



## Utilization of Application-Based Technology for Strengthening Students' Religious Character through the Hidden Curriculum

Syukri Indra\*, Siti Pupu Fauiah, Zahra Khusnul Latifah, Muhammad Rendi Ramdhani, Abdul Kholik, Namira Fauziah

Universitas Djuanda, Indonesia

\*Correspondence: E-mail: [syukri.indra@unida.ac.id](mailto:syukri.indra@unida.ac.id)

### ABSTRACT

This study aimed to examine the utilization of an application-based Character Improvement System (CIS) to strengthen students' religious character through integration with the hidden curriculum. A qualitative case study approach was employed, using interviews, observations, and documentation to collect data from teachers, students, and parents. The findings showed that the implementation of the hidden curriculum through religious practices was reinforced by CIS, which recorded, monitored, and rewarded students' daily behaviors. The system encouraged discipline, honesty, and responsibility because every positive action was systematically appreciated and became a school habit. The integration of CIS with the hidden curriculum created measurable and transparent supervision that involved collaboration among teachers, parents, and students. This research contributes novelty by demonstrating how digital applications can support character formation beyond formal instruction. The impact is to provide schools with a replicable model for cultivating noble values consistently and sustainably.

### ARTICLE INFO

#### Article History:

Submitted/Received 10 May 2025

First Revised 21 Jun 2025

Accepted 23 Aug 2025

First Available online 24 Aug 2025

Publication Date 01 Mar 2026

#### Keyword:

Character education,  
Educational technology,  
Hidden curriculum,  
Religious values,  
Supervision.

## 1. INTRODUCTION

The integration of technology in education has created new opportunities (Al Husaeni *et al.*, 2024). Especially, it is for strengthening student character (Ammatulloh *et al.*, 2022; Riyanto *et al.*, 2022; Fahrannisa *et al.*, 2022; Nabil & Nugraha, 2024; Nugraha, 2023), especially in the area of religious values. Character education is not limited to explicit subjects only, but it is also shaped by the hidden curriculum, namely, unwritten values, habits, and cultural practices that influence students' behavior in schools. The hidden curriculum provides an environment where moral and spiritual values are internalized through daily practices, interactions, and routines that complement the formal curriculum. In this context, the development of an application-based Character Improvement System (CIS) represents an innovative approach to making religious character formation more structured, measurable, and sustainable. The CIS assists teachers and schools in monitoring, guiding, and evaluating the growth of students' religious character while ensuring integration with the hidden curriculum, where values are transmitted through school culture and daily practices. This approach allows character education to move beyond theory and into practical, lived experiences in school settings (Syafei & Abdillah, 2020).

Previous studies have highlighted the potential of technology to support character education in various ways, such as the use of digital learning media to strengthen religious character (Muhammad *et al.*, 2021), the integration of moral values in technology-based curricula, the role of internet technology in shaping children's character, and the implementation of Qur'an memorization programs to build character in Islamic boarding schools (Fauziah *et al.*, 2025). Other research has examined the role of cultural and religious values in character formation in cross-cultural contexts (Apriliani *et al.*, 2024). While these studies underline the relevance of digital tools and religious practices in character education, there remains limited exploration of how technology can be systematically integrated with hidden curriculum practices. This gap opens opportunities to design models that combine digital supervision, evaluation, and religious habituation.

In response to this challenge, the present study investigates the use of the CIS in strengthening the religious character of students through the hidden curriculum. The study is conducted at a junior high school that implements a unique religious-based curriculum known as the Pesat Method, which incorporates daily religious practices into school routines. By combining these activities with CIS, the school aims to create a transparent and accountable system that not only records but also rewards positive behavior. The novelty of this research lies in the integration of hidden curriculum elements with an application-based monitoring tool, which has rarely been studied before. The purpose of this study is to evaluate how this integration supports religious character development, while the impact is expected to provide a model for modern schools to cultivate noble values consistently and measurably in the digital era

## 2. METHODS

The study employed a qualitative descriptive approach to understand how application-based technology supports religious character formation. Detailed information regarding this method is reported elsewhere (Susilawati *et al.*, 2025). **Table 1** presents the research procedures applied in this study. This method was chosen because it allows the researcher to analyze social behavior holistically and contextually. The research used a case study design, which emphasizes in-depth, intensive, and systematic investigation of individuals, groups, and social settings (Yusuf, 2017). Data collection was carried out through interviews, observations,

and documentation to obtain both written and oral accounts of the implementation of the hidden curriculum integrated with the CIS.

**Table 1.** Research Procedures in the Study.

Stage	Activities	Purpose
Pre-field	Planning research, obtaining permits, and conducting initial interviews with school officials to understand hidden curriculum design and related activities	To prepare the research framework and ensure access to relevant sources
Exploration	Collecting school data, conducting in-depth interviews with teachers, students, and parents, and observing hidden curriculum activities (religious practices, daily routines, character programs)	To gather comprehensive information about the integration of CIS with the hidden curriculum
Member check	Summarizing and analyzing data from interviews, observations, and documentation, then validating findings with participants	To confirm the accuracy and reliability of the collected data

The research was conducted at a junior high school during the period from January to May 2024. Participants included the principal, the curriculum department, the Pesat method team, student affairs, homeroom teachers, students, and parents. Primary data were gathered directly from interviews and field observations, while documentation provided complementary evidence.

The procedures followed three main stages:

- (i) Pre-field, which involved planning, obtaining permits, and conducting preliminary interviews with school officials to understand the design of the hidden curriculum;
- (ii) Exploration, which included collecting school data, conducting in-depth interviews, and observing hidden curriculum activities related to character development; and
- (iii) Member check, where the researcher validated and analyzed all data obtained.

Data analysis followed the framework, consisting of data reduction, data display, and conclusion drawing. To ensure validity, triangulation of methods and data sources was employed

### 3. RESULTS AND DISCUSSION

The implementation of application-based technology in religious character education requires a clear system that can consistently record, monitor, and reinforce students' daily practices. In this study, the CIS was introduced as a central tool for integrating technology with hidden curriculum strategies. The CIS served not only as a digital monitoring platform but also as an assessment and reinforcement mechanism that allowed teachers, parents, and school administrators to collaborate in strengthening students' religious character. **Figure 1** presents the interface of the CIS application used in this research.

The CIS application was developed as an innovative educational tool designed to enhance character education through systematic evaluation and reinforcement. Its primary purpose was to ensure that values such as religiosity, honesty, discipline, and social awareness were not merely taught as abstract lessons but translated into measurable behaviors embedded in students' daily routines. The application recorded both positive and negative behaviors, awarded points, and generated periodic reports accessible to teachers, homeroom teachers, and parents. This process reflects an important innovation, as attention was no longer focused solely on addressing student violations but also on recognizing and appreciating positive actions. In this way, CIS created a school culture where good behavior was valued

and encouraged as a collective responsibility. This aligns with the argument that curriculum implementation should integrate academic learning with values of character education to build holistic students (Arifin et al., 2024).

The features of CIS supported this integration in practical terms. Teachers could document attendance at religious activities such as dhuha prayers, honesty during examinations, or participation in social service initiatives. Each action was translated into points, thereby transforming intangible values into measurable data. Monitoring was conducted in real time, with reports generated on a monthly and semester basis to track consistency. Furthermore, CIS incorporated a reward system where the highest-scoring students or classes were recognized at the end of each semester. The design of these features reflects a balance between control and motivation, ensuring that students are both supervised and encouraged. To illustrate this more clearly, the features of CIS are summarized in **Table 2**.



**Figure 1.** CIS application display.

**Table 2.** Features of the CIS Application.

Feature		Description
Daily Behavior Recording	Behavior	Teachers document positive and negative student behaviors (e.g., attendance at dhuha prayer, honesty in exams, social awareness).
Points and Character Scoring	Character	Students earn positive points for good behavior and may receive negative points for disciplinary infractions.
Monitoring and Periodic Reports		Behavior is monitored in real time, with monthly and semester reports accessible to teachers, homeroom teachers, and parents.
Reward System		Classes or students with the highest points receive recognition at the end of each semester, fostering healthy competition.
Integration with Hidden Curriculum		Religious practices and values from informal school activities are recorded and measured systematically.

The introduction of CIS into daily school life produced several important impacts. First, students were encouraged to practice religious habits such as punctual worship, honesty, and mutual respect because these actions were directly rewarded. Over time, repeated reinforcement created intrinsic motivation, whereby students developed habits not only

because of external rewards but also because of internalized values. Second, collaboration between parents and schools was strengthened, since parents could observe their children's progress through reports and actively participate in supporting character development at home. Third, transparency was enhanced because behaviors that were previously implicit or difficult to measure became visible and accountable. This echoes previous findings that reward and punishment strategies can increase students' character index in measurable ways (Fiaji *et al.*, 2023).

In addition to CIS, character development at the school was supported through the Pesat Method, which represented the hidden curriculum framework. The Pesat Method emphasized daily religious practices based on the Sunnah of the Prophet, ensuring that students internalized religious character through concrete and routine activities. These activities were not confined to formal lessons but embedded into the rhythm of school life, creating a holistic environment for character education. The seven core practices included maintaining ablution, performing dhuha prayers before class, engaging in dhikr and supplication, reciting selected surahs of the Qur'an, performing congregational prayers, giving regular charity, and practicing tahajjud prayers during overnight programs. These practices reflect values of religiosity, discipline, cooperation, and responsibility. The programs under the Pesat Method are summarized in **Table 3**.

**Table 3.** Pesat Method Religious Programs

Program	Description
Maintaining Ablution	Students are required to perform ablution at home and maintain it at school.
Dhuha Prayer	It is conducted collectively before classes begin, typically before 7 a.m.
Dhikr and Du'a	It is performed after dhuha and obligatory prayers, as well as before and after daily activities.
Qur'an Recitation	Students focused on selected surahs (Yasin, Al-Mulk, Ar-Rahman, Al-Waqiah), often during special school events.
Congregational Prayer	All students are encouraged to perform obligatory prayers in congregation at the mosque.
Charity	The annual program encourages students to give alms, coordinated by teachers.
Tahajjud Prayer	It is conducted during overnight school programs held twice a semester in the school hall.

The integration of the Pesat Method into daily routines illustrates the power of the hidden curriculum to shape student behavior. Observations revealed that students not only participated in these religious practices but also developed complementary values such as politeness, cooperation, and social responsibility. The school promoted a culture of friendliness, politeness, and courtesy, which was reflected in the so-called "5S culture" (smile, greeting, salutation, politeness, and courtesy). This was further reinforced through commemorations of Islamic holidays, Qur'an memorization activities, and Ramadan programs that combined fasting with social assistance projects. Such activities demonstrate that religious character development extends beyond ritual practice to encompass social awareness and community engagement, consistent with findings that cultural habituation can create friendly and socially responsible personalities (Inayah & Wiyani, 2022).

The combination of CIS and the Pesat Method created a dual-layered approach to character education. While the Pesat Method embedded religious practices into the school's culture, CIS provided the digital framework to monitor and evaluate these practices systematically. Together, they created a cycle of habituation, reinforcement, and accountability. For example, when students performed Qur'an recitation or engaged in

communal prayers, teachers could record these activities in CIS, and students would earn positive points. Conversely, violations such as neglecting prayers or displaying disruptive behavior could be immediately noted, reducing class points. This system fostered not only individual responsibility but also collective accountability, since class scores were displayed publicly. Healthy competition among classes encouraged students to support one another in maintaining positive behavior.

The monitoring function of CIS was particularly innovative. Student behaviors were recorded via ID cards with barcodes linked to the system. Each time a student performed a good deed, such as picking up litter, or a violation, such as chatting during dhikr, teachers could scan the card, and the system would update the class graph displayed on monitors in the school corridor. This public display ensured transparency and allowed both students and teachers to recognize progress and areas for improvement. Positive class performance was rewarded, sometimes with symbolic prizes such as a dispenser, while consistent excellence in religious values and Qur'an memorization could even qualify students for more significant recognition, such as participation in a free Umrah program. This aligns with research showing that child-friendly, transparent school environments can effectively foster character development in line with the demands of contemporary society (Awliya et al., 2023).

Through these findings, it becomes evident that CIS served as more than a control mechanism; it was a developmental tool that fostered intrinsic motivation and a culture of excellence in character education. The Pesat Method, as the school's hidden curriculum, provided the substance of religious practices, while CIS acted as the structural framework that ensured accountability and sustainability. Together, they created an ecosystem in which religious values were not abstract ideals but lived practices reinforced daily. This synergy illustrates the potential of digital applications to support hidden curriculum approaches, offering a model for schools seeking to combine tradition with innovation in character education.

The supervision of character values in the studied school was not merely a matter of informal observation but was formalized through the integration of the CIS system into the daily routines of students. Supervision was conducted under the responsibility of the vice principal for student affairs, who oversaw the systematic monitoring of students' behavior. Unlike traditional approaches, where discipline is recorded in logbooks or handled case by case, CIS provided a digital record that ensured accountability and reduced the subjectivity of evaluations. This was particularly significant because the system transformed hidden curriculum practices (often intangible and difficult to assess) into measurable indicators. The outcome was a culture of transparency where both positive and negative behaviors were equally documented and discussed within the school community.

The design of CIS included eighteen-character values considered essential for student development. These values were incorporated into the system in a way that encouraged students to perceive character formation as a shared responsibility. Competition between classes was an important dimension, as the system recorded collective performance rather than focusing exclusively on individual scores. This collective assessment model created peer influence, motivating students to support one another in achieving higher scores and discouraging behaviors that could harm the class standing. Such peer accountability reflects broader findings that school climate significantly influences student behavior, as it operates as part of the hidden curriculum that goes beyond formal instruction. By situating character formation within a visible, competitive framework, the school successfully transformed abstract values into a dynamic and engaging process.



One of the innovative aspects of CIS was the use of ID cards with barcodes that connected each student's actions to the system. This mechanism ensured that positive deeds, such as helping peers or contributing to a clean environment, were rewarded immediately, while negative actions, such as neglecting prayer or engaging in disruptive behavior, were recorded transparently. The visibility of class performance through monitors in the school corridor reinforced accountability, as students could see the comparative progress of their classes. This system turned every act into a potential teaching moment, with teachers, administrators, and even peers actively engaged in character supervision. As argued in previous papers ([Awliya et al., 2023](#)), child-friendly and transparent educational environments foster student personality development that aligns with the challenges of modern society. In this sense, CIS operationalized transparency and child-friendliness by making supervision participatory and engaging.

The impact of this monitoring system extended beyond the immediate school environment ([Bolaji & Adeoye, 2022](#); [Purazo et al., 2024](#)). Parents could access reports and observe their children's development in real time, allowing them to reinforce at home. This partnership between school and parents is critical because character education cannot be fully realized within the school alone. The continuity of values across home and school ensures that students internalize behaviors as part of their identity rather than as temporary compliance with institutional rules. The involvement of parents also reflects the broader vision of holistic education, where families and schools collaborate in nurturing moral, spiritual, and social responsibility in young people. In this way, CIS strengthened not only the hidden curriculum within the school but also extended its influence into the family domain.

The role of rewards in the CIS framework deserves particular attention. Rewards were not limited to symbolic recognition, such as certificates or announcements, but were designed to encourage continuous improvement and collective pride. For example, the best-performing classes received tangible incentives like dispensers, while outstanding students with strong Qur'an memorization and religious values were considered for the prestigious reward of performing Umrah. This approach balanced short-term extrinsic motivation with long-term spiritual aspirations. By linking performance in religious character education with opportunities for life-changing experiences, the school created powerful incentives for students to commit themselves to sustained excellence. This resonates with previous findings that reward and punishment, when appropriately applied, can strengthen students' commitment to moral and religious values ([Fiaji et al., 2023](#)). However, the school emphasized positive reinforcement more than punishment, aligning with the principle of fostering intrinsic motivation.

The cumulative effect of CIS and the Pesat Method can be seen in the observable transformation of student behavior. Observations conducted during the study indicated that students exhibited politeness, friendliness, and religious discipline in their interactions with teachers and peers. Daily practices such as the 5S culture (smile, greeting, salutation, politeness, and courtesy) became part of their identity, reinforcing the hidden curriculum's effectiveness. Activities such as Qur'an recitation, communal prayers, and social charity programs further solidified these values by embedding them into lived routines rather than abstract lessons. This illustrates that character education must move beyond classroom instruction to daily reinforcement if it is to be internalized. The school thus demonstrated how character education could be made sustainable by intertwining cultural practices with digital supervision.

Despite its strengths, the implementation of CIS was not without challenges. Adolescents are at a developmental stage characterized by instability and experimentation, which means

that compliance with values cannot always be guaranteed. Teachers and administrators reported that some students required extra supervision and guidance to align with the expectations of the program. This limitation reflects the broader challenge of character education, which cannot ensure uniform outcomes across all individuals. Nevertheless, the system provided a framework for continuous evaluation and adaptation, which ensured that setbacks were not seen as failures but as opportunities for further development. The iterative nature of supervision meant that the program remained dynamic and responsive to students' needs.

When compared with previous studies, the novelty of this research becomes more evident. Earlier works have explored the use of technology in religious character education through media-based learning (Muhammad et al., 2021), the integration of moral values into digital curricula, and internet-based interventions for children's character formation. Other studies emphasized religious programs such as Qur'an memorization (Fauziah et al., 2025) and cross-cultural character education (Apriliani et al., 2024). However, these studies tended to focus either on the digital aspect or on the hidden curriculum separately. This research advances the field by demonstrating how the two dimensions (digital monitoring and hidden curriculum) can be integrated into a coherent model. The CIS provided a structural backbone for measuring, rewarding, and supervising hidden curriculum practices, creating a synergy between technology and tradition. This integration represents the study's main contribution to the literature.

The broader implications of this integration extend to the future of character education in the digital era. As schools increasingly adopt technology in instruction, it is important to consider how the same tools can be applied to non-academic domains such as moral and spiritual education. CIS demonstrates that digital systems can create accountability, transparency, and motivation in areas traditionally considered unmeasurable. This has significant implications for policymakers and educators who seek to balance academic excellence with holistic character development. By providing measurable indicators of religious values, the system allows schools to track progress, identify challenges, and involve stakeholders in continuous improvement. It also highlights the potential of digital innovations to preserve and strengthen cultural and spiritual values in modern educational environments.

Another key discussion point is sustainability. The success of the program depends not only on the functionality of the CIS application but also on the commitment of teachers, administrators, and parents to use it consistently. Without collective participation, the system would risk becoming a superficial record rather than a transformative tool. However, the study indicates that the integration of CIS with the Pesat Method created a self-reinforcing cycle. Because values were embedded in daily activities, the recording system naturally became part of school routines rather than an external imposition. This sustainability is crucial, as character education is a long-term process that requires continuous reinforcement across multiple years of schooling.

Finally, the combination of hidden curriculum and digital monitoring provides a model that can be adapted to diverse educational contexts. While the study was conducted in a religiously oriented environment, the principles of CIS (recording behaviors, rewarding positive actions, involving parents, and fostering collective accountability) can be applied to secular contexts as well. Schools seeking to strengthen values such as discipline, honesty, or cooperation can adapt the framework to suit their cultural and institutional needs. This adaptability underscores the impact of the study, which lies not only in its local success but also in its potential as a replicable model for character education in the digital era.



The integration of the CIS with the hidden curriculum not only addressed the immediate needs of the school but also provided insights into broader educational debates. When compared with prior studies, this research reveals both similarities and distinctions that highlight its originality. Some researchers ([Muhammad et al., 2021](#)) emphasized that digital media could be used to strengthen religious character by providing accessible learning tools. Their approach, however, remained limited to the transmission of content through media platforms. In contrast, the CIS system did not focus on content delivery but on monitoring, supervision, and reinforcement of daily practices. This marks a departure from media-centric strategies to a more systemic model that ensures values are translated into measurable behaviors.

Similarly, other researchers explored the integration of moral values in technology-based curricula, underlining the importance of embedding ethics into digital education. While their study highlighted curriculum design, it did not address how such values could be internalized through daily routines or hidden curriculum practices. CIS filled this gap by connecting formal values with everyday behavior, ensuring that moral principles were not confined to abstract curriculum frameworks but embodied in daily student practices. This distinction illustrates the novelty of the current research, which integrates curriculum, hidden practices, and digital supervision into a single system.

The research also resonates with previous papers who discussed the role of internet technology in shaping children's character. While other papers demonstrated the potential of online resources, her study did not address the need for structured accountability. Without systematic monitoring, digital resources risk remaining supplementary rather than transformative. CIS directly addressed this limitation by providing accountability mechanisms that involved teachers, parents, and administrators. In this way, the study advanced the field from theoretical discussions of potential toward practical models of implementation.

Other studies ([Fauziah et al., 2025](#)) emphasized Qur'an memorization as a means of character development. While this method effectively builds religious identity, it often functions in isolation from broader educational routines. The Pesat Method, when combined with CIS, ensured that Qur'an recitation and memorization were part of a broader ecosystem of values reinforced daily. Similarly, some researchers ([Apriliani et al., 2024](#)) demonstrated the role of cultural values in cross-national contexts, particularly in Thailand. Their findings underscored the importance of adapting character education to cultural settings. The current study contributes by showing how cultural and religious traditions can be integrated into a modern technological framework, offering a replicable model for other cultural contexts that seek to balance tradition with innovation.

The implications of these comparisons are significant. First, the study demonstrates that character education in the digital era requires more than adding technology to existing curricula. Instead, technology must be embedded into the very fabric of school culture and daily practices. By aligning CIS with hidden curriculum activities, the school created a sustainable model where values were reinforced through both traditional rituals and digital accountability. This represents a paradigm shift from content-based approaches to systemic integration. Second, the study illustrates that religious character education can remain relevant in the modern era when supported by innovative tools that ensure consistency, transparency, and collaboration.

From a practical perspective, the findings have implications for teachers. The use of CIS reduced the burden on teachers to manually monitor and record student behaviors. Teachers could focus on guiding and mentoring, while the system ensured that data were consistently documented. Moreover, the transparency of the system allowed teachers to provide

evidence-based feedback to students and parents. This shifted the role of teachers from mere disciplinarians to facilitators of character growth. Parents also benefited, as they gained access to real-time reports that helped them support their children at home. The involvement of parents strengthened the continuity of character education across home and school, addressing a long-standing challenge in moral education where disconnection between school and family often weakens outcomes.

For schools, the system provided a framework to build a positive school climate. Research shows that school climate is a critical factor in the success of hidden curriculum practices. By making behaviors visible and measurable, CIS contributed to a culture of accountability and cooperation. The competitive element, where classes strived to achieve higher scores, created collective motivation. This fostered unity among students, as peer influence encouraged positive behavior. Such dynamics are crucial in adolescent education, where peer groups often play a stronger role in shaping behavior than formal instruction. The program thus leveraged peer dynamics for constructive purposes.

Policy makers can also learn from this model. Educational policy often emphasizes curriculum design and teacher training while neglecting the hidden curriculum and its role in character formation (Onia, 2022; Onia & Rmadan, 2023; Karmaker, 2025). CIS demonstrates that hidden curriculum elements can be systematically supported through digital tools. This opens the door for policies that encourage schools to adopt similar systems, tailored to their cultural and institutional contexts. By institutionalizing hidden curriculum monitoring, educational authorities can ensure that character education becomes measurable, accountable, and consistent across diverse schools.

The relevance of this study also extends to global educational agendas. The United Nations' Sustainable Development Goals (SDGs) emphasize the importance of inclusive and equitable quality education (SDG 4) as well as the promotion of peaceful and just societies (SDG 16). CIS contributes to these goals by fostering honesty, responsibility, cooperation, and religiosity values that are essential for building ethical citizens. The integration of religious and moral values into daily education aligns with SDG 4.7, which highlights the need to promote sustainable lifestyles, human rights, cultural diversity, and global citizenship. At the same time, the emphasis on transparency, accountability, and cooperation resonates with SDG 16, which calls for effective, accountable, and inclusive institutions. Thus, the study not only contributes to local educational practices but also aligns with global objectives for sustainable development.

A further dimension worth noting is adaptability. While CIS was implemented in a religious school context, its principles can be generalized to secular environments. The system does not depend on specific religious rituals; rather, it relies on the logic of recording, rewarding, and reinforcing behaviors that align with desired values. In secular schools, the system could monitor values such as environmental responsibility, cooperation, or academic honesty. This adaptability makes CIS a versatile model that can be tailored to different educational goals and cultural contexts. The novelty of this approach lies in demonstrating how a single framework can balance universality and cultural specificity.

The discussion also points toward future challenges and opportunities. Sustaining such a program requires commitment and consistency from all stakeholders. If teachers, parents, or administrators fail to use the system diligently, its effectiveness diminishes. Furthermore, as with all digital systems, there are potential issues of privacy, data management, and technological reliability. These challenges must be addressed to ensure the long-term viability of the model. Future research should explore strategies for scaling up such systems while maintaining ethical and technological safeguards. Nevertheless, the current study

demonstrates that the benefits far outweigh the challenges, providing a promising direction for character education in the digital age.

The broader impact of this research is its contribution to bridging the gap between tradition and modernity. Educational systems worldwide struggle with balancing cultural values and modern innovations. In many contexts, religious or moral education risks being sidelined in favor of technical and academic competencies. By showing how digital tools can reinforce traditional practices, this study provides a model for harmonizing the two dimensions. It demonstrates that technology need not undermine cultural and religious values but can, instead, serve as a powerful ally in sustaining them. This is particularly relevant in societies experiencing rapid modernization, where cultural continuity must be balanced with innovation.

The additional discussion underscores that CIS and the Pesat Method represent a pioneering integration of digital supervision and hidden curriculum practices. The study builds on prior research while addressing gaps that remained unexplored, offering practical, policy, and global implications. Its novelty lies not only in introducing a new tool but in demonstrating a holistic system where technology, culture, and pedagogy reinforce one another. By aligning with both local traditions and global educational goals, this model provides a pathway for schools to cultivate responsible, ethical, and spiritually grounded citizens in the digital era. In addition, this study adds new information, especially regarding Islamic education, as reported elsewhere (Darajah *et al.*, 2024; Anggraeni & Maryanti, 2021; Azizah *et al.*, 2022; Al Husaeni *et al.*, 2022; Francis *et al.*, 2023; Rohim & Nugarah, 2024; Soelistijo *et al.*, 2024; Fauji & Nugraha, 2024; Thoriq *et al.*, 2023; Daud, 2025; Kayode & Jibril, 2023; Hidayat *et al.*, 2024; Daud & Laguindab, 2025; Latifah *et al.*, 2025).

#### 4. CONCLUSION

The integration of the CIS with the hidden curriculum effectively strengthened students' religious character through habituation, supervision, and evaluation. The findings confirmed that positive behaviors such as discipline, honesty, and responsibility became daily practices because they were systematically monitored and rewarded. Despite challenges related to adolescent instability, continuous evaluation ensured progress and adaptation. The study's novelty lies in combining digital supervision with hidden curriculum practices, offering measurable and transparent character formation. Its impact provides a replicable model for schools to develop sustainable collaboration among teachers, parents, and students in cultivating noble values.

#### 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

#### 6. REFERENCES

Al Husaeni, D.F., Al Husaeni, D.N., Nandiyanto, A.B.D., Rokhman, M., Chalim, S., Chano, J., Al Obaidi, A.S.M., and Roestamy, M. (2024). How technology can change educational research? Definition, factors for improving quality of education and computational bibliometric analysis. *ASEAN Journal of Science and Engineering*, 4(2), 127-166.

- Al Husaeni, D.F., Urwah, M., A., Inayah, S., S., Rahmat, M., and Nugraha, R., H. (2022). The phenomenon of al tasyabuh: Birthday celebration in the view of students, education and the perspective of ulama based on Islamic law. *Indonesian Journal of Multidiciplinary Research*, 2(2), 347-360.
- Ammatulloh, M.I., Permana, N., Firmansyah, R., Sa'adah, L.N., Izzatunnisa, Z.I., and Muthaqin, D.I. (2022). Strengthening character education of students through civics caring apps based on m-learning during the covid-19 pandemic. *Indonesian Journal of Educational Research and Technology*, 2(2), 87-96.
- Anggraeni, R., and Maryanti, R. (2021). Implementation of video learning media in Islamic Religious Education subjects. *Indonesian Journal of Multidiciplinary Research*, 1(2), 257-266.
- Apriliani, R., Adri, H. T., and Indra, S. (2024). Penanaman pendidikan karakter dan nilai-nilai budaya di SD Muslim Suksa Thailand. *Karimah Tauhid*, 3(4), 4018–4031.
- Arifin, Z., Indra, S., and Maryani, N. (2024). Manajemen kurikulum integratif pesantren madrasah di Pondok Pesantren Modern Ar-Ridho Sentul. *Al-Kaff: Jurnal Sosial Humaniora*, 2(6), 634–642.
- Awliya, W., Alifiyah, N., and Nudin, B. (2023). Efektivitas penerapan program sekolah ramah anak dalam upaya meningkatkan pendidikan karakter di SMP Negeri 4 Pakem Yogyakarta. *At-Thullab: Jurnal Mahasiswa Studi Islam*, 5(1), 1281–1291.
- Azizah, S.N., Nandiyanto, A.B.D., Wulandary, V., and Irawan, A.R. (2022). Implementation of video learning media in Islamic religious education subjects for elementary school students. *Indonesian Journal of Multidiciplinary Research*, 2(1), 91-96.
- Bolaji, H.O., and Adeoye, M.A. (2022). Accessibility, usability, and readiness towards ICT tools for monitoring educational practice in secondary schools. *Indonesian Journal of Multidiciplinary Research*, 2(2), 257-264
- Darojah, T.Z., Windayani, N., and Irwansyah, F.S. (2024). Implementing project-based worksheets on making kaolin soap with the addition of kefir curd to develop students' scientific performance in Islamic school. *ASEAN Journal for Science and Engineering in Materials*, 3(1), 59-74.
- Daud, K.D. (2025). The Islamic ethos of interfaith socialization: Strengthening community harmony. *ASEAN Journal of Community Service and Education*, 4(1), 43-58.
- Daud, K.D., and Laguindab, R.S. (2025). Assessment of the potential in halal tourism in the Philippines: The case of the Islamic city in Marawi, Lanao Del Sur, the Philippines. *ASEAN Journal of Religion, Education, and Society*, 4(1), 1-22.
- Fahrannisa, A.L., Muktiarni, M., and Mupita, J. (2022). The use of short stories as learning media for character education for elementary school students during the Covid-19 pandemic. *Indonesian Journal of Multidiciplinary Research*, 2(2), 237-244.
- Fauji, I., and Nugraha, M.S. (2024). Redefining epistemology: Exploring a new paradigm in islamic education research. *Indonesian Journal of Multidiciplinary Research*, 4(2), 485-490.

- Fauziah, A., Rusli, R. K., and Indra, S. (2025). Implementasi kurikulum Tahfidzul Qur'an untuk membangun karakter santri di Pondok Pesantren Darul Qur'an Mulia. *Al-Kaff: Jurnal Sosial Humaniora*, 3(2), 133–139.
- Fiaji, M. P., Fiaji, N. N., and Fiaji, N. A. (2023). Peningkatan indeks karakter religius, disiplin, dan tanggung jawab siswa melalui metode reward and punishment. *Waskita: Jurnal Pendidikan Nilai dan Pembangunan Karakter*, 7(2), 193–208.
- Francis, T.T., Mukhtar, B., and Sadiq, K. (2023). Effect of scaffolding instructional strategy and gender on academic achievement of senior secondary school Islamic studies students. *Indonesian Journal of Multidisciplinary Research*, 3(1), 139-144.
- Hidayat, T., Perdana, J., Istianah, I., Saputra, A., Erlina, L., Saket, S.A.S., Al-Gumaei, A.M.A. (2024). Social media da'wah strategy in implementing Islamic da'wah. *ASEAN Journal of Religion, Education, and Society*, 3(1), 51-58.
- Inayah, S. F. N., and Wiyani, N. A. (2022). Pembentukan karakter ramah melalui pembiasaan senyum, sapa, salam, sopan, santun (5S) pada anak usia dini. *Asghar: Journal of Children Studies*, 2(1), 12–25.
- Karmaker, R. (2025). Educational and institutional barriers to indigenous language preservation in Bangladesh: Challenges and policy implications. *Indonesian Journal of Multidisciplinary Research*, 5(1), 29-40.
- Kayode, A.M., and Jibril, A.O. (2023). Impact of traditional Qur'anic schools on Islamic education. *ASEAN Journal of Religion, Education, and Society*, 2(2), 101-108.
- Latifah, E.N., Malihah, N., and Irwansyah, F.S. (2025). Assessment of pedagogical competence of islamic religious education (PAI) teachers: A literature review. *ASEAN Journal of Religion, Education, and Society*, 4(1), 81-90.
- Muhammad, G., Zakiah, Q. Y., and Erihadia, M. (2021). Implementasi pendidikan karakter religius melalui media pembelajaran berbasis teknologi. *Ta'dibuna: Jurnal Pendidikan Islam*, 10(4), 481–495.
- Nabil, F., and Nugraha, M.S. (2024). The integration of the philosophy of science and character education curriculum. *Indonesian Journal of Multidisciplinary Research*, 4(2), 461-468.
- Nugraha, H.H., Nandiyanto, A.B.D., Kurniawan, T., and Bilad, M.R. (2022). Education to develop reading literacy by analyzing the intrinsic elements of short stories in Islamic junior high school students'. *Indonesian Journal of Multidisciplinary Research*, 2(1), 125-130.
- Nugraha, M.G. (2023). Development of web-based radioactivity teaching materials oriented-on character education for highschool students. *ASEAN Journal of Science and Engineering Education*, 3(1), 95-102.
- Onia, S.I. (2022). Education policy of Sudan and utilization of the mobile device (iPad) technology: Opportunities and challenges. *Indonesian Journal of Educational Research and Technology*, 2(3), 205-212.

- Onia, S.I., and Rmadan, A.F. (2023). Policy for distance learning in education in higher education institutions: Experiences from Sudan. *Indonesian Journal of Educational Research and Technology*, 3(1), 59-68.
- Purazo, K.N., Paris, J.M.N.T., Subaldo, J.I.S., and Bacal, B.B. (2024). Design of micro-controlled swimming pool water quality monitoring system with SMS notification for educational purposes with cost analysis. *ASEAN Journal of Science and Engineering Education*, 4(1), 71-84.
- Riyanto, M., Nandiyanto, A.B.D., Kurniawan, T., and Bilad, M.R. (2022). Management of character education in the scope of elementary school students in the distance learning period. *Indonesian Journal of Multidisciplinary Research*, 2(1), 1-8.
- Rohim, M.S., and Nugraha, M.S. (2024). Utilizing the philosophy of science to overcome challenges in Islamic education. *Indonesian Journal of Multidisciplinary Research*, 4(2), 389-398.
- Soelistijo, D., Faqih, A.F., Safitri, A.P., Ramadhianti, D.S., Dwiyantri, E., and Indayanti, S. (2024). Learning media development of outdoor learning treasure map on the material of cultural interaction during the Islamic kingdom period. *Indonesian Journal of Multidisciplinary Research*, 4(2), 455-460.
- Susilawati, A., Al-Obaidi, A.S.M., Abduh, A., Irwansyah, F.S., and Nandiyanto, A.B.D. (2025). How to do research methodology: From literature review, bibliometric, step-by-step research stages, to practical examples in science and engineering education. *Indonesian Journal of Science and Technology*, 10(1), 1-40
- Syafei, I., and Abdillah, A. (2020). Implementasi pendidikan karakter religius di SMP Hikmah Teladan Bandung. *Jurnal Pendidikan Agama Islam*, 17(1), 17–30.
- Thoriq, M., Sakti, A.W., Azizah, N.N. (2023). Learning mixed arithmetic operations using whatsapp groups for Islamic elementary school students. *Indonesian Journal of Teaching in Science*, 3(1), 17-22.