

# OPTIMIZING THE PROGRESS OF EDUCATIONAL INSTITUTIONS THROUGH TEACHER TRAINING IN IMPROVING THE FIELD OF SUSTAINABLE EDUCATION

Moh. Syafi'i<sup>1</sup>, Ahmad Thoyib Mas'udi<sup>2</sup>, Ida Lutfiyatul Jamilah<sup>3</sup>, Mustadi<sup>4</sup>

<sup>1,2,3,4</sup> Universitas Qomaruddin Gresik, Indonesia

e-mail: mohsyafii634@gmail.com<sup>1</sup>, ahmadthoyibmasudi1@gmail.com<sup>2</sup>, jamilah@uqgresik.ac.id<sup>3</sup>, mustadi@uqgresik.ac.id<sup>4</sup>

## Abstract

This community service project was initiated in response to a critical need for improved teaching practices and sustainable educational development. This service aims to empower teachers with the skills and knowledge necessary to integrate sustainability into their teaching methods, thereby improving the overall quality of education and student engagement. The method involves a direct and comprehensive teacher training program through a Participatory Action Research (PAR) approach, which includes workshops, seminars, and ongoing support systems such as peer mentoring and online forums. This training focuses on interactive and student-centered teaching strategies, as well as the incorporation of sustainability concepts into the curriculum. Additionally, the project engages community stakeholders through workshops and information sessions to ensure alignment with local needs and to encourage community support. The results of this service are significant, with marked improvements in teaching practices, teacher confidence, and student outcomes. Teachers report increasing adoption of interactive methods and sustainability concepts, thereby increasing student engagement and academic performance. The project also successfully created a culture of continuous professional growth among teachers, supported by regular follow-up and community engagement. In conclusion, this project shows that comprehensive and ongoing professional development, coupled with strong community engagement, can produce sustainable advances in educational practice.

**Keywords:** Educational Institutions, Optimizing, Sustainable Education, Teacher Training

## Abstrak

Proyek pengabdian masyarakat ini dimulai sebagai respons terhadap kebutuhan kritis akan peningkatan praktik pengajaran dan pembangunan pendidikan berkelanjutan. Tujuan pengabdian ini adalah untuk memberdayakan guru dengan keterampilan dan pengetahuan yang diperlukan untuk mengintegrasikan keberlanjutan ke dalam metode pengajaran mereka, sehingga meningkatkan kualitas pendidikan dan keterlibatan siswa secara keseluruhan. Metode yang digunakan melibatkan program pelatihan langsung dan komprehensif bagi para guru melalui pendekatan Participatory Action Research (PAR), yang mencakup lokakarya, seminar, dan sistem pendukung berkelanjutan seperti pendampingan sejawat dan forum online. Pelatihan ini berfokus pada strategi pengajaran yang interaktif dan berpusat pada siswa, serta penggabungan konsep keberlanjutan ke dalam kurikulum. Selain itu, proyek ini melibatkan pemangku kepentingan masyarakat melalui lokakarya dan sesi informasi untuk memastikan keselarasan dengan kebutuhan lokal dan untuk mendorong dukungan masyarakat. Hasil pengabdian ini signifikan, dengan peningkatan nyata dalam praktik pengajaran, kepercayaan diri guru, dan hasil siswa. Para guru melaporkan semakin tingginya penerapan metode interaktif dan konsep keberlanjutan, sehingga meningkatkan keterlibatan siswa dan kinerja akademik. Proyek ini juga berhasil menciptakan budaya pertumbuhan profesional berkelanjutan di kalangan guru, didukung oleh tindak lanjut rutin dan keterlibatan masyarakat. Kesimpulannya, proyek ini menunjukkan bahwa pengembangan profesional yang komprehensif dan berkelanjutan, ditambah dengan keterlibatan masyarakat yang kuat, dapat menghasilkan kemajuan berkelanjutan dalam praktik pendidikan.

**Kata Kunci:** Institusi Pendidikan, Optimalisasi, Pendidikan Berkelanjutan, Pelatihan Guru.

## INTRODUCTION

Institutions face significant challenges in maintaining and enhancing the quality of teaching and learning processes in the rapidly evolving landscape of education. As the demands for skilled and knowledgeable graduates increase, the role of educators becomes ever more crucial (Nita et al., 2022; Stephenson, 2023). However, many educational institutions, especially in developing regions, need

more teaching methodologies and more professional development for teachers. This situation hampers the progress of educational standards and the overall growth of institutions (Pratama et al., 2023).

The primary issue lies in the need for continuous professional development opportunities for teachers, which leads to stagnation in teaching practices and a decline in educational quality. Traditional training programs often need to address the dynamic needs of modern education, leaving teachers ill-equipped to deal with contemporary educational challenges (Aldiab et al., 2019; Maksun, 2017). This gap in ongoing teacher training presents a significant barrier to educational advancement and sustainability. One of the intriguing aspects of this problem is the potential for substantial improvement through targeted training programs (Heilporn et al., 2021; Nabilah Mokhtar et al., 2023); (Asfahani, El-Farra, et al., 2023). Educators can stay updated with the latest teaching methodologies, technological advancements, and educational strategies by providing comprehensive and continuous professional development. This approach not only enhances the skills of individual teachers but also contributes to the overall progress of the educational institution (Aldiab et al., 2019; Alhawsawi & Jawhar, 2021).

Previous community service initiatives have attempted to address this issue, but many still need a strategic focus on sustainable education and continuous teacher development. Most efforts have been sporadic and limited in scope, often failing to produce long-term benefits for educational institutions. There is a clear need for a novel approach that emphasizes sustained improvement and aligns with contemporary educational demands (Millner, 2021; O'Connor et al., 2023; Rajadurai et al., 2018; Rajalakshmi et al., 2022). Several prior studies have explored the impact of teacher training on the advancement of educational institutions, highlighting both the potential benefits and the limitations of various approaches. One notable study focused on enhancing teaching competencies through regular professional development workshops (Baker & Galanti, 2017; Mouza et al., 2022; Village et al., 2020). This research demonstrated that consistent and well-structured training sessions significantly improved teachers' instructional methods and classroom management skills, leading to better student engagement and academic performance. However, the study also noted that without continuous support and follow-up, the long-term impact of these workshops diminished over time. Another significant research effort examined the role of digital literacy training for teachers in promoting sustainable education. This initiative gave educators the necessary skills to effectively integrate technology into their teaching practices (García-Peñalvo, 2016; Hordvik et al., 2020; Kilag et al., 2023). The results indicated a marked improvement in teachers' ability to use digital tools to facilitate interactive and engaging lessons.

Additionally, students showed increased motivation and improved learning outcomes. Nonetheless, the study highlighted the challenge of maintaining momentum, as technological advancements necessitated ongoing training and adaptation (Bertheau, 2020; Junaid et al., 2023). A different approach was taken in a study that targeted rural educational institutions, where access to professional development resources is often limited.

This research involved mobile training units that traveled to various schools, providing on-site training and teacher resources. The outcomes were promising, showing enhanced teaching practices and boosting teachers' morale and confidence. However, the study identified a gap in the sustainability of such initiatives, as the temporary nature of the mobile units meant that continuous development and support were not guaranteed. The novelty of this initiative lies in its strategic focus on optimizing educational progress through structured teacher training programs aimed at enhancing sustainable education. Unlike previous efforts, this approach integrates continuous professional development with practical application, ensuring teachers can effectively implement new classroom strategies and methodologies.

This community service project's primary objective is to enhance educational institutions' capabilities by equipping teachers with the necessary skills and knowledge for sustainable education improvement. Through comprehensive training programs, we aim to foster an environment of continuous learning and innovation within educational institutions.

The expected benefits of this initiative are manifold. Firstly, it will improve teaching practices and educational outcomes, directly benefiting students. Secondly, it will contribute to the professional growth of teachers, boosting their confidence and job satisfaction. Lastly, the overall progress of educational institutions will be optimized, positioning them to meet contemporary educational challenges and standards. This project, therefore, holds the promise of fostering a more dynamic, responsive, and sustainable educational system.

## METHOD

Participatory Action Research (PAR) is used in this service, which effectively optimizes educational progress through teacher training in sustainable education using the Collaborative Learning Community Model (CLCM) approach. This method emphasizes active participation, continuous feedback, and an iterative improvement process involving teachers, administrators, and community stakeholders (Brydon-Miller et al., 2020). They are forming a diverse team of teachers, school leaders, education experts, and representatives of the Bungah community, Gresik Regency. Activities are located at MA Mambaul Ulum Bedanten Gresik Regency and will be implemented in 2023. The initial stage involves conducting a comprehensive needs assessment through surveys, interviews, and focus group discussions to identify areas requiring teacher development and existing barriers to sustainable educational practices.

After a needs assessment, the team collaboratively designs a customized professional development program. The program includes workshops, seminars, and hands-on training sessions focused on modern teaching methodologies, integration of technology in education, and sustainable practices in curriculum design. Each training session incorporates active learning strategies, such as peer teaching, collaborative projects, and real-world problem-solving activities, to ensure the practical application of the concepts learned.

An important component of CLCM is the establishment of a sustainable support system. This includes regular follow-up meetings, peer mentoring, and the creation of online forums for knowledge sharing and ongoing support. Teachers are encouraged to implement new classroom strategies and share their experiences and feedback with the group (Lascano Pérez & Altamirano Carvajal, 2023; Nolan & Molla, 2017). This iterative process allows real-time adjustments and improvements to training programs based on practical insights and challenges teachers face. In addition, the CLCM method integrates community involvement to ensure the sustainability and relevance of training. Community workshops and information sessions are held to align educational goals with local needs and expectations. This collaborative approach enhances teacher skills and fosters a supportive environment that values continuous improvement and community involvement.

The effectiveness of the CLCM method was evaluated through qualitative and quantitative measurements. Regular assessments of student performance, classroom observations, and feedback from teachers and students provide valuable data to measure the impact of training. This data-driven approach ensures that training programs remain relevant and effective in driving sustainable educational practices. The CLCM method fosters a dynamic and responsive educational environment by utilizing participatory action research principles. This empowers teachers to continuously develop their skills and adapt to evolving educational demands, ultimately contributing to the continued progress of educational institutions.

## RESULT AND DISCUSSION

The project implementation yielded significant and impactful results across several key areas. The findings are based on comprehensive evaluations throughout the project, including pre-and post-training assessments, classroom observations, and feedback from participating teachers and students. One of the most notable outcomes was the substantial improvement in teaching practices among the participating educators. Teachers reported a heightened ability to integrate sustainable educational principles into their lesson plans. The increased use of interactive and student-centered teaching methodologies, such as project-based learning and collaborative classroom activities, evidenced this. Observations showed that students were more engaged and active in their learning processes, leading to a more dynamic and participatory classroom environment.

The training program also significantly boosted the confidence and professional development of the teachers. Many participants expressed that the comprehensive and continuous nature of the training helped them feel more prepared and competent in adopting new teaching strategies. This newfound confidence translated into a greater willingness to experiment with innovative classroom approaches and mentor their peers (Mogale & Malatji, 2022; Sebsibe et al., 2023). Additionally, establishing peer mentoring and support networks fostered a collaborative culture among teachers, further enhancing their professional growth.

As a direct consequence of improved teaching practices, there was a marked improvement in student outcomes. The assessment results indicated that students performed better in subjects where teachers had applied the new methodologies learned during the training (Arachchige & Sathsara, 2020;

Suryanti et al., 2024). There was also an increase in student motivation and enthusiasm for learning, as reported by teachers and students. Integrating sustainability concepts into the curriculum made learning more relevant and interesting for students, contributing to these positive outcomes (Nursalim et al., 2022; Putri & Putri, 2020).

Another significant finding was the sustainable nature of the educational advancements achieved. The continuous support systems, including regular follow-up meetings and online forums, played a crucial role in maintaining the momentum of improvement. Teachers continued to share their experiences and learn from each other, ensuring that the benefits of the training extended beyond the initial implementation phase (Bray et al., 2023; Lyman et al., 2023). This ongoing collaboration and support helped embed the new practices into the school culture, promoting long-term sustainability.

The project also fostered greater community engagement and support for educational institutions. Community workshops and information sessions helped align educational goals with local needs and expectations. As a result, there was a stronger sense of community involvement and ownership in the educational process. This community support further reinforced the improvements' sustainability, as local stakeholders became active participants in advancing their educational institutions.



Figure 1. Teacher Training in Skills Development

Table 1: Optimization of Educational Advancement Through Teacher Training in Sustainable Education

Category	Indicator	Pre-Training (Baseline)	Post-Training (Outcome)	Improvement (%)
Teaching Practices	Use of interactive teaching methods	45%	80%	+35%
	Student-centered learning approaches	40%	85%	+45%
	Integration of sustainability concepts in lessons	30%	75%	+45%
Teacher Confidence	Self-reported confidence in teaching abilities	50%	90%	+40%
	Willingness to experiment with new methods	35%	80%	+45%
	Participation in peer mentoring	20%	70%	+50%
Student Outcomes	Academic performance improvement	55% passing rate	85% passing rate	+30%
	student	50%	88%	+38%

	engagement and participation			
	Interest in sustainability topics	25%	70%	+45%
Sustained Advancements	Regular follow-up and continuous learning participation	N/A	95%	Sustained
	Integration of new practices into school culture	N/A	90%	Sustained
Community Engagement	Community participation in educational activities	30%	75%	+45%
	Alignment of educational goals with community needs	40%	85%	+45%

**Notes:**

1. Pre-Training and Post-Training percentages reflect the extent to which the indicators were observed or reported.
2. The improvement shows the percentage point increase observed from pre-training to post-training.
3. Sustained indicates continuous positive results beyond the initial implementation phase.



Figure 2. Teacher Training in Improving the Field of Sustainable Education

The project yielded several key insights and significant outcomes that merit detailed analysis. This discussion will explore the implications of the findings, the success factors, and areas for future improvement. The most notable improvement was observed in teaching practices. Post-training, there was a substantial increase in interactive and student-centered teaching methods, with percentages rising from 45% and 40% to 80% and 85%, respectively. This shift indicates that teachers embraced the new methodologies and effectively integrated them into their classrooms. The integration of sustainability concepts saw a remarkable rise from 30% to 75%, suggesting that teachers could incorporate these ideas into their curriculum, making lessons more relevant and engaging for students.

This enhancement in teaching practices can be attributed to the comprehensive and hands-on nature of the training program. Teachers were empowered to make lasting changes to their instructional approaches by focusing on practical applications and providing continuous support. This finding aligns

with existing literature that emphasizes the importance of ongoing professional development in achieving sustainable educational improvements.

Teacher confidence was significantly boosted, with self-reported confidence in teaching abilities rising from 50% to 90%. This increase is critical, as confident teachers are more likely to experiment with innovative teaching methods and mentor their peers, leading to a more dynamic and supportive educational environment (Nolan & Molla, 2017). The willingness to experiment with new methods and participation in peer mentoring increased by 45% and 50%, respectively, highlighting the program's success in fostering a culture of continuous professional growth and collaboration.

These outcomes underscore the importance of creating a supportive and collaborative learning community among teachers. Establishing peer mentoring and support networks were crucial in maintaining the momentum of professional development and ensuring that teachers could continue to grow and innovate (Evans, 2018; Malkisedek Taneo et al., 2019); (Damayanti et al., 2024). Improved teaching practices and increased teacher confidence translated into better student outcomes. The passing rate among students improved from 55% to 85%, and student engagement and participation rose from 50% to 88%. Additionally, there was a notable increase in student interest in sustainability topics, from 25% to 70%. These improvements suggest that the training program enhanced the quality of education and made learning more engaging and relevant for students.

The positive impact on student outcomes highlights the direct correlation between effective teacher training and student performance. Engaged and motivated students are more likely to succeed academically, and integrating sustainability concepts makes education more meaningful and applicable to real-world issues. The project also demonstrated the potential for sustained educational advancements (Priando Purba et al., 2021; Sinulingga et al., 2021). Regular follow-up and continuous learning participation reached 95%, and integrating new practices into school culture was observed at 90%. These sustained advancements indicate that the training program successfully embedded a culture of continuous improvement and innovation within the educational institutions (Adhicandra et al., 2024; Agustina et al., 2023). The success of these sustained advancements can be attributed to the establishment of ongoing support systems, such as regular follow-up meetings and online forums. These systems ensured that teachers could continue to learn, share experiences, and support each other in implementing new practices.

Community engagement saw a significant increase, with community participation in educational activities rising from 30% to 75% and alignment of educational goals with community needs improving from 40% to 85%. This enhanced community involvement is crucial for the sustainability of educational improvements, as it ensures that local stakeholders are actively engaged in and supportive of the educational process. The success in fostering community engagement can be linked to the project's efforts to involve community members through workshops and information sessions. By aligning educational goals with local needs and expectations, the project built strong community support and ensured educational advancements were relevant and impactful.

The project provided a comprehensive approach to enhancing educational quality through targeted professional development. A deeper analysis of the results reveals several critical insights into the mechanisms driving these improvements and the broader implications for educational practices. The dramatic increase in the use of interactive and student-centered teaching methods suggests that teachers were receptive to the training and found it practically applicable (Akbar et al., 2022; Asfahani, Sain, et al., 2023). This practicality is crucial, as more than theoretical knowledge is required with practical implementation. The success of these methods can be attributed to the hands-on nature of the training, which included real-world problem-solving activities and collaborative projects (Blau et al., 2020; Waham et al., 2023). This approach ensured that teachers could immediately apply what they learned in their classrooms, leading to a more engaging and effective learning environment for students.

The rise in teacher confidence and professional growth highlights the importance of a supportive and collaborative professional community. By fostering peer mentoring and creating continuous support networks, the project helped teachers feel more competent and willing to innovate (Javed et al., 2018). This culture of collaboration and support is essential for sustainable improvement, as it encourages ongoing learning and adaptation among educators.

Student outcomes improved significantly, with academic performance and engagement significantly increasing. This improvement underscores the direct link between teacher development and student success (Falloon, 2020; Musa et al., 2024; Yogia et al., 2023). Teachers equipped with

effective teaching strategies and a deep understanding of sustainability concepts can create more relevant and engaging learning experiences for their students. This relevance is particularly important in today's rapidly changing world, where students must be prepared for future challenges (Mulyanto et al., 2018).

The sustained advancements observed in the project indicate that the changes were not temporary but had a lasting impact on the educational institutions involved. The regular follow-up meetings and online forums were instrumental in maintaining this momentum, allowing teachers to continually refine their practices and support each other (Amri et al., 2024; Wirawan et al., 2023). This finding highlights the importance of ongoing professional development and the need for educational systems to provide continuous support for their teachers. Community engagement played a vital role in the project's success. By involving community members and aligning educational goals with local needs, the project ensured that the improvements were relevant and supported by the community. This alignment is crucial for sustainability, fostering a sense of ownership and active participation among local stakeholders.

The project achieved significant positive outcomes, enhancing teaching practices, boosting teacher confidence, improving student outcomes, ensuring sustained educational advancements, and fostering community engagement. These results highlight the effectiveness of comprehensive, continuous professional development programs and the importance of community involvement in achieving sustainable educational improvements.

Future initiatives should build on these successes by supporting teachers, fostering collaborative learning communities, and maintaining strong community engagement. By doing so, educational institutions can ensure their advancements' long-term sustainability and relevance, ultimately leading to a more dynamic and effective educational system.

## CONCLUSION

The project demonstrated that comprehensive and continuous professional development can significantly improve teaching practices, teacher confidence, and student outcomes. The sustained advancements and increased community engagement further underscore the effectiveness of this approach. These findings highlight the critical role of continuous professional development and community engagement in achieving sustainable educational improvements. Future initiatives should continue to build on these principles, ensuring that teachers receive the support and training they need to adapt to changing educational demands and that communities remain actively involved in the educational process.

In conclusion, the project provides a robust model for optimizing educational advancement through teacher training in sustainable education. By fostering a continuous improvement and collaboration culture, educational institutions can create more dynamic, effective, and sustainable learning environments, ultimately benefiting teachers and students.

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