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# Development of Student Worksheets for Economics Subjects Based on Learning by Doing

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**Abstract**
This research aims to develop student worksheets based on Learning by Doing in learning Economics subjects for class X students at Senior High School 5 Jambi City. The development method used is Research and Development (R&D) by following the development model that has been agreed upon in the research process. The development stages include needs analysis, planning, product development, limited trials, revisions, field trials and evaluation. The research results showed that the Learning by Doing-based worksheets that were developed received positive responses from teachers and students. These worksheets can increase students' interest in learning and help them understand economic concepts better. Apart from that, these worksheets can also facilitate interactive, collaborative and applied learning in the classroom. Evaluation of the student worksheets shows that this product is suitable for use in learning Economics subjects at Senior High School 5 Jambi City. In conclusion, the development of Learning by Doing-based worksheets for Economics subjects can be an effective alternative in improving the quality of learning for class X students at Senior High School 5 Jambi City. It is hoped that the results of this research can make a positive contribution to the development of education in Indonesia, especially in the context of learning Economics subjects.

Keywords: Economics; High School; Learning by doing; Student Worksheets



## INTRODUCTION

Education is the reincarnation of one of Indonesia's national development goals as stated in the preamble to the 1945 Constitution, namely to make the nation's life intelligent. Education is a conscious effort that is deliberately designed to achieve predetermined goals. In order to achieve educational goals, teachers are required to have methodological abilities in designing and implementing learning, including the use of learning media.

The 2013 curriculum is oriented towards the development of globalization in the world, which includes advances in information technology, environmental problems and the rise of creative and cultural industries (Rizkinara et al, 2023). Based on Minister of Education and Culture Regulation no. 65 of 2013 concerning Primary and Secondary Education Process Standards has indicated the need for a learning process that is guided by the principles of a scientific approach (Apriliyani, 2020). This approach is characterized by highlighting the observational dimensions of reasoning, discovery, validation and explanation of a truth. Thus, the learning process must be carried out guided by scientific values, principles or criteria. Meanwhile, the Ministry of Education and Culture (2013)

provides its own conception that the scientific approach in learning includes the components: observing, asking, trying, processing, presenting, concluding and creating.

A teacher is required to have the ability to design courses and implement the learning process. This includes mastery in the use of learning media. Many practitioners realize that the use of media or tools really helps the learning process activities both inside and outside the classroom, especially helping to increase student learning achievement. However, in its implementation, not many teachers take advantage of it, in fact the use of the monotonous lecture method is still quite popular among teachers in the learning process (Asro, 2020). As a result, sometimes the provision of services tends to be monotonous and boring so that students are not motivated to learn because students do not get new material. As learning designers, teachers must be able to design learning that involves various types of learning resources and media in an effective and efficient learning process (Senjawati, 2020). Learning media can be understood as something that can convey or transmit messages from a source in a planned manner so that a conducive learning environment occurs where the recipient can carry out the learning process efficiently and effectively.

One material that is often used as a reference by teachers in developing students' abilities is by using Student Worksheets. Based on the author's experience and observations as a teacher who has taught Economics subjects, the crucial problems that become obstacles in the learning process in economics subjects using student worksheets are; (1) learning resources in the form of worksheets are not in accordance with actual competencies or practice; (2) there are teachers' handbook worksheets which only contain material references; (3) there is a lack of synchronization of the material between the teacher's handbook and the existing student worksheets; (4) during internship, students cannot be guided by student worksheets due to the lack of suitability of the material contained in the student worksheets with real practice in the field; (5) there are no modules that help students learn independently during internship so that competency achievement is not optimal. Many schools use worksheets as companion books in addition to diktat books, some even use them as guidebooks. Schools consider using student worksheets because they are cheap, provide financial income, and as an alternative handbook because the cost of diktat books is expensive (Cordon & Polong, 2020). If education administrators want to trace the existence of student worksheets, they will find several weaknesses (Muhaling & Lomboh, 2020). These weaknesses include: less attractive, printed on blurry paper, colorless printing, looks boring. In fact, some of the pictures are not clearly displayed, and tend to be just cognitive development. This can hinder the teaching and learning process (Lasmita, 2020).

The problems above are things that need to be solved so that there is an increase in the quality of economics learning in high school. Apart from that, the problems that researchers found regarding the characteristics of students in high school are very diverse, different learning styles due to their abilities, interests, background, education, future aspirations and individual orientation. Economic learning problems can be found at all levels, including high school (Fitriyah, 2020). As an economics subject, the aim is for students to understand and be able to apply economic principles both at home and at school. For this reason, students are equipped with various knowledge (cognitive), skills (psychomotor), and good attitudes (affective) related to the use of the five senses as a communication tool which can also develop their intelligence, character and personality.

Through economics subject worksheets, it is hoped that various intelligences, characters and personalities can be developed. People who master economics lessons with economic knowledge well will be able to express their understanding and ability to organize their character related to their potential, emotions, desires and hopes which are then expressed in various forms of leadership commitment and an organized lifestyle in accordance with economic principles and motives. what was studied (Toto & Nurdin, 2020). Based on the above, we need a worksheet that suits students' needs, which in the end can solve their learning problems, however the material in the worksheet has a very strategic role in the learning process and in practice in everyday life (based on learning by doing), because the main premise of the learning by doing theory is that the process of doing (doing) has the main content for human learning, while other processes such as listening (hearing) are supporting processes. So the implication of learning by doing in the implementation of learning is to treat students

to do more real activities. For this reason, it is necessary to design student worksheets based on learning by doing and develop them based on the demands of the 2013 Curriculum which emphasizes the application of a scientific approach, with the hope that it can help students in their learning process, as well as assist students in achieving competency (Razak, 2020).

This research is in line with research conducted by Apriadi et al, (2020) which states that student worksheets based on project based learning in economics learning increase students' interest in learning. Research on the development of student worksheets for economics subjects based on learning through practice for class By introducing a learning approach through practice, this research presents novelty in efforts to increase students' understanding through direct experience and application of theoretical concepts in real situations (Rahmayanti, 2020). This reflects a paradigm shift in economics teaching where more emphasis is placed on applying theoretical concepts in the context of everyday life, which directly addresses the gap between theory and practice in economics learning in schools (Wijaya & Susanti, 2020).

This research, which focuses on developing student worksheets for economics subjects with a practical learning approach for class X students at Senior High School 5 Jambi City, has very important implications in the educational context. The use of practice-based student worksheets can help increase student involvement in the learning process, facilitate a deeper understanding of economic material, and improve practical skills that can be applied in the real world (Setya, 2020). This implication underlines the importance of paying attention to learning methods that suit students' needs and characteristics in increasing educational effectiveness.

This research aims to create worksheets that can facilitate students in understanding economic concepts through direct experience and application of theory in practical situations. Thus, this research aims to increase students' understanding, motivation and learning achievement in the field of economics through the use of worksheets that are in accordance with the principles of learning through practice.

## RESEARCH METHODS

### *Research Design*

The method used in research on the development of Student Worksheets based on learning by doing is the Research and Development (R & D) 4-D or Four D model (Thiagarajan, Semmel, and Semmel, 1974) which includes the stages: define ( definition), design, develop, and disseminate. Student worksheets development refers to the learning by doing approach. The sequence of development stages in the 4D model consists of 4 stages, namely stage I, define (definition) consisting of 5 main steps: initial final analysis, student analysis, task analysis, concept analysis, and formulation of learning objectives; stage II, design (design) includes 3 steps: preparation of benchmark tests, selection of appropriate media, and selection of format; Stage III, develop (development) consists of validation by a team of experts (material and media experts) followed by revision, limited trials followed by revisions, and field trials and revisions again until learning-by-doing-based economics subject worksheets are obtained with specified specifications. has been established; and stage IV, disseminate. In this study, researchers did not reach the dissemination stage because the research time did not allow for carrying out this stage.

### *Research Target/Subject*

The subjects of this research were class X students at Senior High School 5 Jambi City who were studying Economics subjects. They are part of the relevant population to test the effectiveness of Learning by Doing-based worksheets in increasing their understanding of economic concepts and interest in learning. The subjects of this research were randomly selected from existing classes, and they were involved in developing, testing and evaluating the worksheet during the research process. By involving the subjects of this research, it is hoped that accurate and relevant information can be obtained regarding the potential use of Learning by Doing-based worksheets in the context of Economics learning at the school.

***Research Procedure***

This research procedure begins with the needs analysis stage, where identification of students' and teachers' needs for the development of Learning by Doing-based worksheets is carried out through literature studies and discussions with relevant stakeholders. After that, Student Worksheets development planning was carried out based on the results of the needs analysis, which included designing the content, structure and format of the Student Worksheets. The product development stage is carried out by creating a draft Student Worksheets testing the validity and feasibility of the Student Worksheets through limited trials, and carrying out revisions based on input from teachers and education experts. Furthermore, the Student Worksheets were tested in the field in real learning situations in class The collected data was analyzed qualitatively and quantitatively to evaluate the success of Learning by Doing-based worksheets in increasing students' understanding of Economic concepts. This procedure is carried out systematically and continuously to ensure the validity, reliability and effectiveness of the Student Worksheets development.

***Instruments, and Data Collection Techniques***

In this research, several research instruments were used which included questionnaires to obtain responses from teachers and students regarding the use of Learning by Doing-based worksheets, observation sheets to observe student interactions and responses during the learning process, as well as learning outcome tests to measure students' understanding of concepts. economics after using the worksheet. The combination of these three instruments allows researchers to get a comprehensive picture of the effectiveness of the worksheets developed in improving learning in Economics subjects at Senior High School 5 Jambi City.

***Data analysis technique***

In this research, data obtained from questionnaires, observation sheets, and learning outcomes tests were analyzed using analytical techniques appropriate to the type of data collected. Quantitative data from questionnaires and learning outcomes tests were analyzed using descriptive statistical methods such as mean, median, and percentage to identify patterns and trends in student responses and their learning outcomes before and after using Learning by Doing-based worksheets. Meanwhile, qualitative data from observation sheets were analyzed using a thematic approach, where the main themes and patterns that emerged from students' interactions and their responses to the worksheets were identified and categorized. Integration between quantitative and qualitative analysis is used to provide a more comprehensive understanding of the effectiveness of worksheets in improving student learning in Economics subjects at Senior High School 5 Jambi City.

## RESULTS AND DISCUSSION

The results of this development research are printed teaching materials in the form of economic worksheets based on learning by doing for class X social science at Senior High School 5 Jambi City. The product of this teaching material has been validated by a team of experts and revised before being tested on 10 students (small group) and 32 students (large group) of class X social science Senior High School 5 Jambi City.

### 1. Stages of developing Student Worksheet based on learning by doing

The development of learning-by-doing-based economic worksheets for class The application of the 4D development model goes through 4 stages, namely:

1. Define consists of 5 main steps: initial final analysis, student analysis, task analysis, concept analysis, and formulation of learning objectives. At this stage, data is collected through the technique of distributing questionnaires to students, interviews with students and teachers in the field of economic studies and observation.
2. Design includes 3 steps: preparation of benchmark reference instruments/tests, in the form of a questionnaire with a Linkert scale. Questionnaires can be used to collect and record data or

information, opinions and understanding in causal relationships carried out in writing. The questionnaire will then be used to validate the material, media, teacher responses. At the stage of creating an instrument in the form of a questionnaire, the developer is given guidance, and then the questionnaire is validated by the supervisor. Validation of the questionnaire by the supervising lecturer was carried out only once and was declared suitable for use. Meanwhile, to determine learning outcomes, standardized multiple choice cognitive questions are also prepared. At this stage, learning-by-doing-based economic worksheets were also made for class X social science at Senior High School 5 Jambi City (initial design). The learning by doing based economics worksheet is designed based on constructivist theory. This theory states that the most important principle in educational psychology is that students must build their own knowledge in their minds. For students to truly understand and apply knowledge, they must work to solve problems, discover things for themselves, work hard with the ideas of this theory developed from Piaget and Vygotsky. This Learning by doing based worksheet was also developed by paying attention to students' intellectual development (stage I: student analysis). It shows that the higher a person's stage of cognitive development, the more organized and more abstract their way of thinking. Therefore, teachers, learning designers and those developing learning programs must understand the stages of cognitive development of their students so that they can design and implement learning activities according to the stages of their development.

3. Develop (development), at this stage material validation is carried out by a team of experts from LPTK and economic subject instructors, twice with final revision. As well as media validation once and followed by revisions, limited trials (small groups) followed by revisions, and field trials (large groups) and revised again until a worksheet for economics subjects based on learning by doing is obtained with the specification "containing cognitive indicators from C1-C5, psychomotor for assessing work performance and affectivity includes honesty, cooperation, diligence, cleanliness, responsibility and thoroughness. It also contains assignments that will link the correspondence between theoretical truths obtained at school and in the field, problems that can only be solved through discoveries in the field, as well as simulations of theoretical applications from procedures for establishing school cooperatives. And everything must be submitted to the teacher both individually and in groups in the form of a report which must be presented classically."
4. Disseminate. At this stage, the results of the development are only used within one's own circle, not reaching a wider dissemination stage because the research time does not allow for carrying out this stage.

**2. Quality of Student Worksheets based on learning by doing**

A good worksheet is a worksheet that must meet at least the criteria relating to whether or not a basic competency has been achieved that must be mastered by students. To determine the quality of student worksheets, five assessment instruments are used, which contain questions related to the components/aspects of student worksheets. The results of the assessment of the five instruments by experts/validators/respondents which describe the quality of the student worksheets are as follows:

1. Based on the results of the assessment by material experts, a percentage of 86.40% was obtained with a very feasible category.
2. Based on the results of the assessment by media experts, a percentage of 80.00% was obtained with the appropriate category.
3. Based on teacher responses (10 teachers) as users of the MGMP group for high school economics subjects, a percentage of 90.40% was obtained in the very appropriate category.
4. Based on the assessment by respondents (10 students), from small group trials a percentage of 96.17% was obtained in the very interesting category.
5. Likewise, from a large group trial (32 students of class)

From the results of validation by a team of experts and respondents' responses, it can be concluded that the student worksheets based on learning by doing as a result of development, is declared suitable for use in economics learning. From the results of the small group and large group trial

questionnaires, it was found that students were very happy to use the worksheet developed because it was equipped with pictures which could increase students' interest (Nurjanah et al, 2021). Pictures can foster students' interest and can provide a connection between the content of the lesson material and the real world. To be effective, pictures should be placed in a meaningful context and students must interact with the pictures to get information.

Based on the substance of the student worksheets obtained from the teacher's assessment, it shows that the student worksheets based on learning by doing that was developed has good quality because the content of the student worksheets is in accordance with the competencies achieved and has been able to improve students' high-level thinking abilities (C3-C5). The quality of student worksheets based on learning by doing can also be seen from student learning outcomes, both in the realm of knowledge, skills and attitudes.

The worksheets are also equipped with questions that can help students discover economic concepts (Nugroho, 2020). The functions of student worksheets include: helping students discover concepts and apply and integrate various concepts that have been discovered, because in student worksheets there are theoretical tasks and/or practical tasks which can be in the form of laboratory work or field work (Fauziyah & Hamdu, 2022). To maximize the function of student worksheets, this can be done by applying a learning by doing approach in the application of learning models such as: problem-based learning model, problem solving and reasoning model, inquiry training model, problem-based instruction model, group investigation model and simulation model and study model, other cases (Fitriani, 2021). In principle, student worksheets based on learning by doing can be applied in a learning process that is based on constructivist learning theory, cognitive theory (information processing and cognitive development), applying a problem-based learning model that applies discussion methods, group work, with an oriented or centered learning approach. to students.

### 3. Student Learning Outcomes

Student learning outcomes are taken from the learning process application which uses student worksheets based on learning by doing as a result of development. The learning model used, especially in cooperative material and managing school cooperatives, is group investigation. In the application of this model the learning stages that occur are as follows: (1) students sit in predetermined groups; (2) the teacher calls the chairman to take one problem (in a roll of paper); (3) group discussions using the results of field activities (in student worksheets based on learning by doing; (4) one group member presents the results of the discussion (field activity report) in turn with other groups; (5) question and answer (opened in two sessions, each In each session, each group received two questions; (6) conclusion of the results. Through these learning stages, it is hoped that students will be able to improve individual personality achievements such as tolerance, democracy, critical thinking, systematic thinking, patience and also being able to argue about their opinions, so that the learning atmosphere is more focused. to students (Harahap, 2020).

The learning results of the attitude scores obtained by students, after carrying out learning activities using learning-by-doing-based economics worksheets, showed that 15 students had very good attitudes, while 17 students got good attitude scores. From these results it can be concluded that the highest attitude scores were good scores. Thus, the categories are good and very good because when studying using learning-by-doing based economics worksheets, students cooperate with each other, are responsible, diligent, active, thorough and disciplined (Purwanti & Heldalia, 2020). Apart from being useful for determining psychological factors that influence learning, attitude assessment is also useful as feedback for learning development (Ho & Ismawan, 2020). From the test results obtained, both in the knowledge (cognitive), skills (psychomotor) and attitude (affective) domains, it can be concluded that the learning-by-doing-based worksheets developed can help students improve their thinking abilities. So it can be said that the quality standards for student worksheets have been achieved well because the scores obtained by students have reached the minimum completeness criteria (Hoyi & Liza, 2021). The use of teaching materials can help him deliver the material in accordance with the learning tools, so that all

students can understand the learning material that has been delivered by the teacher and they become enthusiastic in participating in the learning process (Prihatini & Sugiarti, 2022). This results in student learning outcomes being more optimal and better (Rahmayani & Hendriana, 2021). In principle, student worksheets based on learning by doing can be applied in a learning process that is based on constructivist learning theory, cognitive theory (information processing and cognitive development), applying a problem-based learning model that applies discussion methods, group work, with an oriented or centered learning approach to students.

Although research on the development of student worksheets for economics subjects based on learning through practice for class (Parwati & Nafisyah, 2020). One of them is an in-depth study of the effectiveness of using student worksheets in improving understanding of economic concepts quantitatively, by paying attention to the comparison between the group of students who used these worksheets and the control group who used conventional learning methods (Kurniawan & Nurlaili, 2020). Apart from that, aspects of the influence of the learning environment, student motivation, and teacher responses to the implementation of student worksheets can also be the focus of further research to fill this gap and provide a more comprehensive picture of the impact of using student worksheets in economics learning at the secondary school level (Pratiwiningsih, 2023).

This research is in line with research conducted by Ambarwati & Purnomo (2023), which said that Problem Solving-Based Student Worksheets influence students' Critical Thinking Ability. One of the interesting novelties in the economics learning approach is the use of student worksheets based on learning through practice for class X students at Senior High School 5 Jambi City. This method changes the traditional learning paradigm which is more theoretical in nature into a more involved and applicable direct experience (Latief & Novalia, 2023). By providing opportunities for students to be actively involved in the learning process by doing direct practice, it is hoped that they can better understand and internalize economic concepts. This novelty can also motivate students to learn independently and develop the critical skills needed to understand economic dynamics as a whole.

Research on the development of student worksheets for economics subjects based on learning through practice for class X students at Senior High School 5 Jambi City has significant implications in increasing learning effectiveness. By focusing on the concept of learning through practice, this research can help students to better understand economic concepts in a more concrete and applied way. This can also increase students' learning motivation because they are actively involved in real activities that are relevant to their learning (Paino & Desmawan, 2020). Thus, the development of this student worksheet has the potential to improve academic achievement and understanding of economic concepts in class X students at Senior High School 5 Jambi City.

The limitations of research on developing student worksheets for economics subjects based on learning through practice for class X students at Senior High School 5 Jambi City can include several things. First, because of the focus on one particular school and grade level, the generalizability of the study results to a broader population may be limited. Second, constraints related to time and resources in designing and implementing student worksheets can also be a limitation, considering the need for support and cooperation from various parties in the school. Apart from that, the aspect of assessing the effectiveness of student worksheets can also be a limitation, because the variability in the way students absorb and understand economic material through a practical learning approach can differ from one individual to another.

## CONCLUSION

Based on the results of research on the development of student worksheets for economics subjects based on learning through practice for class X students at Senior High School 5 Jambi City, it can be concluded that this approach has great potential in increasing learning effectiveness. The use of student worksheets specifically designed to facilitate learning through practice has been proven to increase students' understanding of economic concepts and motivation to learn. The implications of this research also show that the integration of practice-oriented learning methods with relevant teaching materials can

produce positive results in achieving more effective and memorable learning goals. Therefore, the development of student worksheets based on Learning by Doing can be considered an approach that has great potential to be applied in the context of economic learning at the secondary school level.

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**REFERENCES**

Ambarwati, L., & Purnomo, Y. W. (2023). Pengaruh Lembar Kerja Siswa Berbasis Pemecahan Masalah Terhadap Kemampuan Berpikir Kritis Matematika Materi Bangun Ruang. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, *12*(1), 354-362.

Apriadi, S., Melina, A., & Safitri, E. (2020). Pengembangan lembar kerja peserta didik (LKPD) berbasis project based learning pada pembelajaran ekonomi untuk meningkatkan minat belajar siswa di SMA Negeri 4 Sarolangun. *Ekopendia*, *5*(2), 44-48.

Apriliyani, F. (2020). Identifikasi Motivasi Siswa Sekolah Dasar Menggunakan Video Animasi Tentang Sumber Daya Alam. *Integrated Science Education Journal*, 1(1), 23-29. https://doi.org/10.37251/isej.v1i1.28

Asro, A. (2020). Identifikasi Minat Siswa dalam Belajar Materi Hubungan Antara Bentuk dan Fungsi Bagian Tubuh Hewan dan Tumbuhan. *Integrated Science Education Journal*, *1*(1), 30-38. https://doi.org/10.37251/isej.v1i1.32

Cordon, J. M., & Polong, J. D. B. (2020). Behind the Science literacy of Filipino students at PISA 2018: A Case study in the Philippines' Educational System. *Integrated Science Education Journal*, *1*(2), 70-76. https://doi.org/10.37251/isej.v1i2.59

Fitriyah, K. (2020). Profil Kemampuan Berpikir Kritis Siswa pada Mata Pelajaran Ekonomi Melalui Pembelajaran Berbasis Riset. *heritage*, *1*(1), 111-124.

Fitriani, R. S. (2021). Pengaruh Tanggung Jawab Terhadap Sikap Siswa Pada Mata Pelajaran IPA di SMP Islam Al Falah dan SMP Adhyaksa 1 Kota Jambi. *Journal Evaluation in Education (JEE)*, *2*(1), 16-23. https://doi.org/10.37251/jee.v2i1.184

Fauziyah, S., & Hamdu, G. (2022). Implementasi E-LKPD Berbasis ESD pada Kompetensi Berpikir Kritis di SD. *Attadib: Journal of Elementary Education*, *6*(1), 172-179.

Harahap, S. (2020). Identifikasi Kreativitas Siswa Terhadap Mata Pelajaran IPA. *Integrated Science Education Journal*, 1(1), 16-22. https://doi.org/10.37251/isej.v1i1.21

Ho, L., & Ismawan Prasetia Devi. (2020). Students' Understanding of Interest in Learning Science. *Integrated Science Education Journal*, *1*(2), 60-64. https://doi.org/10.37251/isej.v1i2.72

Hoyi, R., & Liza, L. (2021). Identify the Disciplinary Attitude of Learning Physics in High School Students. *Journal Evaluation in Education (JEE)*, *2*(1), 39-43. https://doi.org/10.37251/jee.v2i1.247

Kurniawan, N., & Nurlaili, N. (2020). Kedisiplinan Siswa terhadap Objek Mata Pelajaran IPA di SMP Kabupaten Muaro Jambi. *Integrated Science Education Journal*, *1*(2), 54-59. https://doi.org/10.37251/isej.v1i2.73

Lasmita, L. (2020). Identifikasi Karakter Kerja Keras dalam Mata Pelajaran IPA di SMPN 3 Batanghari. *Integrated Science Education Journal*, 1(1), 07-15. https://doi.org/10.37251/isej.v1i1.14

Latief, A., & Novalia, N. (2023). Improving Fun Learning in Science Subjects by Using Monopoly Game Media. *Indonesian Journal of Education Research (IJoER)*, *4*(3), 54-57.

Muhaling, J., & Lomboh, F. C. (2020). Pengaruh Tanggung Jawab Terhadap Sikap Siswa pada Mata Pelajaran IPA. *Journal Evaluation in Education (JEE)*, *1*(4), 149-155. https://doi.org/10.37251/jee.v1i4.162

Nugroho, G. (2020). Analisis Motivasi Belajar Siswa Pada Pembelajaran IPA di SDN16/II Sepunggur. *Integrated Science Education Journal*, *1*(2), 65-69. https://doi.org/10.37251/isej.v1i2.67

Nurjanah, S., Hamdu, G., & Respati, R. (2021). Lembar Kerja Siswa berbasis Education for Sustainable Development pada Pembelajaran di Sekolah Dasar. *PEDADIDAKTIKA: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, *6*(2), 275-287.

Paino, P., & Desmawan, W. (2020). Analisis Sikap Siswa pada Pembelajaran IPA di SDN 124/VIII Sidorejo Kabupaten Tebo. *Integrated Science Education Journal*, *1*(2), 49-53. https://doi.org/10.37251/isej.v1i2.75

Parwati, Y., & Nafisyah, D. (2020). Kontak dan Komunikasi Sosial Guru dan Siswa dalam Pembelajaran di Sekolah Dasa. *Journal Evaluation in Education (JEE)*, *1*(3), 96-100. https://doi.org/10.37251/jee.v1i3.135

Pratiwiningsih, E. (2023). Pengembangan lkpd Berbasis Pembelajaran Kontekstual Dan Problem Solving Pada Materi Pendapatan Nasional Kelas Xi Ips Sma Negeri 2 Yogyakarta Tahun Pelajaran 2022/2023.

Prihatini, A., & Sugiarti, S. (2022). Pembelajaran Multiliterasi: Implementasinya dalam Pelatihan Pengembangan Model Pembelajaran Guru SMA di Malang: Multiliteracy Learning: Its Implementation in Training for Development of Learning Models for High School Teachers in Malang. *PengabdianMu: Jurnal Ilmiah Pengabdian kepada Masyarakat*, *7*(4), 486-494.

Purwanti, E., & Heldalia, H. (2020). Korelasi Keterampilan Proses Sains Dengan Kemampuan Berpikir Kritis Siswa Pada Materi Pemantulan Pada Cermin Datar. *Journal Evaluation in Education (JEE)*, *1*(4), 143-148. https://doi.org/10.37251/jee.v1i4.146

Rahmayani, S., & Hendriana, H. (2021). Validitas bahan ajar berbasis pendekatan problem based learning pada materi statistika. *JPMI (Jurnal Pembelajaran Matematika Inovatif)*, *4*(4), 867-874.

Rahmayanti, D. (2020). Pengembangan media pembelajaran pengolahan dan penyajian makanan Indonesia menggunakan aplikasi Lectora Inspire. *Journal Evaluation in Education (JEE)*, *1*(2), 60-67. https://doi.org/10.37251/jee.v1i2.44

Razak, F. M. (2020). Karakter Toleransi Siswa Pada Mata Pelajaran IPA di-SMPN 3 Muaro Jambi. *Integrated Science Education Journal*, *1*(1), 01-06. https://doi.org/10.37251/isej.v1i1.11

Rizkinara, F., Kurniawan, R. Y., & Basir, M. (2023). Upaya Meningkatkan Output Belajar Peserta Didik Dalam Mata Pelajaran Ekonomi Dengan Penerapan Model Problem Based Learning (PBL). *Jurnal Tarbiyah dan Ilmu Keguruan Borneo*, *4*(2), 133-143.

Setya, R. (2020). Deskripsi Sikap Kesenangan Dalam Belajar IPA, Ketertarikan Memperbanyak Waktu Belajar IPA, dan Ketertarikan Berkarir di Bidang IPA di MTS Syifa'ul Qulub. *Integrated Science Education Journal*, *1*(1), 39-43. https://doi.org/10.37251/isej.v1i1.37

Senjawati, S. (2020). Peran Guru Kelas Dalam Meningkatkan Pemahaman Siswa Pada Pembelajaran IPA Melalui Pembelajaran Berbasis Etnosains. *Integrated Science Education Journal*, *1*(2), 44-48. https://doi.org/10.37251/isej.v1i2.78

Toto Nugroho, M., & Nurdin. (2020). Peranan Pembelajaran Agama Islam Dalam Pembentukan Karakter Religius Dan Toleransi Siswa Sekolah Dasar. *Journal Evaluation in Education (JEE)*, *1*(3), 91-95. https://doi.org/10.37251/jee.v1i3.136

Wijaya, E., & Susanti, M. (2020). Model Pembelajaran Berbasis Proyek dalam Meningkatkan Kemampuan dan Kepercayaan Siswa. *PEDAGOGIA*, *18*(2), 136-147.