Jurnal Ilmiah Pendidikan Citra Bakti

p-ISSN 2355-5106 || e-ISSN 2620-6641

https://jurnal.citrabakti.ac.id/index.php/jil

IMPROVING STUDENT LEARNING ACTIVENESS AND ECONOMICS LEARNING OUTCOMES THROUGH DISCOVERY LEARNING SUPPORTED BY STUDENT WORKSHEETS

Indria Purnama Afandi[1)], Efa Wahyu Prastyaningtyas[2)], dan Elis Irmayanti[3)]

Program Studi Pendidikan Ekonomi, Universitas Nusantara PGRI Kediri
Corresponding author email: indriapurnamaafandi@gmail.com

Article History

Received:
June 20, 2026

Accepted:
July 20, 2026

Published:
August 30, 2026

Abstract

This study aimed to improve students learning activeness and This study aimed to improve students learning activeness and economics learning outcomes through the implementation of the Discovery Learning model supported by student worksheets in economics learning. This study employed Classroom Action Research based on the Kemmis and McTaggart model, consisting of planning, action, observation, and reflection stages conducted in two cycles. The subjects of this study were 35 students of Grade XI-Social 5 at SMAN 1 Papar. Data were collected through observation, learning outcome tests, and documentation. Learning activeness was assessed based on students' attention, participation, and involvement during the learning process, while learning outcomes were evaluated using the Learning Objective Achievement Criteria of 78. The success criteria were set at a minimum of 75% classical mastery for learning outcomes and at least 75% of students achieving the active or very active categories for learning activeness. The results showed an improvement in learning outcomes, with classical mastery increasing from 46% in the pre-cycle to 69% in Cycle I and 83% in Cycle II. Students learning activeness also increased from 63% in Cycle I to 86% in Cycle II. The findings indicate that structured learning activities through the implementation of the Discovery Learning model supported by student worksheets were effective in improving students learning activeness and learning outcomes in economics.

Keywords: discovery learning, student worksheets, learning activeness, learning outcomes, economics education

Abstrak. Penelitian ini bertujuan untuk meningkatkan keaktifan belajar dan hasil belajar ekonomi siswa melalui penerapan model *discovery learning* berbantuan LKPD (Lembar Kerja Peserta Didik) pada mata pelajaran ekonomi. Penelitian ini menggunakan PTK (Penelitian Tindakan Kelas) berdasarkan model *Kemmis and McTaggart* yang terdiri atas tahap perencanaan, tindakan, observasi, dan refleksi yang dilaksanakan dalam dua siklus. Subjek penelitian ini berjumlah 35 siswa kelas XI-Social 5 di SMAN 1 Papar. Data dikumpulkan melalui observasi, tes hasil belajar, dan dokumentasi. Keaktifan belajar dinilai berdasarkan perhatian, partisipasi, dan keterlibatan siswa selama proses pembelajaran, sedangkan hasil belajar dievaluasi menggunakan KKTP (Kriteria Ketercapaian Tujuan Pembelajaran) sebesar 78. Indikator keberhasilan ditetapkan berupa minimal 75% ketuntasan klasikal untuk hasil belajar dan minimal 75% siswa mencapai kategori aktif atau sangat aktif untuk keaktifan belajar. Hasil penelitian menunjukkan adanya peningkatan hasil belajar, dengan ketuntasan klasikal meningkat dari 46% pada pra-siklus menjadi 69% pada siklus I dan 83% pada siklus II. Keaktifan belajar siswa juga meningkat dari 63% pada siklus I menjadi 86% pada siklus II. Temuan penelitian menunjukkan bahwa aktivitas pembelajaran yang terstruktur melalui penerapan model *discovery learning* berbantuan LKPD (Lembar Kerja Peserta Didik) efektif dalam meningkatkan keaktifan dan hasil belajar siswa pada mata pelajaran ekonomi.

Kata Kunci: *Discovery Learning*, LKPD (Lembar Kerja Peserta Didik), Keaktifan Belajar, Hasil Belajar, Pendidikan Ekonomi

Introduction

Education plays a crucial role in improving the quality of human resources so that they are able to adapt to the rapid development of science and modern technology (Kurnia & Sari, 2026). The relevance of improving the quality of education is also reflected in the SDGs (Sustainable Development Goals), particularly Goal 4, which focuses on ensuring equitable access to quality, inclusive, and equitable education for all members of society (Safitri et al., 2022). To achieve this goal, teachers need to create learning environments that are not only oriented toward academic achievement but also encourage student engagement in the learning process (Tampubolon et al., 2022). Student engagement in learning can be reflected in students learning activeness throughout the learning process.

Learning activeness refers to students physical and mental involvement in learning activities, such as asking questions, participating in discussions, expressing opinions, seeking information, and completing assigned tasks. High levels of learning activeness indicate that students participate in constructing their own understanding, making learning more meaningful (Wahab et al., 2022). Consistent with this view (Tutal & Yazar, 2023) stated that active learning can have a positive impact on academic achievement and the quality of learning. Conversely, low levels of learning activeness can hinder students understanding of the learning material (Ni'mah & Kusmaryono, 2025). Such meaningful learning experiences can ultimately contribute to the optimization of students learning outcomes.

Learning outcomes are indicators of students mastery of competencies after participating in the learning process (Marliah & Kumar, 2025). Learning outcomes are influenced by various factors, one of which is student engagement during the learning process

(Akhmad et al., 2023). Active students tend to demonstrate better understanding than students who passively receive information (Yandi et al., 2023). Therefore, learning activeness and learning outcomes are interrelated in determining the success of the learning process (Kamaruddin et al., 2023). This relationship is particularly important in learning that requires students to develop conceptual understanding and analytical skills, such as economics education.

Economics education is a learning process aimed at equipping students with an understanding of various economic concepts, principles, and phenomena encountered in everyday life (Hutasuhut et al., 2025). It requires not only mastery of concepts but also the ability to analyze various economic problems logically and critically. Therefore, economics learning needs to provide students with opportunities to actively engage in understanding concepts, processing information, expressing opinions, and constructing their understanding independently. Initial observations in Class XI-Social 5 at SMAN 1 Papar indicated that learning was still dominated by lecture-based instruction, resulting in limited student activeness during the learning process. This condition was reflected in the students low learning outcomes, with only 16 out of 35 students (46%) achieving the required level of mastery, while the remaining 19 students (54%) had not yet met the Learning Objective Attainment Criteria (KKTP in Indonesia Curriculum). This condition indicates the need for a learning model that can increase student engagement while supporting the achievement of learning outcomes.

One learning model relevant to these needs is discovery learning. Discovery learning is a learning model that emphasizes students active involvement in discovering and constructing knowledge through a series of learning activities. In this process, students do not merely receive information from the teacher but are given opportunities to explore, process information, and independently discover concepts based on the problems they encounter (Sakdiyyah et al., 2022). The model is implemented through the stages of stimulation, problem identification, data collection, data processing, verification, and drawing conclusions (Syaifullah & Maulidiyah, 2024). Through these stages, students are encouraged to think critically and actively develop their understanding of the learning material. To ensure that each stage of the learning process can be carried out systematically and effectively, appropriate teaching materials are needed to support the implementation of the model (Famulaqih & Lukman, 2024). One type of teaching material that can support the implementation of discovery learning is Student Worksheets (LKPD in Indonesia Curriculum).

LKPD is a teaching material containing instructions, tasks, and activity steps that systematically assist students in achieving learning objectives (Karima et al., 2025). In addition to serving as a guide for learning activities, LKPD can also facilitate students active engagement through relevant and engaging activities, thereby encouraging them to think

critically, collaborate, and deepen their understanding of the learning material (Melenia, 2024). In the implementation of discovery learning, LKPD serves as a guide that helps students carry out each stage of the learning process in a more systematic and structured manner according to the syntax of discovery learning. Thus, the use of LKPD can support students' discovery activities while providing a structured framework that encourages their active involvement throughout the learning process.

Previous studies have shown that discovery learning and LKPD can support the learning process through their respective functions and characteristics. (Hayati, 2023) demonstrated that the implementation of discovery learning can improve students learning outcomes. Meanwhile (Andrianto & Awantagusnik, 2025) found that the use of LKPD can increase student engagement in learning. These findings indicate that discovery learning can support the achievement of learning outcomes, while LKPD can help guide student's activities and engagement during the learning process. In contrast to previous studies that have focused on the implementation of discovery learning in relation to learning outcomes and the use of LKPD in relation to student engagement, this study focuses on the implementation of discovery learning supported by LKPD to improve two aspects of learning simultaneously, namely student learning activeness and learning outcomes in economics education. Thus, this study positions LKPD as supporting teaching material that assists students in following the stages of discovery learning in a systematic and structured manner. Based on the foregoing discussion, this study aims to examine the implementation of discovery learning supported by LKPD in improving students learning activeness and learning outcomes in economics education. The study focuses on changes in student activeness during the learning process and the achievement of learning outcomes following the implementation of the model.

Method

This study employed a Classroom Action Research (CAR) method. The implementation followed the iterative cycle model developed by Kemmis and McTaggart, in which each cycle integrates four main components: planning, acting, observing, and reflecting (Utomo et al., 2024). The study implemented the discovery learning model supported by LKPD to improve students' learning activeness and learning outcomes in economics education.

The study was conducted at SMAN 1 Papar involving 35 students of Class XI-Social 5 as research participants. The class was selected based on the results of preliminary observations, which indicated that the learning process was still predominantly teacher-centered and that most students had not achieved KKTP (Learning Objective Achievement Criteria). This condition was reflected in the initial learning outcomes, in which 16 out of 35 students (46%) achieved mastery, while 19 students (54%) had not yet met KKTP. The study

was conducted after obtaining approval from SMAN 1 Papar. Data collected through student learning activeness observation sheets and learning outcome tests administered at the end of each cycle were analyzed using descriptive quantitative techniques. Data analysis was conducted separately for each variable using predetermined calculation formulas and criteria (Tahir et al., 2024).

Student learning outcomes were measured using an evaluation test consisting of 25 multiple-choice questions covering the national income topic in economics during the study and validated by the economics teacher at the school. The test was administered during the pre-cycle stage and at the end of each cycle to determine changes in students' learning achievement. Students were considered to have achieved mastery if they obtained a score of ≥78 based on KKTP. Documentation was used as supporting data throughout the research implementation.

The percentage of learning mastery was calculated using the following formula:

$$\text{Percentage} = \frac{\textit{Number of Learning Achieving Mastery}}{\textit{Total Number of Students}} \text{ X } 100\ \%$$

Source: (Wedasuwari et al., 2025)

Student learning activeness was measured using an observation sheet consisting of three indicators and 12 observed aspects adopted from (Wahab et al., 2022). The indicators used were as follows:

Table 1. Indicators of Student Learning Activeness

Indicators of Student Learning Activeness	
1. Attention During Learning Activities	(a) not making disturbances during the learning process, (b) paying attention to the teacher's explanation, (c) not engaging in activities unrelated to learning, and (d) taking notes on important learning materials.
2. Active Participation During Learning Activities	(a) having the courage to repeat unclear readings, (b) asking questions, (c) answering questions from the teacher or peers, and (d) expressing opinions during discussions.
3. Participation During Learning Activities	((a) completing assignments, (b) participating in group discussions, (c) completing tests or evaluations seriously, and (d) presenting the results of their work.

Source: (Wahab et al., 2022)

The student learning activeness observation scores were calculated using the following formula:

$$\text{Learning Activeness Percentage} = \frac{\textit{Obtained score}}{\textit{Maximum score}} \text{ X } 100\ \%$$

Source: (Jannah et al., 2025).

The following assessment criteria were used to determine the level of students' learning activeness:

Table 2. Assessment Criteria for Student Learning Activeness

Percentage Level	Score	Criteria
86 - 100%	4	Very Active
76 - 85%	3	Active
60 - 75%	2	Fairly Active
55 - 59%	1	Less Active
≤ 54%	0	Very Less Active

Source: (Wahab et al., 2022).

The success of this classroom action research was determined based on two main indicators, namely learning mastery and student learning activeness in economics. Learning mastery was evaluated periodically from the pre-cycle stage through Cycle II. The study was considered successful if at least 75% of all students achieved KKTP (Suriadi, 2023). The KKTP established for the economics subject was 78. Likewise, the success indicator for student learning activeness was achieved if at least 75% of students reached the Active and Very Active criteria (Nurmaizura et al., 2025).

Results and Discussion

Results

The pre-cycle stage was conducted to obtain an initial overview of students' learning outcomes before the intervention was implemented. Based on the preliminary observation, the learning process was still predominantly teacher-centered, resulting in suboptimal student participation in learning activities. This condition contributed to the low achievement of students' learning outcomes in economics. The learning outcome data obtained during the pre-cycle stage are presented in the following table.

Table 3. Learning Outcome Data in the Pre-Cycle

Criteria	Number Of Students	Percentage
Archieved Mastery	16	46%
Not Yet Archieved Mastery	19	54%

Based on Table 3, 16 students achieved learning mastery, representing 46%, while the remaining 19 students, or 54%, had not yet met the predetermined KKTP. These findings indicate that students' learning outcomes were still relatively low, highlighting the need for improvement through the implementation of a learning model capable of increasing student engagement in the learning process.

The implementation of Cycle I applied the discovery learning model assisted by LKPD to the national income topic. Observation of students' learning activeness was conducted simultaneously with the implementation of the intervention, followed by an assessment of learning outcomes. The data obtained from Cycle I are presented as follows.

The learning outcome assessment results for students in Cycle I are presented in the following table.

Table 3. Learning Outcome Data of Students in Cycle I

Criteria	Number of Students	Percentage
Archieved Mastery	24	69%
Not Yet Archieved Mastery	11	31%

Based on Table 4, there was an increase in the number of students achieving KKTP, with 24 students (69%) achieving learning mastery, while 11 students (31%) had not yet achieved mastery. This finding indicates that the intervention implemented in Cycle I began to have a positive impact on students' learning outcomes.

The results of the observation of students' learning activeness in Cycle I are presented in the following table.

Table 4. Results of Student Learning Activeness Observation in Cycle I

Criteria	Number of Students	Percentage
Very Active	4	11%
Active	18	52%
Fairly Active	8	23%
Less Active	5	14%

Based on Table 5, a total of 22 students (63%) were categorized as Active and Very Active, while 13 students (37%) were categorized as Fairly Active and Less Active. These findings indicate that the implementation of discovery learning assisted by LKPD had a positive impact on students' learning activeness and engagement, although the predetermined success indicator had not yet been achieved.

The data obtained in Cycle I indicate that the intervention began to have a positive impact on the learning process. Student learning mastery increased from 46% in the pre-cycle to 69% after the implementation of Cycle I. The observation results also showed that most students had demonstrated active engagement in the learning process, as indicated by 63% of students being categorized as Active and Very Active. However, this achievement had not yet met the predetermined success indicator due to several main obstacles. First, group discussions were dominated by certain students, while others remained passive. Second, the utilization of LKPD was not yet optimal because students still had difficulty distinguishing the components of the income and expenditure approaches. Third, students' confidence in presenting their findings remained low. These obstacles became the basis for improvements in the subsequent cycle.

The implementation of Cycle II focused on addressing the obstacles identified in Cycle I. First, to overcome difficulties in group discussions, clear roles were assigned so that each group member had individual responsibilities. Second, conceptual understanding was improved by optimizing the LKPD through the inclusion of visual guidance in the form of a comparison table of national income components. Third, the researcher intensified the provision of motivation and appreciation to increase students' confidence. Following the

implementation of these improvements, students' learning activeness and learning outcomes were reassessed. The data obtained in Cycle II are presented as follows.

The learning outcome assessment results for students in Cycle II are presented in the following table.

Table 5. Learning Outcome Data in Cycle II

Criteria	Number of Students	Percentage
Archieved Mastery	29	83%
Not Yet Archieved Mastery	6	17%

Based on Table 6, 29 students (83%) achieved learning mastery, while 6 students (17%) had not yet achieved the predetermined KKTP. These data indicate that the majority of students had achieved learning mastery in the national income topic.

The results of the observation of students' learning activeness in Cycle II are presented in the following table.

Table 6. Results of Student Learning Activeness Observation in Cycle II

Criteria	Number of Students	Percentage
Very Active	9	26%
Active	21	60%
Fairly Active	3	9%
Less Active	2	5%

Based on Table 7, a total of 30 students (86%) were categorized as Active and Very Active, while 5 students (14%) were categorized as Fairly Active and Less Active. These findings indicate that the majority of students actively participated throughout the learning process.

The implementation of the intervention in Cycle II produced more optimal results, with learning mastery increasing to 83% and active student engagement reaching 86%. These achievements exceeded the predetermined success indicator of 75%. This finding confirms that the discovery learning model assisted by LKPD was effective in improving students' learning activeness and learning outcomes in the national income topic. Since the predetermined target had been achieved, the study was considered successful and was not continued to the subsequent cycle.

The development of students' learning activeness and learning outcomes from the pre-cycle through Cycle I and Cycle II is visually presented below.

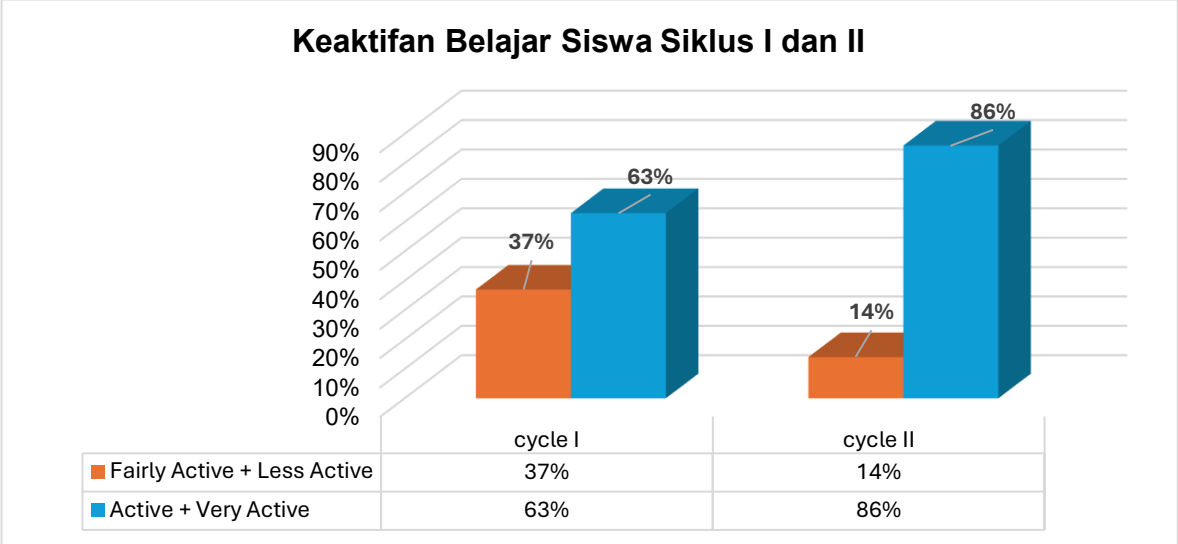

Figure 1. Comparison of Student Learning Activeness Observation Results between Cycle I and Cycle II

Based on Figure 1, there was a significant increase in the cumulative percentage of students categorized as Active and Very Active, from 63% in Cycle I to 86% at the end of Cycle II. Conversely, the proportion of students categorized as Fairly Active and Less Active decreased substantially, from 37% in Cycle I to only 14% in Cycle II.

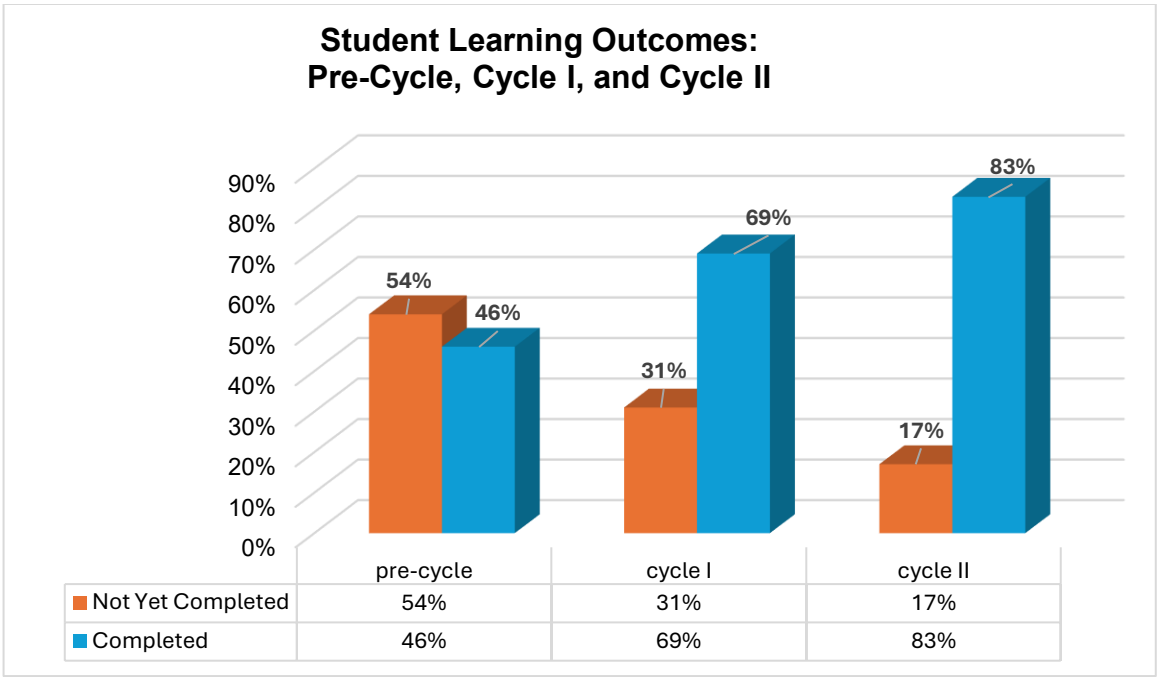

Figure 2. Comparison of Learning Mastery Results in the Pre-Cycle, Cycle I, and Cycle II

Based on Figure 2, the classical learning mastery results showed a positive and consistent upward trend. The proportion of students who achieved the predetermined mastery level increased from 46% in the pre-cycle to 69% after Cycle I, and ultimately reached 83% at the end of Cycle II, thereby exceeding the predetermined research target.

Discussion

The implementation of the discovery learning model assisted by LKPD had a positive impact on students' learning activeness and learning outcomes in the national income topic. Students' learning mastery increased from 46% in the pre-cycle to 69% in Cycle I and 83% in Cycle II. Conversely, the percentage of students who had not achieved mastery decreased from 54% to 31% and finally to 17%. Regarding learning activeness, the percentage of students classified as active and highly active increased from 63% to 86%, while the proportion of students in the moderately active and less active categories decreased from 37% to 14%. These findings indicate that the implemented intervention successfully improved the quality of the learning process. The implementation of a structured learning model contributed positively to the effectiveness of an organized and measurable learning process (Juriyah et al., 2025).

The increase in students' learning activeness can be explained from a constructivist perspective, which views knowledge not merely as something transferred from teachers to students, but as something actively constructed by students through experience and interaction with the learning environment (Nerita et al., 2023). From this perspective, students need to be directly involved in constructing knowledge by connecting new information with their prior knowledge. The implementation of discovery learning is consistent with this principle because it provides students with opportunities to discover concepts through a process of identifying problems, exploring information, processing data, discussing findings, and drawing conclusions (Weinhandl et al., 2025). These activities require students to engage both cognitively and socially throughout the learning process. Consequently, learning is no longer centered on the teacher's delivery of information but shifts toward a process in which students construct understanding through direct learning experiences. Therefore, the increase in learning activeness observed in this study can be understood as a positive consequence of the shift in students' roles from information recipients to active knowledge constructors who are directly involved in the learning process.

The increase in students' learning activeness also contributed positively to the improvement of learning outcomes. When students are directly involved in discovering concepts independently, their cognitive engagement with the learning material becomes stronger, resulting in an increase in the number of students achieving the KKTP (Amrullah et al., 2026). The learning process within discovery learning encourages students to engage in more complex cognitive activities, enabling them to develop a more meaningful understanding of the learning material. In the context of national income, this process helped students not only understand the concepts theoretically but also establish connections among various components and approaches to calculating national income through problem-solving activities. This finding is consistent with (Ledang et al., 2024) who demonstrated that the discovery

learning model was effective in improving students' learning outcomes. In addition, the use of LKPD helped students follow each stage of the learning process in a more structured manner, thereby supporting a more systematic understanding of national income concepts (Nurjihan & Bunawan, 2025).

In this study, LKPD played an important role in supporting the implementation of discovery learning because it functioned not merely as a worksheet for completing assignments but also as a scaffolding tool that provided structure and guidance throughout the learning process (Nur et al., 2026). LKPD was designed to help students follow each stage of the discovery process systematically, beginning with identifying problems, collecting information, processing data, discussing findings, and drawing conclusions. This structure helped students understand the steps that needed to be undertaken during the learning process, allowing the discovery activities to take place in a more focused and systematic manner. In the context of national income, which involves various concepts, components, and calculation approaches, LKPD helped students organize information and connect the concepts being learned with the problems presented.

Although classical learning mastery reached 83%, six students (17%) had not achieved the KKTP in Cycle II. This condition indicates that the improvement in learning outcomes did not occur evenly among all students. The lack of mastery may have been influenced by differences in students' prior abilities, levels of understanding of national income concepts, information-processing speed, and levels of engagement during the learning process. However, these factors cannot be established as definitive causes because this study did not specifically analyze the characteristics and learning difficulties of each individual student. Therefore, students who had not achieved mastery require follow-up support in the form of reinforcement of concepts that have not yet been mastered, gradual practice exercises, and more intensive and individualized guidance. Such support is expected to help students overcome learning difficulties and achieve mastery in subsequent learning activities.

Overall, the implementation of the discovery learning model assisted by LKPD was effective in improving students' learning activeness and learning outcomes. Nevertheless, the scope of this study remains limited because it focused on only one class and one learning topic. Therefore, the findings cannot yet be generalized to students with different characteristics or to other topics in economics. Future studies are recommended to involve a larger number of classes, more diverse student characteristics, and different learning topics to provide broader evidence regarding the effectiveness of discovery learning assisted by LKPD.

Conclusion

This classroom action research involving students of Class XI-Social 5 at SMAN 1 Papar demonstrated improvements in students' learning activeness and learning outcomes

following the implementation of the discovery learning model assisted by LKPD (Student Worksheet) in economics education. Learning mastery increased from 46% in the pre-cycle to 69% in Cycle I and 83% in Cycle II, while the percentage of students classified as Active and Very Active increased from 63% in Cycle I to 86% in Cycle II. These findings indicate that the implementation of discovery learning assisted by LKPD can support student engagement and learning achievement within the context of this study.

Theoretically, these findings reinforce active and constructivist learning perspectives, which position students as active constructors of knowledge through experience, exploration, information processing, discussion, and drawing conclusions. The use of LKPD as a supporting component of discovery learning indicates that providing structure and guidance during the discovery process can help students engage in learning activities in a more systematic manner. Thus, this study provides empirical evidence that contributes to the broader understanding of the integrated implementation of discovery learning and LKPD in supporting students' learning activeness and learning outcomes in economics education.

Practically, this study provides an alternative approach for teachers to create more active, structured, and student-centered economics learning. Through discovery activities supported by LKPD, students are given opportunities to participate directly in the learning process and gradually construct their understanding. However, these findings should be interpreted within the contextual limitations of the study because the research was conducted in only one class and focused on a single learning topic; therefore, the findings cannot be broadly generalized. Future studies are recommended to examine the implementation of discovery learning assisted by LKPD in other subjects, different grade levels, and larger samples. Further research may also investigate the implementation of discovery learning by integrating other learning media, such as interactive digital media, videos, educational games, or technology-based platforms, to provide broader insights into its potential for improving students' learning activeness and learning outcomes.

References

Akhmad, M. A., Mustari, M., Arif, T. A., Fadollah, I., & Sila, A. (2023). Penerapan Model Pembelajaran Problem Based Learning Dalam Meningkatkan Hasil belajar Matematika Siswa SD. *Jurnal Ilmiah Pendidikan Citra Bakti*, *10*, 341–355. https://doi.org/https://doi.org/10.38048/jipcb.v10i2.1462

Amrullah, H., Sari, L., Fandyansari, M. W., & Rakhmadian, M. (2026). Pengaruh Gaya Mengajar Guru dan Keaktifan Belajar Siswa terhadap Hasil Belajar Siswa pada Mata Pelajaran Ekonomi. *Jurnal Pendidikan Profesi Guru*, *1*(02), 12–19. https://doi.org/https://doi.org/10.33503/adaptif.v1i02.2865

Andrianto, D., & Awantagusnik, A. (2025). Penggunaan LKPD Dan Diskusi Kelompok Untuk Meningkatkan Keaktifan Serta Hasil Belajar Matematika Siswa. *Journal Of Social Science Research*, *5*, 7138–7151. https://doi.org/https://doi.org/10.31004/innovative.v5i3.19267

Famulaqih, S., & Lukman, A. (2024). Pengembangan Bahan Ajar Modul Pembelajaran. *Jurnal Riset Ilmu Pendidikan Islam*, *1*(2). https://doi.org/https://doi.org/10.61132/karakter.v1i2.156

Hayati, K. N. (2023). Penerapan Discovery Learning Dalam Meningkatkan Hasil Belajar Siswa. *Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, *3*(4), 256–262. https://doi.org/https://doi.org/10.51878/learning.v3i4.2600

Hutasuhut, S., Siagian, I., Tambunan, L. M., Audina, M., Laurensia, R., Lingga, R. D., & Ginting, T. R. (2025). Integrasi Pendidikan Ekonomi. *Jurnal Visi Manajemen*, *11*. https://doi.org/https://doi.org/10.56910/jvm.v11i2.547

Jannah, M., Pravitasari, A. P., Astuti, Y. D., Utami, R. D., & Suprapti. (2025). Peningkatan Keaktifan Siswa Kelas III Sekolah Dasar Pada Pembelajaran IPAS Melalui Media Interaktif Wordwall. *Jurnal Ilmiah Pendidikan Dasar*, *10*. https://doi.org/https://doi.org/10.23969/jp.v10i01.23144

Juriyah, Raharjo, T. J., & Pramono, S. E. (2025). Efektivitas Model Discovery Learning Dengan Pendekatan Kontekstual Terhadap Kemandirian Belajar Dan Pemahaman Konsep Matematika Materi Bangun Ruang Sisi Datar Pada Siswa Kelas V Sekolah Dasar. *Jurnal Ilmiah Pendidikan Dasar*, *10*. https://doi.org/https://doi.org/10.23969/jp.v10i04.39456

Kamaruddin, Setyowati, R., & Agusniarti, Y. (2023). Hubungan Antara Keaktifan Belajar Siswa dengan Hasil Belajar Mata Pelajaran Ilmu Pengetahuan Sosial (IPS) Kelas V SDN 5 Singkawang. *Journal Of Education Review And Research*, *6*(1), 63–69. https://doi.org/https://dx.doi.org/10.26737/jerr.v6i1.4447

Karima, M. K., Pramudiyanti, Widiastuti, M. V., Anisa, T., Hadisuryanto, M., Nurlelasari, D., Mahmuri, A., & Hartono, S. (2025). Efektivitas Penggunaan LKPD Berbasis Aktivitas Model Discovery Learning untuk Meningkatkan Keterampilan Berpikir Kritis Peserta Didik Sekolah Dasar. *Journal Research and Education Studies*, *5*, 2601–2612. https://doi.org/https://doi.org/10.56832/mudabbir.v5i2.1619

Kurnia, H., & Sari, D. P. (2026). Peran Pendidikan Terhadap Kompetensi Sumber Daya Manusia. *Innovations in Multidisciplinary Education Journal*, *3*(1), 90–97. https://doi.org/https://doi.org/10.61476/5j5pk991

Ledang, H. B., Margunayasa, I. G., & Wibawa, I. M. C. (2024). The Effect Of Discovery Learning With Wamena Local Content On Natural And Social Sciences Learning Outcomes And Scientific Attitudes. *Jurnal Penelitian Ilmu Pendidikan*, *17*, 115–124. https://doi.org/https://doi.org/10.21831/jpip.v17i2.88456

Marliah, E., & Kumar, A. (2025). Improving Students Economic Learning Outcomes through Problem-Based Learning Methods. *International Journal of Education*, *4*(1), 237–249. https://doi.org/https://doi.org/10.59175/pijed.v4i1.410

Melenia, A. F. (2024). Konsep Dasar Pengembangan Bahan Ajar “Lembar Kerja Peserta Didik.” *Jurnal Of Islamic Education*, *1*(1), 33–43. https://doi.org/https://doi.org/10.61166/ahnaf.v1i1.2

Nerita, S., Ananda, A., & Mukhaiyar. (2023). Pemikiran Konstruktivisme Dan Implementasinya Dalam Pembelajaran. *Jurnal Education and Development*, *11*(2), 292–297. https://doi.org/https://doi.org/10.37081/ed.v11i2.4634

Ni’mah, A., & Kusmaryono, I. (2025). Efektivitas Pembelajaran Berdiferensiasi Dengan Media Stafcaps Terhadap Pemecahan Masalah Matematis Dan Keaktifan Siswa. *Jurnal Ilmiah Pendidikan Citra Bakti*, *12*, 353–367. https://doi.org/https://doi.org/10.38048/jipcb.v12i2.5238

Nur, N., Izzatika, A., Wahyudi, A., & Khairani, F. (2026). Pengaruh LKPD Berbasis Discovery Learning Terhadap Pemahaman Konsep Mata Pelajaran IPAS Pada Peserta Didik Kelas

V Sekolah Dasar. *Jurnal Ilmiah Pendidikan Dasar*, *11*(03). https://doi.org/https://doi.org/10.23969/jp.v11i03.62675

Nurjihan, D. S., & Bunawan, W. (2025). Peningkatan Hasil Belajar Peserta Didik melalui Penerapan LKPD Berbasis Discovery learning. *Jurnal Pendidikan MIPA*, *15*(September), 1120–1127. https://doi.org/https://doi.org/10.37630/jpm.v15i3.3133

Nurmaizura, D., Sumardi, L., & Kurniawansyah, E. (2025). Penerapan Model Pembelajaran Kooperatif Tipe Teams Games Tournaments Untuk Meningkatkan Keaktifan Belajar Siswa Kelas VIII-A SMPN 1 Keruak Pada Mata Pelajaran Pendidikan Pancasila. *Jurnal Pancasila Dan Kewarganegaraan*, *10*(2), 179–187.

Safitri, A. O., Yunianti, V. D., & Rostika, D. (2022). Upaya Peningkatan Pendidikan Berkualitas di Indonesia: Analisis Pencapaian Sustainable Development Goals (SDGs). *Jurnal Basicedu*, *6*(4), 7096–7106. https://doi.org/https://doi.org/10.31004/basicedu.v6i4.3296

Sakdiyyah, D. A., Wahjoedi, & Rokhmani, L. (2022). Design and Implementation of Economics Teaching Module Based on Discovery Learning, Its Effect on Students' Critical Thinking Ability 1,2,3). *International Journal Of Humanities Education And Social Sciences*, *2*(1), 93–104. https://doi.org/https://doi.org/10.55227/ijhess.v2i1.213

Syaifullah, A., & Maulidiyah, N. (2024). Model Pembelajaran Discovery Learning Dan Inquiry Learning Pada Pembelajaran Pai. *Al-Manba Jurnal Ilmiah Keislaman Dan Kemasyarakatan*, *9*(1), 57–65. https://doi.org/10.69782/almanba.v9i1.33

Tahir, M., Jahrir, A. S., Patak, A. A., Jafar, M. B., & Jabu, B. (2024). Pengenalan Analisis Data Statistik Deskriptif Kuantitatif Dalam Penyelesaian Tugas Akhir Pada Mahasiswa Pendidikan Bahasa Inggris Universitas Muslim Maros. *Journal Madaniya*, *5*(4), 2363–2373. https://doi.org/https://doi.org/10.53696/27214834.918

Tampubolon, R., Gulo, Y., & Nababan, R. (2022). Pengaruh Reformasi Kurikulum Pendidikan Indonesia Tehadap Kualitas Pembelajaran. *Jurnal Darma Agung*, *30*(2), 389. https://doi.org/10.46930/ojsuda.v30i2.1748

Tutal, O., & Yazar, T. (2023). Research Papers Active Learning Improves Academic Achievement And Learning Retention In K-12 Settings : A Meta-Analysis. *Journal on School Educational Technology*, *18*(3). https://doi.org/https://doi.org/10.26634/jsch.18.3.19288

Utomo, P., Asvio, N., & Prayogi, F. (2024). Metode Penelitian Tindakan Kelas (PTK): Panduan Praktis untuk Guru dan Mahasiswa di Institusi Pendidikan. *Jurnal Penelitian Tindakan Kelas Indonesia*, *4*, 1–19. https://doi.org/https://doi.org/10.47134/ptk.v1i4.821

Wahab, A., Suhartini, & Buhaerah. (2022). Penerapan Model Kooperatif Jigsaw terhadap Peningkatan Keaktifan Belajar Matematika. *Jurnal Ilmiah Pendidikan Matematika*, *6*(1), 9–15. https://doi.org/https://doi.org/10.32505/qalasadi.v6i1.3718

Wedasuwari, I. A. M., Sari, N. W. E., Putra, I. K. W., & Erawan, D. G. B. (2025). Penerapan Pendekatan Culturally Responsive Teaching (CRT) Untuk Meningkatkan Hasil Belajar Dan Keaktifan Mahasiswa. *Jurnal Santiaji Pendidikan*, *15*(2022). https://doi.org/https://doi.org/10.36733/jsp.v15i2.10954

Weinhandl, R., Baldinger, S., & Riegler, V. (2025). Design Characteristics for Discovery Learning within Digital Mathematics Learning Environments from Students ' Perspectives. *International Journal of Science and Mathematics Education*, *23*(8), 3981–4009. https://doi.org/10.1007/s10763-025-10619-x

Yandi, A., Nathania Kani Putri, A., & Syaza Kani Putri, Y. (2023). Faktor-Faktor Yang Mempengarui Hasil Belajar Peserta Didik (Literature Review). *Jurnal Pendidikan Siber Nusantara*, *1*(1), 13–24. https://doi.org/https://doi.org/10.38035/jpsn.v1i1.14