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Workshop on Designing Learning Evaluations Using Artificial Intelligence (AI) at SMK Kesehatan Pelita Bangsa

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Abstract
The utilization of Artificial Intelligence (AI) technology has brought fundamental changes to various aspects of human life, including education. However, the ability to leverage AI technology remains underdeveloped among teachers and educators. The workshop on "Learning Evaluation Using Artificial Intelligence (AI)" at SMK Kesehatan Pelita Bangsa aimed to enhance teachers' skills in using AI for evaluating learning. This workshop addressed the need for more effective, efficient, and objective evaluation methods in modern education. The event was attended by 25 teachers from SMK Kesehatan Pelita Bangsa and consisted of three stages: socialization, workshops, and mentoring. Positive feedback was received, with 87% of teachers finding the material relevant, 88% appreciating the clarity of presentations, and 86% considering the time allocated sufficient. Additionally, 89% found the workshop beneficial, 90% stated the material was easy to understand, and 80% agreed to implement what they learned. These outcomes demonstrate that the workshop achieved its objectives and positively impacted the quality of learning evaluations in schools. Teachers gained new knowledge and were motivated to apply it in their teaching. The use of AI in evaluations is expected to provide more meaningful and accurate feedback, thus supporting overall improvements in education quality.

Keywords*: Artificial Intelligence (AI), Learning Evaluation, Learning Quality, Educational Technology*

1. INTRODUCTION

The utilization of Artificial Intelligence (AI) technology has brought fundamental changes to various aspects of human life, including education (Hanila & Alghaffaru, 2023; Pabubung, 2021; Sulaeman et al., 2024). In the context of learning, AI offers significant potential to enhance the effectiveness, efficiency, and relevance of the teaching-learning process (Firdaus et al., 2023; Gleneagles, 2024; Mayasari et al., 2023). Its ability to analyze data, identify patterns, and provide personalized recommendations creates opportunities for developing more adaptive and individualized learning methods (Zainul, 2023). The technological transformation has significantly impacted the field of education, including the integration of Artificial Intelligence (AI) (Kisno et al., 2023; Sudaryanto & Hanny, 2023; Yahya et al., 2023). In education, AI offers various opportunities to improve the effectiveness and efficiency of the learning process while opening new avenues for developing innovative learning methods (Auna & Hamzah, 2024). The Artificial Intelligence (AI) Learning Workshop is a strategic initiative to implement technology in education, particularly for teachers and students at SMK Kesehatan Pelita Bangsa Yogyakarta.

SMK Kesehatan Pelita Bangsa Yogyakarta is a vocational high school focused on the health sector. Most students at SMK Kesehatan Pelita Bangsa have a specific interest in health-related fields. The teachers at this school have educational backgrounds and experience in health but face challenges in adopting the latest technologies, such as Artificial Intelligence (AI), in the learning context. Opportunities for improving the quality of the partnership include enhancing access to technology, increasing teachers' competencies in utilizing AI technology, and developing innovative learning methods leveraging AI technology. By deepening the understanding and application of AI technology in the learning process, the school can elevate educational quality and update the curriculum to align with contemporary demands (Yuanita Anwaristi, 2024).

The challenges faced by SMK Kesehatan Pelita Bangsa Yogyakarta include limited access to AI technology, a lack of teacher competence in applying AI in learning, and insufficient innovation in teaching approaches (Gilang Prayoga et al., 2024). Additionally,

limited resources and infrastructure pose obstacles to introducing and implementing AI technology in schools. The objectives of this initiative are to enhance the understanding and application of AI technology in the learning process at SMK Kesehatan Pelita Bangsa Yogyakarta, improve teachers' skills in utilizing AI technology, and develop innovative learning approaches by integrating AI technology into the curriculum. Upon completion of the program, SMK Kesehatan Pelita Bangsa Yogyakarta is expected to experience improvements in educational quality and increased teacher proficiency in using AI technology. This will better equip the school to face the challenges of the digital era and provide students with a superior educational experience.

2. METHOD

This community service program was conducted on Tuesday, June 11, 2024. The resource persons for this activity were three lecturers from the Mathematics Education Study Program of Universitas Sarjanawiyata Tamansiswa (UST) Yogyakarta. The activity was carried out in person (offline) under the title "AI Learning Workshop for SMK Kesehatan Pelita Bangsa". The community service activity, which took the form of a workshop, was attended by 25 teachers from SMK Kesehatan Pelita Bangsa. It aimed to address field challenges such as limited access to AI technology, inadequate teacher competence in implementing AI in learning, and a lack of innovation in teaching approaches. Moreover, constraints in resources and infrastructure also hindered the introduction and implementation of AI technology in the school. A detailed representation of the challenges, the proposed solutions, and the expected outcomes is illustrated in Figure 1.

Figure 1. Problems, solutions, and outputs of service activities

Before conducting the community service activity, the team carried out surveys or interviews with teachers and school staff to identify the technology needs, teacher competencies, and teaching methods used at the school. Additionally, they prepared the

necessary resources for procuring hardware and software, as well as for the implementation of the workshop and mentoring sessions. During the preparation process, the team collaboratively developed the materials to be delivered to the teachers. In the main activity, the team presented content emphasizing the importance of utilizing AI in education and how AI can be leveraged to create learning evaluations. The materials provided during each stage of the community service training program are detailed in Table 1.

Table 1. Materials for Community Service Activities

Programs	Workshop Materials
Socialization	Introduction to the basic concepts of AI, demonstration of the use of AI software in mathematics learning, and practical activities for teachers in evaluating the learning process.
Workshop	How to install Conker AI app, recognize various features in Conker AI app, and how to create learning evaluation using Conker AI app.
Mentoring	Installing the Conker AI application, creating a learning evaluation with Conker AI, question and answer, and evaluation of the implementation of the community partnership program

The following steps were designed to address the challenges faced by the partner institution:

1. Implementation of Socialization and Training:
   - Conduct socialization sessions on AI in education, including an introduction to basic AI concepts, demonstrations of AI software applications in mathematics teaching, and practical training for teachers on evaluating the learning process.
2. Development of a Technology-Based Curriculum:
   - Form a working team comprising teachers and school staff to design a technology-based curriculum that integrates AI into mathematics learning, particularly for student evaluations.
   - Organize discussion sessions to create innovative and adaptive lesson plans using AI technology.
3. Periodic Monitoring and Evaluation:
   - Perform regular monitoring and evaluations of the program to assess its effectiveness and impact on learning evaluations and teacher competencies.
   - Collect feedback from teachers and students regarding their experiences in using AI technology for learning, particularly in evaluating the learning process.

   Indicators of Success

The success of this activity is indicated by: (1). An increase in teachers' understanding of the importance of AI in education; and (2) Enhanced teacher competence in creating learning evaluations using AI. Throughout the program, the principles of Tamansiswa Education, particularly the 3N approach (*Niteni, Nirokke, Nambahi*), were applied. This involved encouraging teachers to observe and understand AI concepts (*Niteni*), replicate and try implementing AI in learning (*Nirokke*), and enhance and innovate existing teaching methods by utilizing AI (*Nambahi*). During the mentoring phase, participants were given the opportunity to independently practice the steps for using AI software on their own laptops. Before the program concluded, the team conducted an evaluation by distributing a questionnaire via Google Forms to gather feedback from participants on the program's sustainability. Through this approach, it is expected that teachers will gradually improve their ability to use AI technology, particularly in evaluating the learning process.

3. RESULTS AND DISCUSSION

The community service program was conducted in four (4) stages: preparation, socialization, workshops, and mentoring (Kusumaningrum et al., 2024). During the

preparation stage, the team conducted initial observations through in-person communication with the Principal of SMK Kesehatan Pelita Bangsa Yogyakarta to identify challenges faced by teachers in evaluating the learning process. The challenges identified included limited access to AI technology, a lack of teacher competence in applying AI in learning, and insufficient innovation in teaching approaches (Tri Astuti Arigiyati et al., 2021). To address these challenges, the team developed materials outlining steps for creating learning evaluations using the Conker AI application.

Conker AI is an innovative platform that enhances learning evaluations using Artificial Intelligence (AI) technology. This platform offers automated assessment of assignments and exams, in-depth learning data analysis, and personalized feedback for each student. With seamless integration into various Learning Management Systems (LMS) and a strong emphasis on data security, Conker AI reduces teachers' workload, improves assessment accuracy, and provides practical suggestions for improvement. Suitable for all levels of education and professional training, Conker AI fosters an adaptive, responsive, and data-driven learning environment, enhancing overall educational quality (Figure 2).

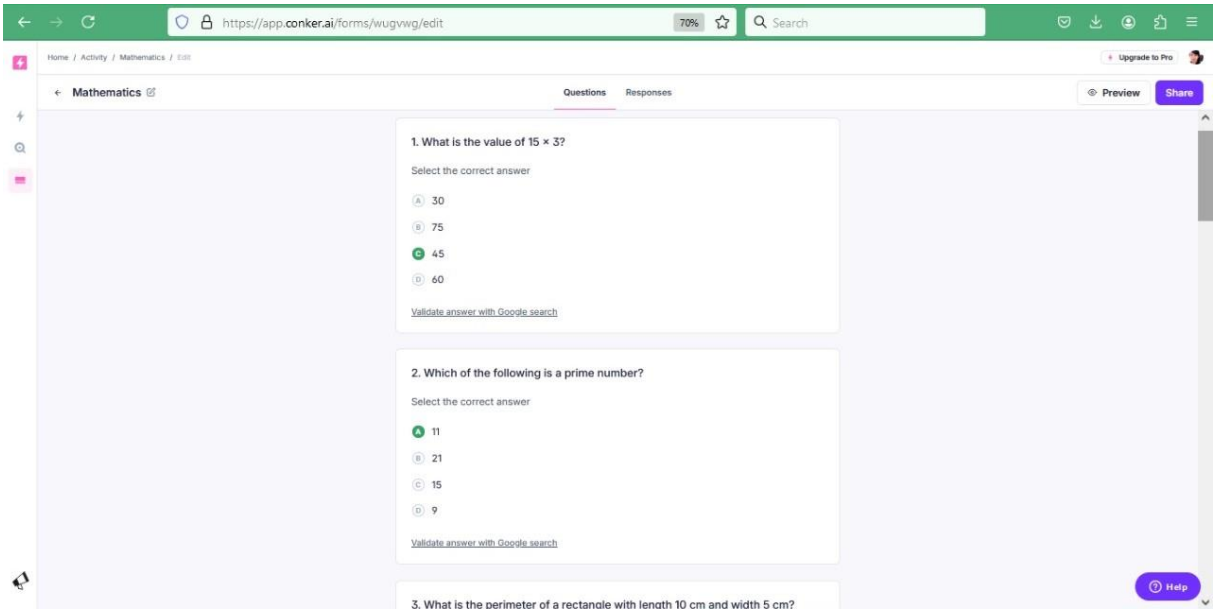

Figure 2. Conker AI

Before conducting the workshop, the team first held a socialization activity. This included introducing the basic concepts of AI, demonstrating the use of AI software in mathematics learning, and providing practical training for teachers in evaluating the learning process. Following the socialization, a workshop was organized to guide teachers in creating learning evaluations using AI. The workshop began by forming a working team of teachers and school staff to design a technology-based curriculum that integrates AI into mathematics learning, specifically for student evaluations. The community service team then delivered material, starting with instructions on installing Conker AI and using it for creating learning evaluations. At the end of the workshop, a discussion session was held to develop innovative and adaptive lesson plans using AI technology. Photos of the community service activities are presented in Figure 3.

Figure 3. Photos of the Community Service Activities

Following the workshop, a mentoring activity was conducted. During this phase, the teachers of SMK Kesehatan Pelita Bangsa were given the opportunity to independently practice the steps for installing and using the Conker AI application, under direct guidance from the community service team. At the end of the mentoring activity, an evaluation was conducted to assess the achievement of the community service program objectives. The evaluation involved periodic monitoring and assessment of the program's implementation to measure its effectiveness and impact on learning evaluation and teacher competence. A continuous evaluation process was carried out by collecting feedback from teachers and students about their experiences using AI technology in learning, particularly for evaluating the learning process. The success of this community service program was measured by the following indicators: (1) An increase of more than 50% in teachers' understanding of the importance of AI in learning; (2) An improvement of more than 50% in teachers' ability to create learning evaluations using AI. The percentage of teachers' abilities to understand educational media before and after the training is presented in Figure 4.

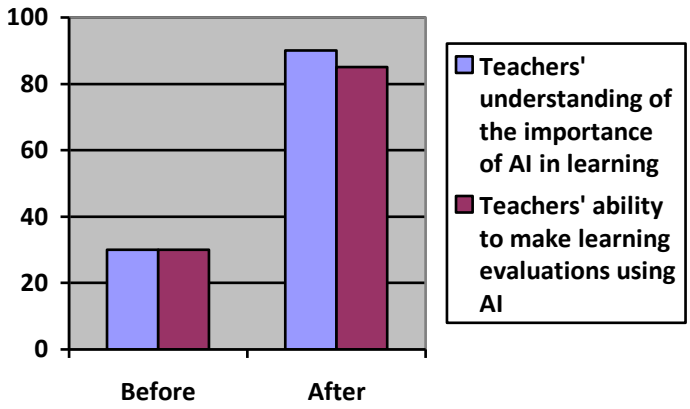

Figure 4. Teachers' Ability Before and After Workshop Activities

From Figure 4, it can be concluded that there is an increase in teachers' understanding of the importance of AI in learning by 58%, and an increase in teachers' ability to make learning evaluations using AI by 55%. This is in accordance with the goal to be achieved, which is an increase of more than 50%. In addition, the team also evaluated the activity by giving a questionnaire on the level of teacher satisfaction with the implementation of the workshop. The questionnaire contains 6 closed questions using 2 Likert scales, namely Agree and Disagree. The evaluation results show that the community service activity with the title "Workshop on Learning Evaluation Using Artificial Intelligence (AI) at Pelita Bangsa Health Vocational School" was carried out very effectively (Table 2).

Table 2. The Questionnaire Results

Number	Questions	Percentage
1	The material presented by the resource person was in accordance with the activity	87%
2	The resource person was clear in delivering the material	88%
3	The time allocated for the workshop was sufficient	86%
4	The workshop material provided by the resource person was very useful	89%
5	The material delivered by the resource person was easy to understand	90%
6	I wanted to apply the results of this training to learning.	80%

The Workshop on Learning Evaluation Using Artificial Intelligence (AI) at SMK Kesehatan Pelita Bangsa has been well implemented. Over several days, teachers have gained new insights and practical skills in integrating AI into the learning evaluation process. This activity provides a clear picture of how AI technology can be used to improve and enhance existing evaluation methods. With AI, learning evaluation becomes more effective, efficient and objective, allowing teachers to provide more targeted feedback to students. During the workshop, participants not only received theoretical material but also did various useful hands-on practices. From student data analysis to the application of AI algorithms to measure comprehension levels, all these aspects have been discussed and practiced well. As a sustainability activity, the team hopes that all participants can apply the knowledge gained to improve the quality of learning at SMK Kesehatan Pelita Bangsa. Hopefully this innovation will bring positive and significant changes in the world of education and provide great benefits for student development.

4. CONCLUSION

The Workshop on Learning Evaluation Using Artificial Intelligence (AI) at SMK Kesehatan Pelita Bangsa successfully addressed the primary objectives of the service study activities. The initiative significantly enhanced teachers' understanding of the importance of AI in education and improved their ability to implement AI in learning evaluations. The program included socialization, workshops, and mentoring phases, which were well-received by the participants. Positive responses from the teachers, with 87% affirming the material's relevance and 90% stating the ease of understanding, highlight the workshop's effectiveness in achieving its goals. The implementation of Conker AI provided teachers with practical tools for creating efficient, objective, and adaptive learning evaluations. The outcomes demonstrate a marked increase in teachers' competence and confidence in applying AI, as shown by the 58% improvement in understanding and the 55% enhancement in their ability to create learning evaluations using AI. Moreover, 80% of participants expressed readiness to apply these skills in their teaching practices, reflecting the program's practical value. In conclusion, the workshop not only met but exceeded its objectives by empowering teachers with actionable knowledge and skills, setting the stage for ongoing improvements in education quality at SMK Kesehatan Pelita Bangsa. It is hoped that this initiative will inspire sustained innovation and the widespread adoption of AI technologies in education, ultimately enhancing learning outcomes for students.

REFERENCES

Auna, H. S. A., & Hamzah, N. (2024). STUDI PERSPEKTIF SISWA TERHADAP EFEKTIVITAS PEMBELAJARAN MATEMATIKA DENGAN PENERAPAN CHATGPT. HINEF : Jurnal Rumpun Ilmu Pendidikan, 3(1), 13–25. https://doi.org/10.37792/hinef.v3i1.1160

Firdaus, M. R., Irawan, R. R., Mahardika, C. H. Y., & Gaol, P. L. (2023). TANTANGAN TEKNOLOGI ARTIFICIAL INTELLIGENCE PADA KEGIATAN PEMBELAJARAN MAHASISWA. Sindoro: Cendikia Pendidikan, 1(9), 71–80.

Gilang Prayoga, A., Dewangga Prada, B., Junianto, S., Panca Aji, A., Prabuwana Dewa, A., & Sakti Rumpoko, S. (2024). Survey of Facilities and Infrastructure for Enhancing Physical Education and Sports Capabilities at SMA 3 Boyolali. Journal of Community Capacity Empowerment, 2(1), 12–15. https://doi.org/10.36728/jcce.v2i1.3273

Gleneagles, F. L. D. B. (2024). Peran Teknologi Kecerdasan Buatan (AI) dalam Meningkatkan Efisiensi Proses Belajar dan Pembelajaran. https://doi.org/10.5281/ZENODO.11364580

Hanila, S., & Alghaffaru, M. A. (2023). Pelatihan Penggunaan Artificial Intelligence (AI) Terhadap Perkembangan Teknologi Pada Pembelajaran Siswa Sma 10 Sukarami Kota Bengkulu. Jurnal Dehasen Mengabdi, 2(2). https://doi.org/10.37676/jdm.v2i2.4890

Kisno, K., Fatmawati, N., Rizqiyani, R., Kurniasih, S., & Ratnasari, E. M. (2023). PEMANFAATAN TEKNOLOGI ARTIFICIAL INTELLIGENCES (AI) SEBAGAI RESPON POSITIF MAHASISWA PIAUD DALAM KREATIVITAS PEMBELAJARAN DAN TRANSFORMASI DIGITAL. IJIGAEd: Indonesian Journal of Islamic Golden Age Education, 4(1), 44. https://doi.org/10.32332/ijigaed.v4i1.7878

Kusumaningrum, B., Septiani, D., Setiana, D. S., Novitasari, S., Atiyyah, S., & Naibaho, R. (2024). Cinema for change: Sokola rimba for the young generation in building integrity and love of nature. Journal of Compacta Community Empowerment, 1(1), 12–22.

Mayasari, N., Dewantara, R., & Yuanti, Y. (2023). Pengaruh Kecerdasan Buatan dan Teknologi Pendidikan terhadap Peningkatan Efektivitas Proses Pembelajaran

Mahasiswa di Jawa Timur. Jurnal Pendidikan West Science, 1(12). https://doi.org/10.58812/jpdws.v1i12.863

Pabubung, M. R. (2021). EPISTEMOLOGI KECERDASAN BUATAN (AI) DAN PENTINGNYA ILMU ETIKA DALAM PENDIDIKAN INTERDISIPLINER. Jurnal Filsafat Indonesia, 4(2), 152–159. https://doi.org/10.23887/jfi.v4i2.34734

Sudaryanto, A. P., & Hanny, S. (2023). Manajemen Sumber Daya Manusia Sektor Publik Menghadapi Kemajuan Kecerdasan Buatan (Artificial Intelligence). Musamus Journal of Public Administration, 6(1), 513–521. https://doi.org/10.35724/mjpa.v6i1.5402

Sulaeman, S., Anggraini, R., Paramansyah, A., Fata, T. H., & Judijanto, L. (2024). Peran Artificial Intelligences Sebagai Alat Bantu Dalam Meningkatkan Keterampilan Menulis Mahasiswa Pendidikan Agama Islam Di Era Disruptif. Innovative: Journal Of Social Science Research, 4(1), 5206–5216. https://doi.org/10.31004/innovative.v4i1.8456

Tri Astuti Arigiyati, Kusumaningrum, B., & Krida Singgih Kuncoro. (2021). Pemanfaatan Videoscribe Dalam Peningkatan Kompetensi Guru. Kanigara, 1(1), 1–9. https://doi.org/10.36456/kanigara.v1i1.3097

Yahya, M., Hidayat, H., & Wahyudi, W. (2023). Implementasi Artificial Intelligence (AI) di Bidang Pendidikan Kejuruan Pada Era Revolusi Industri 4.0. Seminar Nasional Dies Natalis 62, 1, 190–199.

Yuanita Anwaristi, A. (2024). Increasing Children's Capacity At Al-Azhar Syifa Budi Kindergarten To Maintain Healthy Teeth. Journal of Community Capacity Empowerment, 2(1), 34–37. https://doi.org/10.36728/jcce.v2i1.3231

Zainul, R. (2023). Penelitian-Penelitian Dari Ranah Teknik Untuk Meningkatkan Kualitas Sumber Daya Manusia melalui Inovasi Penelitian dan Pengabdian kepada Masyarakat. Prosiding Seminar Nasional Ilmu Sosial Dan Teknologi (SNISTEK), 5, 1–7. https://doi.org/10.33884/psnistek.v5i.8055