

Benchmarking in educational emergencies: Improving the quality of learning in the midst of a global crisis

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ABSTRACT

The global crisis has brought about fundamental changes in teaching methods, forcing the education system to adapt quickly and effectively. Many institutions face challenges such as unequal access to technology, inadequate infrastructure, and varying teacher readiness, which leads to disparities in the quality of learning. This study examines the application of benchmarking practices as a strategy to improve the quality of learning in the midst of crisis conditions. Through an in-depth analysis of SMK Negeri Darul Ulum Muncar, the study found that by adopting innovative teaching methods that have proven successful in other institutions, educational institutions can improve student engagement and academic achievement. The descriptive and qualitative approach applied allows for an in-depth understanding of the strategies used. The results show that the application of the best practices model adaptively not only maintains educational standards, but also encourages innovation in teaching method. In addition, this study emphasizes the importance of building sustainable education system resilience to face future challenges. These findings are expected to provide guidance for stakeholders in implementing benchmarking as part of a sustainable improvement strategy, so that the quality of education is maintained in an uncertain crisis era.

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1. INTRODUCTION

The global crisis has prompted a significant transformation in teaching methods, moving away from in-person classroom interaction to a more flexible and technology-based approach. In the conditions of global crisis, many education systems are forced to adapt quickly to new challenges. Unequal access to technology, inadequate infrastructure, and teacher readiness create disparities in the quality of learning. This causes some students to be able to access quality education, while others are forced to experience a decline in the quality of education. Educational institutions that implement benchmarking practices effectively can significantly improve the quality of learning (Asfahani, El-Farra, and Iqbal 2023);(Javed and Alenezi 2023);(P. S. and Aithal 2023). As is the case with institutions that adopt innovative and interactive teaching methods that have been proven successful in other institutions (Khan, Gul, and Zeb 2023);(Wong and Liem 2022);(Adams et al. 2020). By implementing strategies

that have proven to be effective, educational institutions are able to provide a more meaningful and responsive learning experience to student needs, despite the challenges that exist.

Educational institutions need to implement benchmarking to improve the quality of learning in a global crisis situation. The global crisis is creating major challenges for the education system, including disruptions to teaching methods, resource limitations, and declining learning quality. Therefore, benchmarking is necessary to adopt best practices from other institutions that have successfully maintained the quality of education. Several institutions that implemented benchmarking during the crisis have shown success in maintaining the quality of learning. They adapt methods and strategies that have been proven effective in other institutions, which helps them face challenges such as technological limitations and changes in the way they learn (Turbull, Chugh, dan Luck 2021);(García-Morales, Garrido-Moreno, dan Martín-Rojas 2021);(Ahmed and Opoku 2022). Benchmarking is an essential tool for educational institutions in maintaining and improving the quality of learning during the global crisis (Camilleri 2021);(Obaid AI-Youbi et al. 2020);(Santally et al. 2020). By learning from the best practices of other institutions, schools and universities can develop more resilient and adaptive strategies to maintain the quality of education in the future.

Research related to Benchmarking in Improving the Quality of Defense in the Midst of a Global Crisis has been carried out by many previous researchers, including (Santally et al. 2020);(Ummah 2019);(Zaman et al. 2024): that institutions that implement benchmarking practices during the transition to distance learning are able to create more effective teaching strategies. demonstrated an increase in student engagement and learning satisfaction, as they were able to adopt methods that have been proven effective in other institutions. The use of digital technology adopted through benchmarking practices not only improves the quality of education but also increases accessibility. The technology allows more students to access learning materials and participate in learning activities, leading to better results. Institutions that implement benchmarking have succeeded in improving the quality of online learning and student success despite facing challenges.

The application of benchmarking in educational emergency situations to improve the quality of learning in the midst of a global crisis. This study aims to identify the best practices of institutions that have successfully implemented benchmarking as a tool for improving education. Through this analysis, it is hoped that innovative strategies can be found that can be adapted by other institutions. In addition, this study will evaluate the impact of the application of benchmarking practices on student learning outcomes, including improving the quality of teaching and student engagement. Policy recommendations will be compiled based on findings to provide guidance for stakeholders in implementing benchmarking as part of a sustainable improvement strategy (McDermott et al. 2022);(Sacks et al. 2020);(Villazón et al. 2020);(Villazón et al. 2020). Thus, the results of the research are expected to help build the resilience of the education system and increase the readiness of institutions to face future crises.

The application of benchmarking in educational emergency situations is very important to improve the quality of learning in the midst of a global crisis. Learning from best practices at other institutions, institutions can adopt more effective teaching strategies and quickly adjust their approach. Education management benchmarking also helps measure the quality of education and identify areas for improvement (Kaso et al. 2021);(Bartz-Beielstein et al. 2020);(Javaid et al. 2020). Thus, students can be better adapted to difficult conditions, and all stakeholders can be involved in the educational process (Cheng et al. 2022);(Daly-Smith et al. 2020);(Brunetti et al. 2020). This step not only improves the quality of education, but also builds the resilience of the education system to face future crises.

From the above research, it can provide an update on the realm of Benchmarking in educational emergency situations, this method can improve the quality of learning in the midst of a global crisis. With a focus on best practices that have proven to be effective, educational institutions are able to adapt to unexpected challenges. The main contribution of this article is to provide a systematic framework that can be used by education stakeholders, including decision-makers and educators, to improve the quality of education (Aliyyah et al. 2020);(Penuel et al. 2020);(Langrafe et al. 2020). By analyzing case studies and adaptable models, this article enriches the educational literature and encourages further discussion on education system resilience and innovation in teaching strategies.

2. METHOD

SMK Negeri Darul Ulum Muncar was established in 2003 based on the Decree of the Regent of Banyuwangi and began operating from the 2003/2004 school year. Located in the environment of the Mambaul Ulum Islamic Boarding School in Wringinputih Village, this school was founded by Bani Askandar. The application of benchmarking at SMK Negeri Darul Ulum Muncar to improve the quality of learning in emergency situations. This study uses a descriptive method with a qualitative approach, which focuses on exploring and analyzing the application of benchmarking in educational emergency situations to improve the quality of learning. The case study approach was chosen to examine several educational institutions that have successfully implemented benchmarking practices during the crisis, with the aim of understanding the strategies, challenges, and results achieved. The paradigm used is constructivist, which focuses on a subjective understanding of

individual and group experiences, so that researchers can understand how stakeholders in educational institutions interpret and apply benchmarking.

Data will be collected through several techniques, namely in-depth interviews with managers, teachers, and students to gain a thorough understanding of their experiences and perceptions. In addition, direct observation will be carried out on the learning process and the implementation of benchmarking practices at the selected institutions, as well as the collection of documentation from evaluation reports, curriculum, and implemented strategies. Data analysis is carried out using thematic analysis methods, where data from interviews, observations, and documentation will be analyzed to identify emerging themes and patterns. The results of this analysis are expected to formulate recommendations for educational institutions in improving the quality of education in the midst of emergency situations.

3. RESULT AND DISCUSSION

3.1. Adaptive Application of Best Practices Model

The application of the adaptive best practices model is one of the effective strategies in maintaining the quality of education, especially in the midst of crisis situations. This model allows educational institutions to identify and adopt best practices that have been successfully implemented in other institutions. By benchmarking, schools and universities can tailor models that have been proven to be effective according to the context and challenges they face. This adaptation not only maintains educational standards, but also allows institutions to improve the learning process quickly and on target. In conditions full of uncertainty, the adaptive application of best practices is an important key in ensuring that the quality of education is maintained and continues to develop. As well as the results of the interview with the following Principal:

*"We started implementing **best practices** after seeing how other institutions have successfully dealt with crisis situations. This benchmarking is a guide for us to identify the most effective steps in maintaining the quality of learning. We don't just imitate, but adapt existing practices to the specific needs of our school, especially given the context in which we are in the pesantren environment. For example, we adapted technology-based learning strategies that have been successfully implemented in large schools, but we modified them to fit the infrastructure we have."* (KP)

From the interview, it can be interpreted that the application of adaptive best practices in this institution is an effective strategy in maintaining and improving the quality of learning in the midst of challenges. Adaptation of practices from other institutions demonstrates the flexibility of schools in adopting methods relevant to the local context, such as adapting available technologies and infrastructure. Despite the obstacles, especially in terms of resource readiness and technology limitations, the results of the interviews showed that with continuous evaluation it was able to make the right modifications to optimize learning outcomes. The positive impact can be seen in the improvement of student academic achievement and the capacity building of teachers, who innovate in teaching methods. Adaptation of best practices not only maintains the quality of education, but also builds institutional resilience in the face of crises and prepares schools to face future challenges. The following are the aspects of the Implementation of the Best Practices Model:



Figure 1. Aspects of Implementation of the Best Practices Model

From the figure above, it is explained that the application of the best practices model adaptively shows that schools proactively identify best practices from other institutions that have successfully faced educational challenges in times of crisis. It is important to get a tested practical guide. Furthermore, adaptation to the local context indicates that the implementation of the strategy is not carried out directly, but is adjusted to the existing situation and limitations, both in terms of infrastructure and the ability of teaching staff. Continuous evaluation and adjustment processes are key to ensuring the effectiveness of the adopted strategies, so that schools can

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continue to refine their approach based on the results achieved. The improvement in the quality of learning can be seen from the increasing academic achievement of students despite being faced with various limitations. In addition, the development of teacher innovation reflects another positive impact, where teachers are encouraged to innovate in teaching methods. Overall, the application of adaptive best practices has proven to be effective in improving school resilience, learning quality, and innovation in teaching in the midst of challenging situations.

The application of adaptive best practices models in educational institutions is a very relevant strategy in maintaining the quality of education, especially in challenging situations (Nurjaman 2023);(Sari and Nayir 2020)(Fairman et al. 2023). Through this approach, schools can conduct benchmarking, which allows them to learn best practices from other institutions that have been successful in addressing the education crisis (Caeiro et al. 2020);(Blessing 2020). This not only provides tested practical guidance, but also facilitates the process of adaptation to specific local contexts, including the available infrastructure and the capabilities of teaching staff. Technology-based learning strategies that have been proven effective in other institutions, for example, are modified to suit the conditions in the pesantren environment. This process demonstrates the flexibility and responsiveness of the institution in facing challenges.

Continuous evaluation and adjustment processes are key to ensuring the effectiveness of the adopted strategy (Leg 2023);(Al-Shi'ad, Bawa, Dan Shaukat 2024). By conducting regular evaluations, schools can continue to improve the approach used, so that the quality of learning can continue to be improved. The improvement in the quality of learning that can be seen from the academic achievement of students, even in the midst of limitations, is an indicator of the success of the implementation of this model. Another positive impact of implementing best practices is the encouragement for teachers to innovate in teaching methods (Lambriex-Schmitz et al. 2020);(Newspaper 2020);(Eli 2021). This innovation not only increases teachers' motivation and creativity, but also enriches the student learning experience. The application of adaptive best practices models has proven to be effective in increasing the resilience of educational institutions, maintaining and improving the quality of learning, and encouraging innovation in teaching, which is very important in the midst of uncertain conditions.

3.2. Improving Student Academic Performance

Improving student academic performance is one of the main results expected from the adaptive application of best practices models in educational institutions. Efforts to maintain and improve the quality of learning are not only limited to the adoption of effective teaching methods, but also involve a holistic approach that includes student engagement, relevant curriculum development, and the use of technology. Through continuous evaluation and adjustment of learning strategies, the school has successfully created a conducive learning environment, which encourages students to achieve better academic achievement. These findings show that the adaptive strategies implemented not only improve the overall quality of education, but also have a direct impact on students' motivation and academic achievement. Thus, improving students' academic performance not only reflects individual success, but is also an indicator of the institution's success in implementing effective and innovative educational practices. As well as the results of the interview with the following Principal:

"We implement a variety of innovative teaching methods, including project-based learning and group discussions. This method not only makes students more active, but also helps them understand the material better." (KP)

The following interview results aim to dig deeper into efforts to improve students' academic performance. Through interviews with the Principal, we gained valuable insights into the strategies implemented to encourage student achievement. From the interview, he explained the various innovative approaches used, as well as the importance of parental involvement and the use of technology in the learning process. The results of this interview are expected to provide a clear picture of the institution's success in improving students' academic performance and can be an inspiration for other schools to implement similar practices. The following are aspects of Improving Student Academic Performance:

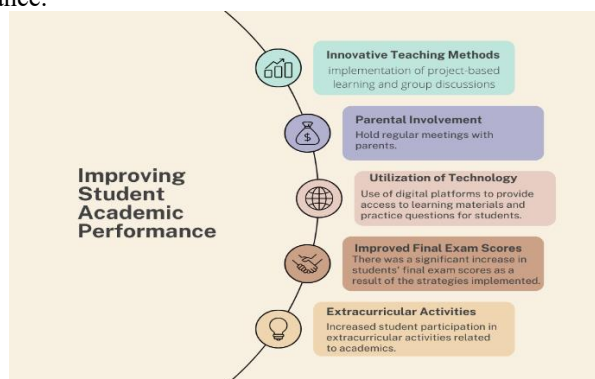


Figure 2. Aspects of Improving Student Academic Performance

From the image above, it is explained that more interactive learning approaches, such as project-based learning and group discussions, have succeeded in increasing student engagement in the learning process. This method not only makes students more active but also helps them understand the material more deeply through hands-on experience and collaboration. Parent involvement, as seen in Parent Engagement, plays a crucial role in supporting students' academic development. Regular meetings with parents ensure good communication between the school and the family, which ultimately helps to create a supportive learning environment, both at school and at home. The use of technology is a key element in supporting student learning flexibility so as to improve academics. The success of this strategy can be seen from the Increase in Final Exam Scores, which shows that the approaches implemented effectively are able to significantly improve students' academic achievement, despite various limitations. Lastly, more active Extracurricular Activities in the academic field reflect that students are not only focused on learning in the classroom but are also encouraged to deepen their knowledge through supportive extracurricular activities. This shows the holistic development of students who focus not only on academic grades but also other relevant abilities.

The improvement of students' academic performance is driven by several key strategies. First, innovative teaching methods such as project-based learning and group discussions have successfully improved student engagement and understanding (Almulla 2020);(López-Gazpio 2022);(Juuti et al. 2021). Parent involvement is also important, where regular meetings with schools help create strong learning support at home. In addition, the use of technology provides flexible access for students to repeat learning materials and practice questions, which has an impact on improving academic achievement. The success of this strategy is reflected in the increase in students' final exam scores. Participation in academic extracurricular activities also increases, enriching students' abilities outside the classroom (Heath et al. 2022);(from Prada Creo, Mareque, dan Portela-Pino 2021);(Reis and Renzulli 2018). The combination of innovative methods, technology, and parental involvement has shown effectiveness in improving the overall quality of learning.

Improvement in students' academic performance results from the implementation of *best practices* adaptively in schools (Pak et al. 2020);(Wang et al. 2023);(Martin, Sun, and Westine 2020). This approach includes interactive learning methods such as projects and group discussions that increase student engagement. Parent involvement through regular meetings also strengthens home learning support, while the use of technology helps students repeat material flexibly. As a result, there was a significant increase in final exam scores and student participation in academic extracurricular activities. This adaptive strategy not only improves academic achievement, but also the overall quality of education in schools (Pokhrel 2024);(El-Sabagh 2021);(Theobald 2021).

3.3. Sustainable Education System Resilience Development

Sustainable education system resilience development is one of the important aspects in ensuring the sustainability of education quality, especially in the midst of various challenges and unexpected changes. In this context, educational institutions need to build capacity that is not only able to respond to short-term crises, but also design long-term strategies that allow education systems to remain resilient and adaptive. These findings highlight the importance of a holistic approach, from strengthening infrastructure, developing educator competencies, to integrating technology and innovation in learning. All of this aims to ensure that the education system continues to function optimally and is able to face various challenges in the future. As well as the results of the interview with the following Principal:

"We realize that to ensure the sustainability of education quality, we need to build a resilient system. In recent years, we have focused on improving infrastructure, both physical and digital, to be able to support sustainable learning. In addition, we also continue to encourage the development of teachers' competencies so that they can be more adaptive in using new technologies and methodologies. We believe that educational resilience does not lie in just one aspect, but in the collaboration of various elements, including teacher training, adequate facilities, and students' mental readiness to face the ever-changing situation." (KP)

The results of the interview with the Principal provide a deeper insight into the strategies and steps taken in building the resilience of a sustainable education system. This interview revealed the importance of a holistic approach that includes infrastructure improvement, educator competency development, and technology integration to ensure that the education system remains resilient amid existing challenges. These findings confirm that the success of building educational resilience does not depend only on one aspect, but on the synergy of various elements in the institution. This shows that the resilience of education does not only depend on the readiness of facilities, but also on the ability of educators to utilize technology effectively. Collaboration between adequate infrastructure, enhanced educator competence, and student involvement in the adaptive learning process are key factors in ensuring a sustainable education system. This interview also reflects that building the resilience of the education system must be long-term-oriented, with a focus on flexibility and readiness to face change. The following are the aspects of Sustainable Education System Resilience Development:

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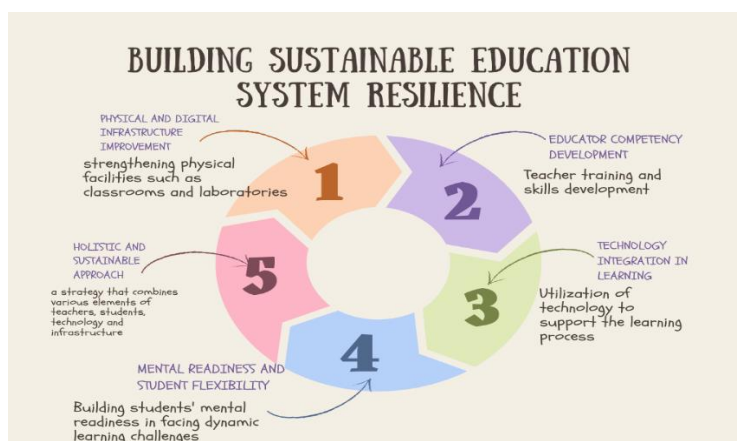


Figure 3. Aspects of Sustainable Education System Resilience Development

From the figure above, it is explained that the development of sustainable education system resilience must be carried out through various complementary approaches. Improving physical and digital infrastructure is an important foundation so that the learning process can run smoothly, both in the classroom and outside. Technology plays a key role in ensuring the flexibility and effectiveness of learning, especially in the face of various challenges. The development of educator competencies is another important component, where teachers must be equipped with the ability to utilize technology and apply innovative teaching methods. This ensures that the learning process is not only effective, but also relevant to the needs of the times. Meanwhile, students' mental readiness and flexibility are the main supporting factors so that they are able to adapt to changes in learning methods and styles. This holistic approach that includes strengthening all elements shows that the resilience of the education system is not only focused on one area, but is the result of collaboration and adaptation from various aspects. The overall strategy is designed to ensure that the education system can continue to run and develop, even in crisis situations, and ensure the sustainability of the quality of education in the long term.

Sustainable education system resilience development shows the need for a complementary approach. Improving physical and digital infrastructure is an important foundation so that the learning process can take place properly, both inside and outside the classroom (Safta-Zecheria et al. 2020);(Timotheou et al. 2023);(Alenezi, Wardat, and Akour 2023). Technology plays a key role in ensuring flexibility and effectiveness of learning, especially in the face of various challenges. In addition, the development of educator competencies is very important, where teachers must be equipped with the ability to utilize technology and apply innovative teaching methods, so that learning becomes more effective and relevant. Students' mental readiness and flexibility are also supporting factors so that they can adjust to changes in learning methods and styles. This holistic approach that integrates all elements shows that the resilience of the education system is not only focused on one aspect, but is the result of collaboration and adaptation of various elements (Negri et al. 2021);(Green et al. 2020);(Dentoni, Pinkse, and Lubberink 2021). The overall strategy is designed to ensure that the education system continues to run and develop, even in crisis situations, and to maintain the sustainability of education quality in the long term.

Sustainable education system resilience development is a crucial aspect in maintaining the quality of education in the midst of challenges and unexpected changes (Servant-Miklos 2022);(AlQashouti et al. 2023);(McKay and Mom 2022). The findings emphasize the need for a holistic approach that includes strengthening physical and digital infrastructure, developing educator competencies, and integrating technology and innovation in the learning process. By designing a resilient and adaptive long-term strategy, educational institutions can ensure optimal continuity of function in the face of various challenges in the future. The results of the interview with the Principal underlined the importance of collaboration between facility improvement, teacher training, and student mental readiness as a key component in building a resilient education system. This holistic approach reflects that the resilience of the education system is not the result of one element alone, but rather a synergy between various aspects that complement each other (Marulanda Fraume et al. 2020);(Faulkner, Murphy, dan Scott 2020);(Karaman 2020). Thus, this strategy is expected to ensure the sustainability of education quality in the long term, even in crisis situations.

4. CONCLUSION

The global crisis triggered a major change in teaching methods, requiring the education system to adapt quickly and effectively. Gaps in access to technology, inadequate infrastructure, and teacher skills create unequal quality of education, where some students get quality education, while others experience a decline in quality. Benchmarking practices have proven to be important in helping educational institutions maintain and improve the quality of learning by adopting best practices from other institutions. Through the implementation of effective strategies and adaptation to innovative teaching methods, educational institutions can offer learning experiences

that are more responsive to student needs, while strengthening the resilience of education systems in facing the challenges of future crises. Inequality in access to technology and infrastructure readiness is a major challenge, creating a gap in the quality of education between students. In this situation, benchmarking is instrumental in adopting best practices from institutions that have successfully overcome similar constraints, which can improve student engagement and academic achievement. The application of this benchmarking supports institutions in creating relevant and responsive learning experiences, so that education remains quality even in the midst of crisis situations.

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