Strategic Leadership of School Principals in Enhancing Character Education in the Digital Literacy Era

Dhanu Lukmantoro*, Nunuk Hariyati, Yatim Riyanto, Sri Setyowati
State University of Surabaya, Surabaya, Indonesia

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ABSTRACT

Objective: This research aims to explore the strategies employed by school principals to enhance character education through digital literacy at 3rd Sidoarjo State Senior High School, providing detailed insights into goal-setting processes and strategies. **Method:** The study utilizes a qualitative approach, involving informants such as school principals, vice principals, subject teachers, and education staff. Data collection includes interviews, field notes, and other relevant materials. Systematic data analysis is performed by categorizing, synthesizing, and identifying patterns to derive meaningful findings. **Results:** The findings reveal significant positive impacts on students, teachers, parents, and the school environment. Students show improved discipline, reduced delinquency, and enhanced digital responsibility. Teachers display better attendance and a deeper understanding of their role as role models. Increased parental involvement in school activities fosters a collaborative atmosphere. The school's management and community engagement have also improved, contributing to a supportive educational environment. **Novelty:** This study uniquely integrates character education with digital literacy, demonstrating a holistic approach to educational enhancement. It highlights the interconnectedness of ethical digital behavior and character development, offering a comprehensive model for other schools to emulate. The research underscores the importance of continuous evaluation and the inclusion of diverse perspectives to sustain and evolve effective character education programs in the digital age.

INTRODUCTION

National education aims to be able to develop the potential of students so that they can become human beings who believe, fear God Almighty, have noble character, capable, independent, creative, and become democratic and responsible citizens. The national education system in Indonesia is run by referring to Pancasila and the 1945 Constitution which prioritizes noble character and morals. The strategy of implementing character education through portfolio-based multiple intelligence can accommodate theories about the four pillars of education that view learning as a process, how to know, how to do, how to be and how to live together which are used as the basis for developing student learning capabilities (Fan et al., 2021; Saepuddin, 2023; Septiani et al., 2020; Tur et al., 2023; Yawisah et al., 2019).

Multiple intelligence is needed to understand what students know for, what they learn for, what they do for, and how to benefit themselves and benefit their environment. By understanding this, it is expected that students will not only do learning with a sense of compulsion just to obey what has been conveyed by their teacher, but they are expected to really understand the purpose of learning, so that learning can be more meaningful (Banoğlu et al., 2022; Critcher et al., 2020; Muhammad Ilham, 2021; Ritonga, 2022; Susilo et al., 2022; Tołwińska, 2021).

Technology literacy is an ability to use technology to maximize the function of the technology itself. This includes understanding macro systems, adaptability to technology, system behavior. Digital literacy is a more general skill, namely life and career skills, skills in learning and innovating, and skills in utilizing information, media, and technology (Anthonysamy et al., 2020; Audrin & Audrin, 2022; Kateryna, 2020; Rinekso et al., 2021). Life and career skills have components, namely (1) flexibility and adaptability, (2) initiative and self-regulation, (3) social and inter-cultural interaction, (4) productivity and accountability managing projects and producing products, and (5) leadership and responsibility. These life skills are in line with those expected in the twenty-first century.

Data on the deterioration of student character which is a negative impact of digital literacy can be seen from the academic and non-academic sides. This academic side can be seen from the dependence of students looking for answers to questions instantly from the internet, copy and paste answers from friends through social media, limited data in accessing the internet when studying from home so that students choose places that are free internet such as coffee shops that can have a negative impact on them. Meanwhile, from the non-academic side, it can be seen from the decline in the character values of politeness and ethics of students. Improving character education is certainly an obligation in digital literacy which is full of negative influences, so improving character education to students is very necessary to be instilled (Hanafiah et al., 2022; Hijrawatil Aswat et al., 2022; Karmini, 2022; Khoir et al., 2024). Character education research has indeed been conducted. But in this study, researchers focused on how the principal's leadership in strengthening character education in the digital literacy era.

Hence, the objectives of this research: this study aims to describe and analyze: 1) Head leadership strategies in strengthening character education in the digital literacy era; 2) A curriculum that contains strengthening character education in the era of digital literacy; 3) The environment of strengthening character education in digital literacy can be collaborated/integrated into: curriculum, learning, intra and extra coaching, school culture and environment, so as to be an example for school residents at 3rd Sidoarjo State Senior High School.

RESEARCH METHOD

This exploratory research aims to investigate the strategies employed by school principals to enhance character education through digital literacy. The study seeks to provide comprehensive information on the goal-setting processes and strategies utilized by school principals to strengthen character education within the context of digital literacy. The research involves informants including school principals, vice principals, subject teachers, and education staff. Consequently, the leadership of character education in digital literacy within schools is examined thoroughly and naturally, resulting in a descriptive analysis and report. This study used analysis techniques: 1) in-depth interviews; 2) participant observation; and 3) document studies. This research data validity technique uses four kinds of criteria, namely credibility, transferability, dependability and confirmability (Saphira et al., 2022).

Figure 1. Research flowchart.

Data analysis techniques involve systematically searching and organizing interview transcripts, field notes, and other collected materials. The analysis process includes examining the data, categorizing it to facilitate researcher understanding, synthesizing information, identifying patterns, uncovering significant findings, and systematically reporting the research outcomes.

RESULTS AND DISCUSSION
Results
Strengthening character education is a program that must be implemented by educational units that can be implemented through the curriculum. 3rd Sidoarjo State Senior High School is one of the schools that implements strengthening character education to face the era of digital literacy which has now become a habit in the digital era. The vision formulated by 3rd Sidoarjo State Senior High School has also included elements of character education, namely: The realization of quality schools in independent learning for the achievement of the Pancasila student profile. From this vision, it can be interpreted that 3rd Sidoarjo State Senior High School has aimed to instill character education to form students who are in accordance with the profile of Pancasila students.

Based on the interview results, 3rd Sidoarjo State Senior High School has implemented an independent curriculum, as stated by Ristiwi Peni as the principal as follows.

> *3rd Sidoarjo State Senior High School has used the Merdeka Curriculum starting from the 2021/2022 Academic Year. So this year is the second year for the implementation of the independent curriculum in this school. (W. 1/WKS/Smantig/V/04-03-2022)*

The results of the interview explained that 3rd Sidoarjo State Senior High School has been running for 2 years in using the Merdeka Curriculum. That means that in strengthening character education today, 3rd Sidoarjo State Senior High School implements it in the independent curriculum. This is in accordance with the interview results that the curriculum structure of 3rd Sidoarjo State Senior High School has contained character education. The implementation of strengthening character education in the era of digital literacy at 3rd Sidoarjo State Senior High School using the Independent Curriculum is integrated into intracurricular, co-curricular, and extracurricular activities, as stated by Ristiwi Peni, the principal of 3rd Sidoarjo State Senior High School.

> *The application of character education in learning is carried out in the form of habituation both in the learning process, and character strengthening in project learning and habituation through extracurricular activities. (W. 1/KS/Smantig/V/04-03-2022)*

The principal's statement shows that the application of character education at 3rd Sidoarjo State Senior High School is integrated into the independent curriculum through habituations applied in classroom subjects, learning activities for the Pancasila Student Profile Strengthening Project (P5), and habituation through extracurricular activities.

Based on the curriculum carried out at 3rd Sidoarjo State Senior High School, namely the independent curriculum, habituation of character education in the era of digital literacy through subjects starts from the preparation of learning tools that include the cultivation of character education. As in accordance with the statement of Ristiwi Peni as a teacher at 3rd Sidoarjo State Senior High School as follows:

> *In the teaching module, we have implemented character education strengthening by formulating character strengthening learning objectives based on dimensions, elements and sub-elements of the Pancasila Student Profile. Then the achievement of objectives is carried out through activities or learning steps from the initial activity, core activities, and closing activities. (W. 1/GR/Smantig/V/04-03-2022)*

The teacher's statement explained that in the preparation of learning activities, teachers must include character education that refers to the dimensions of the Pancasila Student Profile so that automatically character education has been carried out by students when they learn a subject matter.

In accordance with the statement of the principal of 3rd Sidoarjo State Senior High School, the strengthening of character education in the era of digital literacy in the independent curriculum that is carried out is also carried out through habituation of project activities to strengthen the profile of Pancasila students and extracurricular activities. In its application, as well as the application of character education in intracurricular activities, character education through P5 activities and extracurricular activities also begins with the formulation of learning objectives that include the dimensions of the Pancasila student profile to then be applied to each learning activity. This is in accordance with the statement of Ristiwi Peni as the principal as follows.

> *Currently, the Independent Curriculum has been implemented with the big goal being the Achievement of the Pancasila Student Profile which consists of 6 dimensions. So that the right character strengthening is through Intracurricular learningProject for Strengthening the Profile of Pancasila Students and extracurriculars. In this learning, it is necessary to formulate character strengthening learning objectives first, then carried out through real habituation in learning poses. So the essence of this habituation is really carried out in the learning process in all subjects, in all projects and in all extracurricular activities. (W. 1/KS/Smantig/V/04-03-2022)*

Based on this statement, it shows that SMA Negeri 3 is very concerned about the purpose of the curriculum used, namely the independent curriculum to realize the profile of Pancasila students. Therefore, in every classroom learning activity, project activity, and extracurricular activity, 3rd Sidoarjo State Senior High School has provided character education through real habits carried out as a form of manifestation of the formation of the Pancasila student profile.

Supervision of strengthening character education in the digital literacy era at 3rd Sidoarjo State Senior High School creates a solid foundation to ensure the continuity

and effectiveness of the program. The headmaster and leadership play a crucial role in overseeing the implementation process, ensuring that all components of the program are on track. Through regular meetings and periodic evaluations, principals can directly monitor the progress of character strengthening and digital literacy at all school levels.

Supervision is not only limited to administrative aspects, but also involves the quality of learning in the classroom. Direct observation of teacher teaching methods and student interaction in the digital environment becomes an integral part of the supervision process. Through the development of specific evaluation instruments, principals and supervisory staff can measure the extent to which aspects of character and digital literacy are integrated in day-to-day teaching.

Reporting systems and feedback from teachers, staff, and students are becoming important tools in supervision. This opens up room for continuous improvement and adjustment of the program according to emerging needs. Supervisors can also ensure that teachers receive adequate support through relevant training and resources to improve the quality of their teaching. In addition, supervision is directed at the management and security aspects of digital literacy at 3rd Sidoarjo State Senior High School. Ensuring that online safety policies are implemented effectively and overseeing students' use of technology are key concerns. Regular digital security audits can help identify risks and ensure that online learning environments remain secure.

Cooperation with external parties such as digital literacy institutions or cybersecurity experts can provide additional insights and ensure that 3rd Sidoarjo State Senior High School remains at the forefront in facing changes and challenges in the digital literacy era. With careful supervision, 3rd Sidoarjo State Senior High School can ensure that strengthening character education in the digital literacy era is not just an initiative, but a continuous commitment to create a learning environment that is safe, responsive, and in accordance with the demands of the times. This is evidenced by the results of the interview as follows.

> *Assessment is carried out through Observation Techniques in Intracurricular, P5 and Extracurricular Projects by first formulating Learning Objectives oriented to the Pancasila Student Profile Dimensions, elements and sub-elements and involving external parties in the use of technology. (W. 1/KS/Smantig/V/04-03-2022)*

The environment of strengthening character education in digital literacy at 3rd Sidoarjo State Senior High School summarizes various aspects that can be collaborated to create role models among school residents. First of all, collaboration within the curriculum is the main foundation for integrating digital literacy and character. A deep understanding of the concept of digital literacy and character values must be embodied in the curriculum structure so that each subject has a balanced contribution in shaping the character of students. Then, in the context of learning, a collaborative approach engages teachers and students to create learning experiences that blend digital literacy and character development. Active learning that promotes hands-on practice and reflective discussion can improve students' understanding of online ethics, digital responsibility, and critical ability to consume information online. Strengthening character education in the children's environment plays a crucial role in forming a generation with integrity and resilience. One vivid example of this approach is the program "Character Development that Starts with Students and for Students," which gives students an active role in their own character-building process. The program

encourages student participation in extracurricular activities, the development of social initiatives, and the application of character values in daily life.

In addition, the "Anti-Violence and Change Agents" program demonstrates a commitment to creating a safe and supportive environment for children. The program not only focuses on violence prevention, but also empowers students to become agents of positive change in their environment. This includes conflict skills training, peace advocacy, and the formation of supportive communities. Furthermore, the program "Preparation and Implementation of Class Beliefs" provides a special approach in developing character in the child's environment. By building shared beliefs and values in each class, the program creates a strong foundation for cooperation and empathy among students. This approach not only focuses on building individual character but also creating positive social bonds among students.

These three are concrete examples of how character strengthening approaches in the child's environment can be implemented effectively. By giving students an active role, creating a safe environment, and building shared values, these programs become an important foundation in shaping children's character to become responsible, caring, and empowered individuals. This is reinforced by the results of the interview as follows.

Strengthening Character Education in the Child Environment: Character development that starts from Students and for Students. The Antiviolence and Change Agents Program mentioned above is an example. Then also the Preparation and Implementation of Class Beliefs program, felt to be quite effective in developing character in the child's environment. (W. 1/KS/Smantig/V/04-03-2022)

Intra- and extra-school coaching becomes a space to develop student character through activities such as digital literacy clubs, volunteer activities, or technology skills training. In coaching, the role of educators not only focuses on academic aspects but also on fostering students' character as an integral part of their personal development. The implementation is in extracurricular activities that are well managed, through the preparation of structured programs and high implementation oriented to achievement, can make a significant contribution to the development of student character. Coaching teachers have a central role in monitoring and ensuring the effectiveness of extracurricular activities related to character development. Within this framework, the coaching teacher works alongside external instructors to ensure that each practice session goes according to the program objectives.

Monitoring of students' character development is carried out effectively through observation, participation and attendance in each practice session. The coaching teacher acts as a direct monitor who can provide direct feedback on the development of student character during extracurricular activities. These observations include aspects of engagement, teamwork, leadership, and other values instilled through the activity.

In addition, external instructors contribute to the assessment of students' character through their objective perspective. Collaboration between coaching teachers and external instructors creates a comprehensive evaluation framework, enabling a more holistic understanding of student character development. Assessment is not only focused on achieving mere achievements but also on aspects of soft skills and character values instilled during activities.

Thus, through good management, cooperation between coaching teachers and external instructors, and holistic assessment of student participation and attendance

observations, extracurricular activities become effective vehicles for student character development outside the classroom. This is reinforced by the results of the interview as follows.

Extracurricular activities are well managed through the preparation of programs with high implementation and achievement-oriented. In terms of character development, extracurriculars are effectively monitored by the coaching teacher in addition to external instructors. Assessment is carried out through observation, participation and attendance in each training session. All extracurriculars at 3rd Sidoarjo State Senior High School, which number 19 types, are directed at developing achievement and character. Its application is carried out in line with the implementation of training activities with assessment through observation by Coaches and Instructors. (W. 1/KS/Smantig/V/04-03-2022)

A conducive school culture and environment for strengthening character education must be realized through collaboration between school residents. Concerted efforts to create positive norms in technology use, awareness of online risks, and support the implementation of digital security policies can create a safe and ethical environment. The development of school culture in line with the strengthening of character education at 3rd Sidoarjo State Senior High School provides a solid foundation to build a sense of discipline and responsibility, mutual respect, and a spirit of mutual cooperation. In the context of the Pancasila Student Profile Dimension, school policy focuses on building student character that reflects the noble values of Pancasila. The culture of discipline is emphasized through the implementation of programs that prioritize the values of honesty, diligence, and responsibility in every educational activity.

In addition, mutual respect and mutual assistance are an inseparable part of the school culture at 3rd Sidoarjo State Senior High School. Extracurricular programs, classroom activities, and other school activities are designed to encourage positive interaction among students, teachers, and staff. The application of ethical rules and norms is the foundation in creating an environment that respects differences and supports cooperation between school residents.

The importance of Pancasila values in shaping student character is reflected in the way the school manages and directs its school life. Therefore, the development of school culture at 3rd Sidoarjo State Senior High School is not only limited to the delivery of academic knowledge, but also a concrete effort to form a young generation who have integrity, a sense of responsibility, and readiness to contribute positively to society. This is evidenced by the results of the interview as follows.

The development of School Culture is in line with the strengthening of character education that builds a sense of discipline and responsibility, mutual respect and mutual cooperation in accordance with the Pancasila Student Profile Dimension. (W. 1/KS/Smantig/V/04-03-2022)

Finally, being an example for school residents involves the whole community. Teachers as role models in the classroom, principals who provide clear direction, and active participation of parents in supporting the strengthening of their children's character and digital literacy are important elements in creating consistent role models. 3rd Sidoarjo State Senior High School provides a good example in the aspects of

discipline and responsibility, as well as in creating a culture of mutual respect and cooperation among all school members. In terms of discipline and responsibility, the school affirms ethical rules and norms as a guide for students and staff. Enforcement of such rules creates a structured environment and builds awareness of each individual's responsibility to duties and behaviors.

Learning at 3rd Sidoarjo State Senior High School is consistently centered on the needs of students. This approach reflects the school's responsibility to understand the characteristics and potential of each student. Teachers are geared towards personalising learning, identifying individual needs, and providing appropriate support. This focus on the needs of learners encourages students' active participation in the learning process, creating an inclusive and growth-oriented environment.

In addition, a culture of mutual respect and cooperation is a strong foundation at 3rd Sidoarjo State Senior High School. Extracurricular initiatives and activities are designed to promote cooperation among students, team building, and increase social engagement. The application of values such as honesty, empathy, and tolerance supports the establishment of a school culture that maintains respect for diversity.

By providing exemplary examples in aspects of discipline, responsibility, mutual respect, and cooperation, 3rd Sidoarjo State Senior High School is not only a place of education, but also an environment that motivates students to grow as responsible, ethical, and able to collaborate individuals in society. This is reinforced by the results of the interview as follows.

> *The example given by the School is quite good, especially in terms of: discipline and responsibility, mutual respect and cooperation. Learning is centered and oriented to the needs of learners. Parental involvement is carried out through Seklah Activity Program Discussion activities during the preparation of RKAS. The school explores the aspirations of parents for character strengthening, as well as in parenting skills activities that can improve the skills and effectiveness of parents in providing assistance to children. (W. 1/KS/Smantig/V/04-03-2022)*

By collaborating on all these aspects, 3rd Sidoarjo State Senior High School can become an educational institution that not only excels academically but also produces graduates who have strong character and good digital literacy, ready to face the modern era with a high work ethic and deep social responsibility.

Discussion

The evaluation of strengthening character education in the digital literacy era at 3rd Sidoarjo State Senior High School is a critical step in ensuring the success and relevance of this program. Using a variety of evaluation methods, schools can gain deep insights into the impact of programs on students' character development and their digital literacy skills (Alt & Raichel, 2020; Martzoukou et al., 2024; Morgan et al., 2022; Quaicoe & Pata, 2020; Timotheou et al., 2023). First, evaluation can be done through measuring predetermined performance indicators, such as increasing understanding of online ethics, digital responsibility, and critical thinking skills in consuming online information.

In addition, the application of surveys and interviews to students, teachers, and parents can provide diverse perspectives on the effectiveness of the program. Surveys can include aspects such as satisfaction levels, changes in student behavior, and parents'

understanding of the role of digital literacy in their children's character formation (Chen et al., 2022; Kong & Wang, 2021; Li & Chu, 2021; Martzoukou et al., 2024; Sholehuddin et al., 2023; Susanto, 2021). In-depth interviews can provide richer context and an in-depth understanding of individual experiences of character strengthening and digital literacy.

The use of exam result data or character assessment on a regular basis is also an important element in evaluation. Analysis of these results can help schools to identify specific successes or shortcomings in achieving character strengthening and digital literacy goals. In addition, direct observation by the evaluation team can provide an overview of how the program is implemented in the classroom and the extent to which teachers and students are involved in the learning process.

The evaluation must be continuous, allowing 3rd Sidoarjo State Senior High School to adjust strategies and actions based on previous evaluation findings. Schools must be able to respond quickly to changes in digital literacy dynamics and ensure that programs remain relevant to students' needs and the demands of the times (Abdurrahman et al., 2019; Al Husaeni & Nandiyanto, 2022; Gass et al., 2021; Godwin & Kirn, 2020; Hadgraft & Kolmos, 2020). In addition, the involvement of external parties, such as research institutions or digital literacy experts, can provide a valuable independent point of view to assess the overall effectiveness of the program. With a holistic and continuous evaluation approach, 3rd Sidoarjo State Senior High School can ensure that strengthening character education in the digital literacy era is not only a temporary initiative, but a continuous effort to create an educational environment that is responsive, quality, and in accordance with the demands of the times.

Strengthening character education at 3rd Sidoarjo State Senior High School has had a significant impact on various related parties, including students, teachers, parents/guardians, schools, school environments, and children's neighborhoods. For students, there is a decrease in the problem of juvenile delinquency in schools, which can be attributed to the formation of strong character. Student discipline is increasingly well developed, as seen from the fairly good attendance and the decrease in late attendance at school over the past few years.

Teachers also feel the positive impact of strengthening character education. Teacher attendance is better as a form of discipline, and delays are rare. Teachers are also increasingly aware of their important role as role models for students, strengthening the connection between teacher example and student character development. Parents or guardians also found positive changes, especially in attention to children's problems at school. Parental involvement in duties and responsibilities related to school administration increases, creating positive collaboration between schools and families in supporting children's character education.

From the perspective of the school, strengthening character education improves school management and opening up to the community as a form of responsibility. The school environment, both internal and external, provides support to school services to the user community, unlocking the potential for school development and progress. Although the impact on the environment where children live is difficult to observe objectively due to the large number of students, nevertheless, strengthening character education can have a positive impact on the quality of life in the environment where children live. Awareness of the importance of character education can create a positive culture around where students live. Overall, strengthening character education at 3rd Sidoarjo State Senior High School is not just an educational strategy, but a holistic

initiative that creates positive changes in various aspects of the lives of students, teachers, parents, schools, school environments, and children's neighborhoods.

CONCLUSION

Fundamental Finding : The evaluation of character education enhancement in the digital literacy era at 3rd Sidoarjo State Senior High School reveals several key outcomes. The program has significantly impacted various stakeholders, including students, teachers, parents, and the school environment. Students have shown improved discipline, reduced delinquency, and enhanced understanding of digital ethics and responsibility. Teachers exhibit better attendance and recognize their crucial role as role models. Parents are more involved in school-related responsibilities, fostering a collaborative environment. The school itself has improved management and accountability, gaining support from the broader community. **Implication :** These findings imply that character education integrated with digital literacy can lead to comprehensive improvements in the educational environment. For students, it enhances not only academic performance but also personal development and social behavior. Teachers benefit from a more disciplined and engaged approach, while parents become active participants in their children's education. The school's overall functionality and community engagement improve, highlighting the program's positive ripple effect beyond the classroom. **Limitation :** Despite these successes, the study has limitations. The impact on students' home environments remains challenging to measure objectively due to the large student body. Additionally, while positive changes are noted, the research might not fully capture the depth of individual experiences or the variability in program implementation across different contexts. There may also be biases in self-reported data from surveys and interviews. **Future Research :** Future research should aim to address these limitations by incorporating longitudinal studies to track long-term impacts and using mixed methods to gather more nuanced data. Exploring the influence of character education on students' home environments and community culture could provide a more holistic understanding. Additionally, involving external experts in digital literacy and character education can offer independent evaluations and new insights to refine and enhance the program further.

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* Dr. Dhanu Lukmantoro (Corresponding Author)
Department of Graduate School, Education Management
State University of Surabaya,
Jl. Lidah Wetan No.1 Surabaya, East Java, 60213, Indonesia
Email: danu.lukmantoro@gmail.com

Dr. Nunuk Hariyati
Department of Graduate School, Education Management
State University of Surabaya,
Jl. Lidah Wetan No.1 Surabaya, East Java, 60213, Indonesia
Email: nunukhariyati@unesa.ac.id

Prof. Yatim Riyanto
Department of Graduate School, Education Management
State University of Surabaya,
Jl. Lidah Wetan No.1 Surabaya, East Java, 60213, Indonesia
Email: jatimriyanto@gmail.com

Dr. Sri Setyowati
Department of Graduate School, Education Management
State University of Surabaya,
Jl. Lidah Wetan No.1 Surabaya, East Java, 60213, Indonesia
Email: srisetyowati@unesa.ac.id