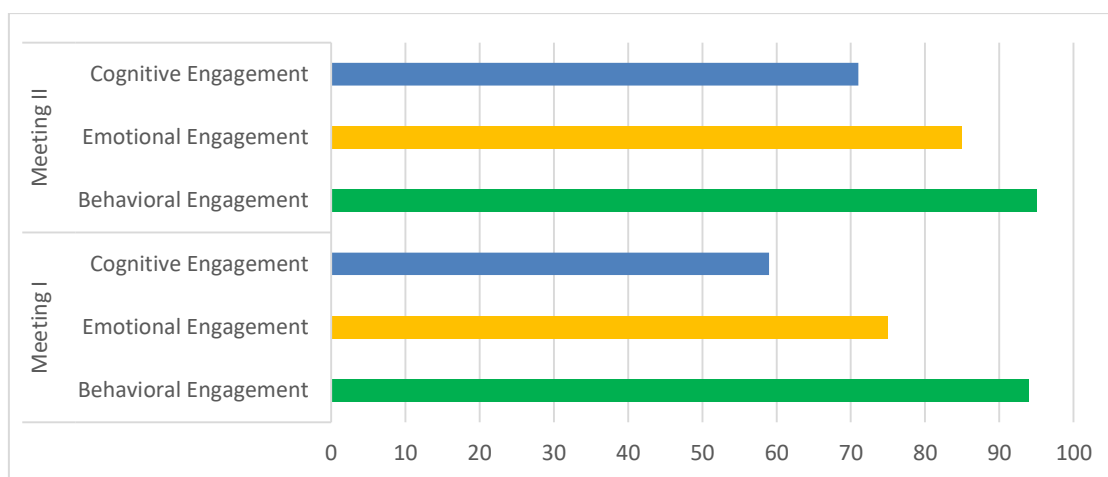


Figure 3. Average percentage of student engagement based on three aspects

Based on the table, it was seen that the behavioral involvement of the first meeting was 94%, and the second meeting was 95%. The emotional involvement was seen that the student involvement was 75% in the first meeting and increased to 85% in the second meeting, and the cognitive involvement was 59% in the second meeting and increased significantly to 71%. Thus, the overall level of student engagement after using an interactive student worksheet based on Liveworksheet is 80%, which means that student engagement is included in the high category.

Discussion

Observation results show that the involvement of social studies students after using an interactive student worksheet based on Liveworksheet is in the high category (80%), with details of behavioral involvement aspects of 95%, emotional involvement of 80%, and cognitive involvement of 65%. This is in line with previous research that shows that interactive digital media can increase student involvement in the learning process, one of which is by using the Liveworksheet platform (Firdausia & Nasol, 2025).

The following is a more detailed explanation of the three aspects of student involvement: Behavioral aspects, such as students actively accessing, working on, and completing the student worksheet, then following teacher instructions and obeying the rules throughout the learning process, which are in the high category. This is also reinforced by the findings of the interactive student worksheet, which are designed interactively to facilitate students' independent and cooperative activities (Fadillah et al., 2025). By using Liveworksheet, students gain direct access, more valid instructions, and more flexible interactions, so that their overall behavioral involvement increases.

The emotional aspect is included in the high category (80%). This shows that the use of interactive student worksheets through Liveworksheets has succeeded in increasing students' emotional involvement in social studies learning. This is consistent with research that found that digital learning media that attract visuals and interactions can increase students' motivation and emotional involvement (Octavia et al., 2025). This is also in line with Sardiman's (2020) view, which puts forward the issue of learning motivation in developing students' initial motivation to enjoy and be interested in the media used in learning. Supporting factors such as ease of access, interactive media skills, and direct responses from the system become the main drivers of high emotional involvement.

Although the cognitive score was slightly lower than the other aspects (65%), it was still in the high category. This means that students are not only active in academics, but also try to understand mathematics, think critically, and relate learning to everyday life. Research on the development of the E-Student Worksheet based on Liveworksheets shows that this media is effective in improving critical thinking skills. (Yanti & Mawardi, 2024). This is also in line with the constructivist learning theory, as explained by Purwanto (2019), which states that cognitive development develops when students actively build knowledge through practical learning activities. Thus, interactive student worksheets play an important role in improving the quality of students' cognitive engagement.

These three aspects of engagement are multidimensional. High levels of emotional engagement have the potential to encourage students to participate actively in learning activities, which in turn opens up opportunities for deeper cognitive engagement (Yulfiani & Karsiwan, 2025). High levels of emotional engagement among students can indeed trigger active participation in learning, which subsequently paves the way for deeper cognitive engagement through critical thinking and reflection (Nuaedah, 2023). When students feel enthusiastic—for example, through relevant stories or interactive activities—they are more likely to participate actively, such as by asking questions, engaging in discussions, or working on group tasks. This creates a positive cycle: active participation reinforces positive emotions, which in turn enhances overall learning motivation.

Active engagement opens up cognitive opportunities such as deep thinking strategies, analysis of material, and problem-solving, as seen in the use of worksheets that integrate knowledge with student participation through critical reflection. Research findings indicate that this integration not only improves academic outcomes but also reduces misconceptions and learning stress. This aligns with findings that intensive use of digital tools is positively correlated with student engagement in learning (Hardiyanti et al., 2023).

Previous literature indicates that several factors support the successful use of interactive student worksheets through Liveworksheet, such as the availability of adequate devices and internet connections (Fadillah et al., 2025), teachers' ability to design and facilitate digital media (Silalahi & Suyanti, 2023), interactive and user-friendly student worksheet design (Yanti & Mawardi, 2024). Research in Bengkulu, for example, shows that infrastructure factors and teacher skills are still obstacles to the implementation of Liveworksheets (Susanti et al., 2025). These constraints need to be considered in the interpretation of this research so that the application of digital media in social studies learning can run more optimally. However, overall, an interactive student worksheet based on Liveworksheet is considered a tool to become one of the

learning media in the class, especially in social studies learning. This media is also relevant to the characteristics of digital generalizations that require flexible, visual, and interactive learning (Fitriyani et al., 2025).

CONCLUSION

The overall observation results show that the implementation of interactive student worksheets increases student involvement throughout the learning process. This is proven by the overall percentage of student involvement of 80%, which is in the high category. The calculation of the percentage of students shows that the peak of behavioral involvement is 95% in the high category, then the peak of emotional involvement shows that 80% is in the high category, and the peak of cognitive involvement is 65% in the high category. The difference in the level of involvement is clearly a reflection of the characteristics of the learning process being implemented. The high level of student engagement indicates that the learning process has successfully encouraged students to actively participate in activities, be actively involved in learning, and work on assignments in real-time. Thus, Liveworksheet is an interactive and effective digital learning media alternative in increasing student engagement in the classroom, especially in social studies learning.

REFERENCES

- Amalia, I. N. F., Roesminingsih, M. V., & Yani, M. T. (2022). *Pengembangan LKPD Interaktif Berbasis Liveworksheet untuk Meningkatkan Hasil Belajar IPS Sekolah Dasar*. 6(5), 8154–8162.
- Arsyad, A. (2019). *Media Pembelajaran*. Rajagrafindo Persada.
- Aswandi, R., Iskandar, I., & Burchanuddin, A. (2023). Penggunaan Gadget di Kalangan Siswa (Studi Kasus Perilaku Sosial pada Siswa SD Negeri Mawas Kota Makassar). *Jurnal Sosiologi Kontemporer*, 3(1), 09–16.
- Bustami, A., Suwindri, I., & K Karsiwan. (2023). *Merancang Pembelajaran IPS berbasis PJBL dengan tema sejarah lokal dan Cagar Budaya* (1st ed.). CV. Laduny Alifatama.
- Depdiknas. (2003). *Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional*. <https://doi.org/10.24967/ekombis.v2i1.48>
- Fadillah, M. A., Usmeldi, Festiyed, Lufri, & Maward. (2025). *Assessment of Teaching Strategies, Utilization of Student Worksheets, and Student Engagement in Science Education Muhammad Aizri Fadillah * , Usmeldi, Festiyed, Lufri, Mawardi, Department of Science Education, Universitas Negeri Padang, Padang, Indonesia*. 8(January), 198–207.
- Firdausia, A., & Nasol, M. F. (2025). *The Utilization of Interactive Digital Media to Increase Learning Interest of Elementary School Students in Merdeka Curriculum Era*. 6(2), 223–244.
- Fitriani, F., Iza, R., Fikri, M., & Fatimah, F. (2023). Desain Modul Ajar Berdiferensiasi Menggunakan Model PBL dalam Meningkatkan Hasil Belajar Peserta Didik SMP Negeri 3 Peusangan. *JEMAS : Jurnal Edukasi Matematika Dan Sains*, 4(2), 54–62.
- Fitriyani, S., Sintia, S. A., & Fakhri, M. C. (2025). *Interactive Teaching Material Development Model to Improve Personalized Learning Generation Model Pengembangan Materi Pengajaran Interaktif Untuk*. 19006–19018.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential

- of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- Gusrina, A., Sihombing, H. R. S., Sitompul, U. H., & Nasution, I. (2021). Analisis Keterlibatan Belajar Siswa Secara Online. *COMSERVA Indonesian Journal of Community Services and Development*, 1(7), 261–271. <https://doi.org/10.59141/comserva.v1i7.46>
- Hamdayama, J. (2014). *Model dan Metode Pembelajaran Kreatif dan Berkarakter*. Ghalia Indonesia.
- Handayani, T., Rahmandani, F., & Muzzaki, A. (2023). *JINoP (Jurnal Inovasi Pembelajaran)*. 9, 31–43.
- Jojo, A., & Sihotang, H. (2022). Analisis Kurikulum Merdeka dalam Mengatasi Learning Loss di Masa Pandemi Covid-19 (Analisis Studi Kasus Kebijakan Pendidikan). *Edukatif: Jurnal Ilmu Pendidikan*, 4(4), 5150–5161. <https://doi.org/10.31004/edukatif.v4i4.3106>
- Karsiwan, K., Wardani, W., Lisdiana, A., Purwasih, A., Hamer, W., & Retno Sari, L. (2023). Sosialisasi Materi Kearifan Lokal Dalam Kurikulum Merdeka Pada Mata Pelajaran IPS Bagi Guru di Kota Metro Lampung. *Malaqbiq: Jurnal Pengabdian Kepada Masyarakat*, 2(1), 12–22. <https://doi.org/10.46870/jam.v2i1.513>
- Liovas, D., Kolokotronis, D., Liakos, I., & Stathopoulos, K. (2024). Green Pedagogy: Environmental and Outdoor Education in the Context of a Holistic Approach to Learning. *International Journal of Educational Innovation*, 6(5), 113–116. <https://doi.org/10.69685/AAPW6038>
- Lubis, M., Siregar, H. S., & Sormin, S. (2022). Pengembangan E-Modul Berbasis Kearifan Lokal Adat Dalihan Natolu pada Mata Kuliah Sejarah Lokal. *Edukatif Jurnal Ilmu Pendidikan*, 4(5), 7231–7240. <https://doi.org/10.31004/edukatif.v4i5.3977>
- Nuaedah. (2023). Between Women , Throne , and Power: Religious Transformation in Kagaua Palu, 1600-1904. *Paramita: Historical Studies Journal*, 33(1), 86–96. <https://doi.org/10.15294/paramita.v33i1.39109>
- Nurohmah, A. N., Kartini, D., & Rustini, T. (2023). Relevansi Kebijakan Kurikulum Merdeka Dengan Pendidikan Abad 21 Pada Pembelajaran IPS di SD. *Jurnal Ilmiah Wahana Pendidikan*, 9(3), 24–35.
- Nurtanto, Y., & Suneki, S. (2024). *Penggunaan Lembar Kerja Peserta Didik (LKPD) Berbasis Software Liveworksheet Untuk Meningkatkan Hasil Belajar Peserta Didik*. 10(02), 1479–1493.
- Octavia, A. S., Iswahyudi, D., & Yulianti. (2025). *Pengaruh Penggunaan Lembar Kerja Peserta Didik (Lkpd) Berbasis Websiteliveworksheetterhadap Motivasi Belajar Pendidikan Pancasila*. 10(03), 85–106.
- Parwatha, P. M., Sudarma, I. K., Warpala, I. W. S., Pendidikan, S. T., & Ganesha, U. P. (2025). *Pengaruh Model Project Based Learning Berbantuan Liveworksheet Terhadap Kemampuan*. 15, 8–11.
- Pribadi, B. A. (2009). *Model-Model Desain Sistem Pembelajaran*. UPI.
- Purwanto, M. N. (2019). *Prinsip-prinsip dan Teknik Evaluasi Pengajaran*. Remaja Rosdakarya.
- Reschly, A. L., & Christenson, S. L. (2022). Handbook of Research on Student Engagement: Second Edition. In *Handbook of Research on Student Engagement: Second Edition* (Issue November). <https://doi.org/10.1007/978-3-031-07853-8>
- Saputra, B. R., & Karsiwan, K. (2024). Analisis Perilaku Sosial Siswa Berlandaskan

- Perspektif Teori Bandura. *Sosial Horizon: Jurnal Pendidikan Sosial*, 11(3), 403–415. <https://doi.org/10.31571/sosial.v11i3.8145>
- Sardiman, A. M. (2020). *Interaksi dan Motivasi Belajar Mengajar*. Rajawali Pers.
- Silalahi, S., & Suyanti, R. D. (2023). *Development of Digital Student Worksheets Based on Inquiry Training Assisted by Live Worksheet*. <https://doi.org/10.4108/eai.19-9-2023.2340545>
- Sudijono, A. (2011). *Pengantar Evaluasi Pendidikan*. PT RajaGrafindo Persada.
- Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Susanti, E., Aisyah, N., Silaen, E. O., & Sriwijaya, U. (2025). *Developing STEM-Based Digital Worksheet to Encourage Students ' Problem-Solving Skills Problem-solving has become a fundamental competency that all students must develop in the 21st century . Education today is not limited to transmitting knowledge . Stil*. 7(2), 489–505.
- Triyaningsih, T., & Ferosa, F. N. (2023). Keterlibatan siswa dalam pembelajaran online mata pelajaran biologi pada masa pandemi. *Bio-Pedagogi*, 11(2), 91. <https://doi.org/10.20961/bio-pedagogi.v11i2.51639>
- Widiantho, Y., Virdhani, N., & Silvana, H. T. (2023). *Enhancing Learning with Liveworksheet : Perceptions , Advantages , Disadvantages , and Impacts*. 4(3), 42–49.
- Widiyani, P. N., & Karsiwan, K. (2024). Efektivitas Model Pembelajaran Problem Based Learning terhadap Kepekaan Sosial Siswa pada Pembelajaran IPS Kelas VIII MTs Nurul Iman. *IJTIMAIYA: Journal of Social Science Teaching*, 8(2), 16–24.
- Yanti, A. R., & Mawardi, A. C. (2024). The Development of Electronic-based Student Worksheets to Facilitate the Critical Thinking Skills of Tenth Graders. *Impulse: Journal of Research and Innovation in Physics Education*, 3(1), 31–38. <https://doi.org/10.14421/impulse.2023.31-04>
- Yulfiani, N., & Karsiwan, K. (2025). Penguatan Karakter Peduli Lingkungan melalui Program Budaya Positif Era Gen Alpha di SMP Negeri 4 Metro. *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)*, 5(4), 2160–2174. <https://doi.org/doi.org/10.53299/jppi.v5i4.2795>
- Yulismar, R. N. (2023). *Pemanfaatan Lembar Kerja Peserta Didik Berbasis Aplikasi Liveworksheet Sebagai Upaya Meningkatkan Keaktifan dan Prestasi Belajar*. 10(2), 93–103. <https://doi.org/10.31629/kiprah.v10i2.5055>



Social Pedagogy: Journal of Social Science Education

Published by: Fakultas Tarbiyah dan Ilmu Keguruan IAIN Metro

E-ISSN: 2722-7154

P-ISSN: 2722-7138

Social Pedagogy : Journal Of Social Science Education work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)