Strategic Innovation in Improving 21st Century Competencies at SMPN 46 Surabaya

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Abstract

Today's education faces the challenge of preparing students with competencies that are relevant to the demands of the times. This research aims to explore innovative strategies in improving 21st Century competencies at SMPN 46 Surabaya. The research method involved classroom observation, interviews with teachers, and document analysis. Findings show that project-based learning, the use of interactive technology, cooperative learning models, and student-centered approaches are effective in developing 21st Century competencies. In addition, simulation activities, innovative curriculum development, special extracurricular programs, and continuous teacher training also play an important role. The conclusions emphasize the need for inclusive and innovative learning approaches in dealing with the demands of modern education. The findings provide a strong foundation for the development of effective learning strategies to improve students' 21st Century competencies in the future.

INTRODUCTION

The 21st century education landscape, shaped by globalization and rapid technological advancements, underscores, the critical need to cultivate essential competencies like critical thinking, collaboration, communication, and problem-solving among students (Crosta et al., 2023; Le et al., 2022; Maoulida et al., 2023). Fostering these skills is imperative not only enhancing students' competitiveness in the global job market but also for driving societal progress as a whole. Addressing the gap in these competencies is vital for preparing a generation cable of meeting the challenges of the future. Research focusing on innovative strategies to enhance 21st century skills in schools plays pivotal role in fortifying the educational system's capacity to nurture well-rounded individuals equipped to thrive in ever-evolving world.

The introduction, which focuses on the difficulties encountered in SMPN 46 Surabaya, highlights the urgent need to close the gap between traditional curricula and the demands for 21st century capabilities in schools. The lack of integration of innovative learning strategies is identified as a major obstacle hindering the development of these competencies (Yan et al., 2022). The goal of the study is to give a thorough grasp of the obstacles schools face in equipping students with the abilities they need to succeed in the twenty-first century. By bringing these problems to light, the research hopes to make a substantial contribution to the identification of workable solutions for SMPN 46 Surabaya as well as maybe other educational institutions.

In exploring the gaps in understanding the implementation of innovative strategies to enhance 21st century competencies in schools, it is evident that there is a scarcity of research focusing on practical implementation, especially in Indonesian context (Almasco, 2023). While numerous studies discuss the importance of 21st century competencies, there is limited research on specific implementation practices in schools, such as SMPN 46 Surabaya (Ahmar et al., 2023). This study aims to address this gap by delving into the experiences and perspectives of practices at SMPN 46 Surabaya, aiming to identify and evaluate innovative strategies utilized to tackle competencies challenges of the 21st century. By shedding light on these practices, the research endeavours to significantly contribute to the literature on innovative educational strategies in the 21st century, offering valuable insights for educators and policymakers (Kiyikci & Özyurt, 2023).

This study has the potential to make a substantial contribution to the body of knowledge in education by illuminating cutting-edge tactics and methods (Kalalo et al., 2023; Kilag et al., 2023; Susmi et al., 2023). Focusing on secondary schools in Surabaya, the study offers a local and contextual perspective on implementing innovative strategies to enhance 21st century skills (Natsir et al., 2023). The study is distinctive because it provides a thorough understanding of the current teaching methods at SMPN 46 Surabaya, which other schools dealing with comparable issues can use (Soipimai & Sanrattana, 2023). The urgent necessity to match education to modern demands and offer useful information

to educational stakeholders is the basis for the research justification. This study intends to create the foundation for future education policies that are more relevant and effective by clarifying the use of innovative tactics in schools.

Research objectives:

The purpose of this study is to investigate the implementation of innovative strategies at SMPN 46 Surabaya in improving students' 21st Century competencies, as well as to understand teachers' views on these strategies.

Literature Review

The acquisition of 21st century skills is essential in today's classroom for success in the digital era and in a globalized world. These abilities cover a variety of abilities, mindsets, and information required for people to prosper in the quickly changing world of today. Numerous aspects of 21st century competences are highlighted by research, such as digital skills, emotional intelligence, critical thinking, teamwork, communication, creativity, culture, and connectedness (Tkachenko et al., 2023). In order to provide students with transversal abilities that are applicable in a variety of situations and enable them to handle technological improvements, intercultural communication, and the demands of the modern workforce, educators must possess these competencies. Educational practitioners and academics want to make sure that students are ready to take on the opportunities and difficulties of the twenty-first century, thus they concentrate on developing the competences.

METHOD

Research Design

A descriptive qualitative method is used in the study on innovative strategies to enhancing 21st century competencies at SMPN 46 Surabaya in order to explore the intricacies of teaching methods and teacher perspectives (Lukmantya, 2023; Susmi et al., 2023). This approach makes it possible to investigate several aspects in-depth in the classroom. Furthermore, a case study methodology is employed to furnish a comprehensive comprehension of the particular educational setting under examination. The goal of the research is to determine how strategic management can effectively address the issues of the twenty-first century and increase the school's competitiveness by integrating these techniques. The study's qualitative design allows for a thorough analysis of the creative tactics used, providing insights into how they could improve educational effectiveness and quality to meet the needs of the contemporary world.

Research participants.

The participants of this study consisted of teachers who teach at SMPN 46 Surabaya. A total of 15 teachers were purposively selected to participate in this study. The inclusion criteria for participation were a minimum of 2 years of teaching experience at the school and presence in an active teaching position during the research period.

Data Collection

Data was collected through several methods, including classroom observations, semi-structured interviews and document analysis. Observations were conducted directly in selected classrooms to obtain information on learning practices related to 21st century competencies. Semi-structured interviews were conducted with teachers to gain an understanding of their views on the innovative strategies implemented in the school. Documents related to school policies, development plans, and learning materials were also analyzed to complete the understanding of the school context.

Data Analysis

The qualitative data collected was analyzed using a thematic analysis approach. The steps of analysis included transcription of interviews, identification of key themes, and grouping of findings by theme, and interpretation of results in the context of the research questions. The analysis was iterative and involved a process of data verification by other researchers to ensure the validity and reliability of the findings.

Research Ethics

This study was conducted by observing the principles of research ethics, including obtaining permission from the school and informed consent from the study participants. All data were kept confidential and used only for the purpose of this study. The identity of the participants was also kept confidential and the data was published without identifying individual participants.

FINDINGS AND DISCUSSIONS

Findings

Strategies from Classroom Observation

Direct classroom observations revealed a number of strategies that are effective in improving students' 21st century competencies at SMPN 46 Surabaya. One of the main strategies observed was the implementation of project-based learning. Educators are actively involved in designing and presenting challenging projects, which allow students to collaborate, think critically, and solve problems in real contexts. For example, in a collaborative project on environmental research, students were asked to work in groups to design creative solutions to environmental problems relevant to their community.

Observations also show that the use of interactive technology such as computer-based learning software and gadgets is an integral part of the learning process. Teachers carefully integrate these tools into their lessons to increase

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student engagement and facilitate interactive learning. For example, in English language learning, teachers use software that corrects students' pronunciation to help students learn proper pronunciation.

In addition, observation revealed that the cooperative learning model is consistently applied in classes at SMPN 46 Surabaya. This model allows students to work together in small groups to achieve specific learning objectives. In this activity, students are given the opportunity to share knowledge, exchange ideas and work together to achieve a deeper understanding of the learning material. Teachers actively support the interaction between students and provide the direction needed to ensure effective collaboration. Through this collaborative experience, students not only develop social and communication skills, but also learn to work together to achieve a common goal, a skill that is essential in a modern and diverse work environment.

Strategies from Teacher Interviews

In-depth interviews with teachers at SMPN 46 Surabaya provided valuable insights into the strategies they employ to improve students' 21st century competencies. One of the strategies consistently highlighted by the teachers is a student-centered approach to learning. They underline the importance of making learning relevant and meaningful to students by paying attention to their individual interests and needs. These teachers strive to create a supportive environment where students feel valued and motivated to learn. By providing space for students to express their own opinions, ask questions, and develop their own understanding, teachers hope to foster independence and deep curiosity in students.

In addition, teachers also highlighted the importance of simulation and role-play activities in learning. They claimed the added value of simulations that mimic real-world situations or role-based exercises that allow students to experience first-hand the concepts being taught in a safe and controlled environment. For example, in English language learning, teachers use role simulation to enable students to experience and understand how English is used in real-world contexts while developing their analytical and critical skills. By emphasizing practical experience and reflection, teachers hope to move learning from the conceptual level to real-world application, preparing students to face real-world challenges with the necessary confidence and competence.

Strategies from Document Analysis

Analysis of school documents, including curriculum and extracurricular programs, revealed a number of strategies that support the development of 21st Century competencies at SMPN 46 Surabaya. One of the strategies found is the development of an innovative and integrated curriculum. The curriculum is designed for 21st Century skills development through interdisciplinary and project-based approaches. For example, there are specific modules that emphasize collaboration across subjects to complete real-world projects, allowing students to apply their knowledge in contexts relevant to everyday life.

In addition, document analysis also revealed the existence of extracurricular programs specifically designed to develop 21st century skills. These programs include a variety of activities such as Scouting, Qur'an Recitation, Al-Banjari, Samroh, Volleyball, Environmentalism, Paskibra, Taekwondo, Videography, Broadcasting, Voice Guidance, Culinary and Lighter. These activities not only develop practical skills, but also foster creativity, critical thinking and collaboration skills. In addition, the documentation also highlights the importance of continuous teacher training as a strategy to support the implementation of innovative curricula and effective learning strategies. By providing the necessary training and support, schools can ensure that teachers have the necessary skills and knowledge to deliver relevant and meaningful learning, in line with the 21st Century competency development goals.

Discussions

The findings from this study consistently support theories that emphasize the importance of innovative learning approaches in improving students' 21st Century competencies. Project-based learning models, such as STEAM-based approaches, have been shown to effectively improve students' 21st century competencies (Kautsar, 2023). These collaborative projects not only foster critical thinking and problem-solving skills but also enhance collaborative and communicative abilities, essential components of 21st century competence (Kalalo et al., 2023). Additionally, the integration of interactive technology and computer learning software in education aligns with literature, promoting student engagement and digital literacy development (Yang & Cheng, 2023). The observed classroom implementations reflect a conceptual framework emphasizing tangible and contextual learning experiences, which are crucial for skill development in students (Nuraydah et al., 2023).

The significance of student-centered learning strategies in promoting active participation and exploration among students is underscored in various research studies. These strategies align with constructivism theories that emphasize the pivotal role of student-centered learning in knowledge construction (Jasmi et al., 2022; Ntuli, 2022). Student-centered approaches, such as project-based learning, problem-based learning, and argument-based curriculum, empower students to take charge of their education, fostering self-directed learning and critical thinking. While traditional teacher-centered instruction hinders student growth by limiting autonomy and accountability in learning (Levitt & Grubaugh, 2023), student-centered approach like project-based learning promotes deep learning and engagement. Encouraging the implementation of student-centered approaches through professional development, collaboration, and varied teaching methods can enhance the overall learning experience for students.

Implication

The implications of this research finding for existing theories in the literature are significant in the context of modern education development. The findings confirm the importance of integrating innovative student-centered learning approaches in an effort to improve students' 21st Century competencies. By confirming the effectiveness of these

strategies in real contexts, this study provides strong empirical support for theories that emphasize the importance of student-centered and real-life relevant learning experiences in students' skill building.

In addition, the findings of this study have important practical implications for curriculum development and learning strategies in schools. Based on the findings, education policy makers and practitioners may consider integrating more innovative learning approaches in the school curriculum. This can be done through the development of a more flexible and open curriculum that allows teachers to adopt approaches that are relevant to the needs and context of their students. In addition, it is important to provide training for teachers in implementing these strategies so that they can effectively facilitate more engaging and meaningful learning for students. Thus, this study provides a strong empirical foundation and concrete suggestions for the development of more effective curriculum and learning strategies in improving students' 21st Century competencies at SMPN 46 Surabaya, as well as other schools.

Research Limitations

Although this research provides valuable insights into innovative strategies in improving 21st Century competencies at SMPN 46 Surabaya, there are limitations that need to be recognized. These limitations are methodological limitations. While classroom observations, interviews with teachers and document analysis are valid methods for data collection, this study may be limited in geographical scope and the number of participants involved. This may affect the generalizability of the findings to other school contexts or different geographical areas. In addition, there are potential biases in the interpretation of the data, especially in interviews with teachers, where teachers' personal perceptions and experiences may influence their responses. In addition, there are also other factors that affect the validity of the results of this study such as environmental factors, time factors and potentially uncontrollable external factors such as education policy.

For future research, it is important to address these limitations by expanding the sample size and deepening the data analysis. For example, further research could involve more schools with different backgrounds and characteristics, and use a mixed methodology approach to gain a more comprehensive understanding of effective strategies in improving 21st Century competencies. In addition, further research could consider using more structured and objective research instruments, and longitudinal utilization to track the long-term impact of the implemented learning strategies. Thus, further research can provide a deeper and broader understanding of innovative strategies in improving 21st Century competencies in secondary schools.

CONCLUSION

The conclusion of this study shows that the implementation of innovative strategies in learning at SMPN 46 Surabaya has a positive impact in improving students' 21st Century competencies. From direct observation, interviews with teachers, and document analysis, it was found that project-based learning, the use of interactive technology, cooperative learning models, and student-centered approaches are effective strategies. In addition, simulation activities, innovative curriculum development, special extracurricular programs and teacher training also play an important role in developing 21st century competencies. Although there are limitations to this study, such as potential bias and environmental factors affecting the implementation of learning strategies, the findings provide a strong foundation for the development of more inclusive and innovative education in the future. Therefore, follow-up research and further attention to the development of effective learning strategies are expected to strengthen this approach in improving secondary school students' 21st Century competencies.

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