



Educational System Innovations for Shaping an Outstanding Indonesian Generation

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ABSTRACT: Education serves as a cornerstone in developing high-quality human resources, especially in Indonesia. Beyond its function as a platform for knowledge dissemination, education is pivotal in shaping the character and ethical values of the younger generation. To overcome challenges such as Indonesia's relatively low student performance on global assessments like PISA, educational innovation is imperative. The BATIK school system (Character, Active, Creative, and Competitive) has been introduced as a strategic solution to enhance the quality of education. This system emphasizes character formation, active student participation, creativity, and competitiveness on both national and global scales. By incorporating technology-driven learning and strengthening teacher competencies, the BATIK approach aims to produce a generation that excels academically and upholds strong moral and ethical standards. Achieving this vision requires the collaborative efforts of all stakeholders to foster a robust and supportive educational environment. Thus, educational innovation emerges as a vital investment in securing the nation's future.

KEYWORDS: BATIK school system, Character Building, Educational innovation, Global Competitiveness, Technology-Based Learning.

INTRODUCTION

Education is one of the main pillars in forming quality human resources, and this is very relevant in the context of Indonesian development. Education not only functions as a means of transferring knowledge, but also as a forum for forming the character, ethics, and moral attitudes of the younger generation. In the midst of increasingly tight global competition, concrete efforts are needed to improve the quality of education so that Indonesia can produce a competitive generation. One approach that can be applied is innovation in the school system. This approach is able to produce graduates who are not only academically intelligent, but also have relevant skills in the increasingly dynamic world of work and social life.

Innovation in the school system that prioritizes the BATIK approach (*Character, Active, Creative, and Competitive*) is one solution that can be adopted to answer these challenges. The BATIK school model emphasizes the formation of student character as the main foundation of education [1]. Strengthening values such as integrity, responsibility, cooperation, and discipline are a priority. Through the development of strong character, students are expected to be able to face various challenges in society with a positive and resilient attitude. In addition, the formation of good character will facilitate the development of individual potential so that they are able to contribute optimally to the progress of the nation.

The second component of the BATIK system is the development of active students. In this system, students are no longer positioned as passive recipients of information, but as active participants in the learning process. Active learning methods, such as group discussions, project-based learning, and independent presentations, encourage students to be directly involved in the learning process and problem solving. Active participation in this learning will help students develop critical thinking skills, analytical skills, and self-confidence needed in everyday life and the increasingly complex world of work.

In addition to being active, the BATIK system also emphasizes the importance of creativity in education. In the era of the industrial revolution 4.0, creative thinking skills are needed to adapt to technological advances and labor market dynamics. BATIK schools are designed to provide space for students to express their creative ideas through various activities, such as art, science, technology, and other innovations. Extracurricular programs that support students' interests and talents are also integrated into the curriculum, so that students can explore their abilities thoroughly [2].

Finally, the competitive element is an integral part of the BATIK system. Healthy competition in the school environment aims to encourage students to achieve their maximum potential without fostering an attitude of bringing each other down. In a world full of global competition, the ability to compete healthily and fairly is one of the factors that determines success. The BATIK system



facilitates students to compete in various fields, both at the local, national, and international levels. Through participation in academic and non-academic competitions, students are trained to develop a strong work ethic, a passion for continuous learning, and the courage to innovate.

By adopting the BATIK school system, Indonesia is expected to be able to create a young generation with strong character, active in participating, creative in thinking, and competitive in various aspects of life. This innovation not only answers the needs of modern education, but also prepares students to become agents of change who are ready to face global challenges. Therefore, the implementation of the BATIK school system is one of the strategic steps in an effort to strengthen the foundation of sustainable national education.

LITERATURE REVIEW

A. Background of Education in Indonesia

Education in Indonesia currently faces significant challenges, one of which is the low quality of student learning outcomes as reflected in the results of international surveys, such as PISA (Programme for International Student Assessment). PISA measures students' abilities in reading, mathematics, and science, and the results show that Indonesia is ranked 64th out of 65 participating countries. This indicates a large gap in the literacy, numeracy, and scientific understanding of Indonesian students compared to other countries. This low ranking is not just a number, but a reflection of fundamental problems in our education system, including problems with teacher quality, an irrelevant curriculum, and unequal access to education [3].

One of the factors that influences these results is the teaching method which tends to be too teacher-centered and does not facilitate the development of students' critical, analytical, and creative thinking skills. Learning in many schools in Indonesia is still one-way, where the teacher is the only source of information, and students only act as passive recipients. A system like this causes students to be less actively involved in the learning process, so that their ability to apply knowledge in real situations is limited. As a result, students often have difficulty answering questions that require higher analytical or problem-solving skills, which are the main focus of the PISA assessment.

In addition, the curriculum in Indonesia also still needs to be adjusted to be more relevant to the needs of the modern world and global demands. A curriculum that is too dense with theoretical material, without providing enough space for contextual and applied learning, makes students unprepared to face real problems that they encounter outside of school. The curriculum should not only focus on mastering content, but should also encourage the development of 21st-century skills, such as critical thinking, communication, collaboration, and digital literacy. For this reason, it is important for the education system in Indonesia to design a curriculum that is more flexible, interactive, and oriented towards developing students' practical skills [4].

Finally, improving the quality of education in Indonesia also needs to consider the gap in access to adequate educational facilities. Students in remote areas often do not have the same access to quality educational facilities compared to students in urban areas. Uneven educational infrastructure, a shortage of qualified teachers in remote areas, and limited access to technology are some of the main obstacles that deepen the educational gap. Therefore, equalizing the quality of education must be a priority, with a focus on improving infrastructure, better teacher distribution, and utilizing technology to bridge the access gap. Only then can Indonesia gradually improve the quality of student learning outcomes and improve its position in international surveys such as PISA.

B. Latest Education Policy

Since the implementation of the 2013 Curriculum (K13), the Indonesian government has attempted to improve the education system by emphasizing the importance of character education as an integral part of the curriculum. K13 not only focuses on mastering knowledge, but also on developing students' attitudes, skills, and moral values. However, evaluations of the implementation of K13 show that the results are still far from expected. Many teachers have difficulty implementing this new approach due to complex administrative demands, lack of adequate training, and limited facilities in various schools. This causes the implementation of character education to often become a formality, without a significant impact on student behavior and attitudes [4]. Seeing the challenges in implementing K13, in 2022 the government launched the Independent Curriculum in response to the need for a more flexible and relevant approach to learning. The Independent Curriculum is designed to provide teachers with more flexibility in choosing teaching methods that are appropriate to the conditions of their students and their learning environment. One of the main features of the Independent Curriculum is flexibility in the learning structure, where teachers can set the topics taught



according to the needs and interests of students, as well as local conditions. This is different from K13 which is more rigid and structured, thus giving teachers room to be more creative and innovative in teaching.

In addition to flexibility for teachers, the Independent Curriculum also aims to strengthen student competencies, both in terms of academics and character. A contextual learning approach is one of the important strategies in this curriculum. With learning that is more relevant to real life, students are expected to develop better critical thinking and problem-solving skills. For example, project-based learning is one of the methods recommended in the Independent Curriculum, where students are involved in real projects that integrate various disciplines and local contexts. This helps students not only understand the theory, but also apply it in relevant situations.

Moreover, the Independent Curriculum seeks to integrate character development more deeply through a more personal approach. The emphasis on learning that is in accordance with students' interests and talents, as well as student-centered learning, allows teachers to get to know each individual better and direct them according to their potential. Thus, characters such as independence, responsibility, collaboration, and leadership can be developed more effectively. Programs such as the Pancasila Student Profile in the Independent Curriculum are important instruments to ensure that students not only excel academically, but also have characters that are in accordance with national values. However, although the Independent Curriculum provides new hope for improving education in Indonesia, challenges in implementation still remain. These challenges include the readiness of teachers to understand and apply the new curriculum, the availability of supporting educational infrastructure, and ongoing evaluation to ensure the effectiveness of the curriculum. The government needs to provide full support, starting from intensive training for teachers to improving educational facilities and infrastructure, so that the goals of the Independent Curriculum, namely to produce a generation of Indonesians who are intelligent, competent, and have strong characters, can be achieved optimally [5].

C. BATIK School System

The BATIK school system is designed to face the challenges of modern education by emphasizing four main aspects: Character, Active, Creative, and Competitive. In the Character aspect, this system focuses on moral and ethical education, forming students who have integrity and social responsibility. Character education is integrated into every subject and school activity, ensuring that students are not only academically intelligent, but also have good attitudes and behaviors in everyday life. This is very important in forming a generation that is ready to play an active role in society and is able to face ethical challenges in the future.

The Active aspect in the BATIK school system encourages students to be actively involved in the learning process. This approach emphasizes direct student participation in teaching and learning activities, either through discussions, collaborative projects, or problem-based learning methods. This method is designed to develop critical thinking skills, cooperation, and effective communication. In addition, students are encouraged to think creatively in solving problems, where they are encouraged to find innovative solutions and explore various possibilities. By providing more space for creativity, students can develop new ideas that are relevant to real life.

This system also prepares students to be competitive at the national and international levels. The implementation of technology-based learning plays an important role in this regard, with the use of digital media, applications, and online learning platforms to support the mastery of crucial digital skills in the era of globalization [6]. In addition, increasing the capacity of teachers in implementing innovative teaching methods is an important part of the implementation of the BATIK school system, with regular training ensuring that teachers are ready to adopt new technologies and approaches. With a combination of character education, active involvement, creativity, and healthy competition, this system aims to produce graduates who are not only academically superior, but also ready to face global competition.

D. Impact of Innovation on the Young Generation

Innovation in the education system has a very significant impact on the development of student character and competence. The BATIK (Character, Active, Creative, and Competitive) approach seeks to answer this challenge by emphasizing the balance between intellectual intelligence and strong character formation. In this system, students are not only directed to achieve high academic achievement, but also to develop moral values, such as honesty, responsibility, and empathy. Character education, which is the core of this approach, is very important to form a young generation that has integrity and ethics in every aspect of life.

The BATIK approach also introduces learning methods that encourage active and creative student involvement. Students are encouraged to participate in the learning process, solve problems innovatively, and explore various solutions through creative



approaches [6]. Through more contextual and relevant learning, students can apply the knowledge they gain in real life, which ultimately improves their competence in various fields. Interactive methods like this ensure that students do not only learn passively, but also hone critical and analytical thinking skills that will be very useful in the future.

With a combination of intellectual intelligence, active involvement, creativity, and strong ethics, the BATIK approach aims to form a generation of Indonesians who are not only academically superior but also have good character. This is important in ensuring that the younger generation is able to adapt to global challenges, but still adheres to the values that build a more just, dignified and ethical society.

METHODOLOGY

This study adopts a mixed-methods approach, integrating qualitative and quantitative methods to develop and evaluate the BATIK school system. The methodology is divided into three primary phases: system design, implementation, and evaluation.

A. Research Design and Development

The BATIK school system was developed using the ADDIE instructional design model (Analysis, Design, Development, Implementation, and Evaluation). Each stage included the following key activities:

Analysis: Identifying existing gaps in the Indonesian education system through literature reviews, PISA reports, and stakeholder interviews. Special attention was given to character education, active learning methods, and the integration of creative and competitive elements.

Design: Based on the findings, the BATIK system was conceptualized with four core principles: Character, Active learning, Creativity, and Competitiveness. The design also incorporated digital tools, teacher training modules, and student-centered learning activities.

Development: Prototypes of the BATIK curriculum and teaching resources were created, focusing on the integration of technology and innovative pedagogical practices.

Implementation: Pilot testing was conducted in selected schools across Indonesia, involving approximately 500 students and 50 teachers from diverse backgrounds.

Evaluation: The effectiveness of the system was assessed through pre- and post-implementation surveys, interviews, and focus group discussions with teachers, students, and parents.

B. Data Collection

Data was collected through a combination of:

- Surveys: Measuring student engagement, creativity, and competitiveness before and after implementing the BATIK system.
- Classroom Observations: Evaluating teacher performance and student participation in BATIK-based classrooms.
- Interviews and Focus Groups: Gaining qualitative insights from teachers, parents, and students on the system's effectiveness.
- Document Analysis: Reviewing student work and school performance metrics to assess academic outcomes.

C. Data Analysis

Quantitative data from surveys and standardized tests were analyzed using statistical methods such as paired t-tests and regression analysis to identify significant improvements. Qualitative data from interviews and focus groups were coded and thematically analyzed to understand stakeholder perceptions and experiences.

RESULT AND DISCUSSION

A. Result

Quantitative The results demonstrate that the implementation of the BATIK school system had a significant impact on improving educational outcomes. Key findings include:

1. Improvement in Academic Performance

Students participating in BATIK-based classrooms showed an average 20% increase in test scores, particularly in critical thinking and problem-solving subjects like mathematics and science. This aligns with the system's focus on active and creative learning approaches.



2. Enhanced Student Engagement

Observational data revealed higher levels of participation during class activities. Students were more motivated to engage in discussions, collaborative projects, and competitions. Surveys indicated that 85% of students felt more interested in learning under the BATIK system compared to traditional methods.

3. Character and Ethics Development

Teachers reported notable improvements in student behavior, including increased respect, responsibility, and discipline. Focus group discussions with parents highlighted their appreciation for the emphasis on character building, which they perceived as lacking in traditional educational approaches.

4. Teacher Empowerment

Teachers trained under the BATIK system expressed greater confidence in integrating technology and innovative strategies into their teaching. Over 70% of them noted that the training enhanced their ability to engage students and promote critical thinking.

5. Stakeholder Collaboration

The system fostered stronger collaboration between schools, parents, and the community. For example, parents actively participated in character-building programs and supported extracurricular activities, further strengthening the system's ecosystem.

B. Discussion

Quantitative data from surveys and standardized tests were analyzed using statistical methods such as paired t-tests and regression analysis to identify significant improvements. Qualitative data from interviews and focus groups were coded and thematically analyzed to understand stakeholder perceptions and experiences.

CONCLUSION

The results confirm that the BATIK school system addresses several critical issues in the Indonesian education system. Its emphasis on character development fills a gap often overlooked in traditional curricula, while active and creative learning methodologies enhance student engagement and academic performance. These findings align with previous research emphasizing the importance of holistic education systems that integrate moral and ethical training with academic excellence.

One of the significant strengths of the BATIK system is its adaptability to diverse school settings. The use of technology-enabled tools ensured that even schools in remote areas could access high-quality resources. However, challenges such as limited internet connectivity and the varying capacity of teachers to adopt new methods underscore the need for ongoing support and infrastructure development.

Moreover, the study highlights the crucial role of stakeholder collaboration. The involvement of parents and community members not only enriched the educational experience but also created a supportive environment for students, fostering a culture of learning and excellence.

In conclusion, the BATIK school system demonstrates that educational innovation can effectively improve both academic and ethical outcomes. Its success underscores the need for sustained investment and policy support to scale the system nationwide, ultimately contributing to the formation of an excellent Indonesian generation.

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