



DEVELOPMENT OF AN INTEGRATED DIGITAL GUIDANCE AND COUNSELING MANAGEMENT APPLICATION FOR STRENGTHENING STUDENTS' MORAL DEVELOPMENT IN ISLAMIC SENIOR HIGH SCHOOLS

Kurniawan¹, Muhammad Khoiruddin², Sukarman³

^{1,2,3} Islamic University of Nahdlatul Ulama Jepara, Central Java, Indonesia

Email: zaenudinkhabib.2561@student.unisnu.ac.id¹,

muhammad.khoiruddin@unisnu.ac.id², pakar@unisnu.ac.id³

Abstract:

The rapid advancement of digital technology has transformed educational management, including guidance and counseling (GC) services. However, many Islamic senior high schools still rely on fragmented and manual counseling administration, resulting in inefficient documentation, limited stakeholder collaboration, and inadequate monitoring of students' behavioral and moral development. This study aimed to develop an Integrated Digital Guidance and Counseling Management Application to improve counseling effectiveness while strengthening students' moral development. This research employed a Research and Development (R&D) approach using the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation. Data were collected through observations, interviews, documentation, questionnaires, and expert validation involving counselors, teachers, school leaders, students, parents, and information technology experts. The developed web-based application integrates student profiles, counseling records, behavioral monitoring, disciplinary management, parent communication, reporting systems, and executive dashboards into a centralized information system. The implementation results indicate that the application improves administrative efficiency, facilitates collaboration among educational stakeholders, supports evidence-based decision-making, and enables continuous monitoring of students' behavioral and moral development. The novelty of this study lies in integrating digital counseling management with Islamic moral education within a comprehensive educational management system specifically designed for Islamic senior high schools. The application is expected to contribute to digital transformation in educational management and enhance the quality of guidance and counseling services.

Keywords: *Guidance and Counseling Management, Digital Transformation, Educational Management, Moral Development, Islamic Education, ADDIE.*

INTRODUCTION

The rapid advancement of information and communication technology (ICT) has significantly transformed educational systems, influencing not only teaching and learning processes but also institutional management and student support services (Kamil, 2025). Digital transformation has become a strategic

priority for educational institutions seeking to improve efficiency, transparency, accountability, and data-driven decision-making (Abdurrahman, 2025). As schools increasingly adopt integrated information systems, educational management is shifting from conventional administrative practices toward digital platforms that support collaboration among stakeholders and improve service quality.

Guidance and counseling (GC) services constitute an essential component of educational management because they support students' academic, personal, social, career, and moral development (Holidi et al., 2026). In Islamic Senior High Schools (Madrasah Aliyah), counseling services have a broader responsibility that extends beyond addressing students' academic and behavioral problems. Counselors are also expected to facilitate the development of *akhlaq al-karimah* (noble character), discipline, responsibility, and Islamic values that form the foundation of students' personal development. Therefore, effective counseling management plays a strategic role in achieving the holistic goals of Islamic education (Abdullah, 2025).

Despite the increasing adoption of digital technologies in education, guidance and counseling management in many Islamic senior high schools remains predominantly paper-based or relies on separate spreadsheet files. Counseling records, behavioral reports, disciplinary documentation, attendance records, and communication with parents are often managed independently by different stakeholders (Razaq, 2026). This fragmented approach creates duplicated administrative work, limits collaboration among counselors, teachers, school leaders, and parents, and makes it difficult to monitor students' behavioral and moral development comprehensively. In addition, manual reporting procedures reduce administrative efficiency and limit the availability of accurate information for institutional decision-making (Saputra et al., 2026).

The challenges faced by schools have become increasingly complex in the digital era. Students encounter various social and behavioral issues, including excessive social media use, cyberbullying, declining interpersonal interaction, and mental health concerns. Addressing these issues requires counseling services that are collaborative, responsive, and supported by integrated digital information systems (Khomairotusshiyamah, 2026). However, many existing counseling applications primarily focus on administrative record management and rarely integrate behavioral monitoring, parent communication, executive reporting, and character development within a unified platform.

Several previous studies have highlighted the importance of digital transformation in guidance and counseling services (Rahman, 2026). However, most available systems emphasize documentation or online counseling without integrating educational management functions that support collaboration among counselors, teachers, school leaders, students, and parents. Furthermore, limited attention has been given to integrating digital counseling management with moral development in Islamic educational settings. This research gap indicates the need for a comprehensive digital counseling management system that not only improves administrative efficiency but also strengthens character education through continuous monitoring and collaborative intervention (Sa'diyah et al., 2025).

To address these challenges, this study aims to develop an Integrated Digital Guidance and Counseling Management Application for Islamic Senior High Schools using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model. The proposed web-based

application integrates student profiles, counseling records, behavioral monitoring, disciplinary management, parent communication, home visit documentation, institutional reporting, and executive dashboards within a centralized information system (Rofik & Mudarris, 2024).

The novelty of this study lies in integrating digital guidance and counseling management with students' moral development through a comprehensive educational management platform specifically designed for Islamic Senior High Schools. By facilitating collaboration among educational stakeholders and providing real-time access to counseling information, the application is expected to improve counseling effectiveness, enhance evidence-based decision-making, strengthen character education, and support the broader digital transformation of Islamic educational institutions.

RESEARCH METHODS

This study employed a Research and Development (R&D) approach to develop an Integrated Digital Guidance and Counseling Management Application for strengthening students' moral development in Islamic Senior High Schools. The development process adopted the ADDIE model, consisting of five sequential phases: Analysis, Design, Development, Implementation, and Evaluation (Sain, 2026). This model was selected because it provides a systematic framework for designing, validating, implementing, and evaluating educational technology products.

The research was conducted at MAN 1 Jepara, Central Java, Indonesia, where guidance and counseling services were still administered using conventional and fragmented documentation systems. Participants were selected through purposive sampling and included guidance and counseling teachers, classroom teachers, subject teachers, school administrators, students, parents, educational management experts, guidance and counseling experts, and information technology experts (Hasanah, 2026). These participants were chosen based on their direct involvement in counseling management and educational administration.

During the Analysis phase, observations, interviews, document analysis, and focus group discussions were conducted to identify existing problems and determine user requirements. The findings indicated fragmented counseling documentation, duplicated administrative work, delayed reporting, and limited collaboration among educational stakeholders.

In the Design phase, the system architecture, database structure, user interface, workflow, and functional modules were designed. The application was planned as a responsive web-based information system accessible from desktop and mobile devices. Functional modules included student profiles, counseling records, behavioral monitoring, disciplinary management, achievement records, parent communication, home visit management, reporting dashboards, and executive dashboards.

The Development phase focused on building the application using web technologies supported by a centralized database. The prototype was subsequently validated by experts in educational technology, guidance and counseling, and educational management to assess content validity, functionality, usability, and technical feasibility.

During the Implementation phase, the validated application was piloted at MAN 1 Jepara. Guidance counselors, teachers, school administrators, and system operators received training before using the application in routine

counseling activities. User feedback was collected to evaluate system usability and practicality.

Finally, the Evaluation phase consisted of formative and summative evaluations. Data were collected through observation, semi-structured interviews, documentation analysis, expert validation, and questionnaires assessing usability, practicality, and effectiveness. Qualitative data were analyzed using data reduction, data display, and conclusion drawing, while quantitative data were analyzed descriptively using percentage scores (Novita, 2026). The application was considered feasible when it met the criteria of validity, practicality, and effectiveness based on expert assessments and user evaluations.

RESULTS AND DISCUSSION

Needs Analysis and Functional Requirements

The needs analysis was conducted through observations, interviews, documentation analysis, and questionnaires involving guidance counselors, teachers, school administrators, students, and parents (Haisuma et al., 2026). The findings revealed that guidance and counseling (GC) management at MAN 1 Jepara still relied on manual documentation using printed forms and separate spreadsheet files. Counseling records, disciplinary reports, attendance data, and behavioral assessments were managed independently by different stakeholders, resulting in fragmented information, duplicated administrative work, delayed reporting, and limited collaboration among counselors, teachers, school leaders, and parents.

Guidance counselors reported that manual administrative procedures significantly increased their workload, reducing the time available for preventive and developmental counseling services. Teachers experienced difficulties in communicating behavioral observations because no centralized information system was available to support collaborative interventions (Holidi et al., 2025). School administrators also faced challenges in preparing periodic counseling reports, as data had to be collected manually from multiple sources. Meanwhile, parents expressed the need for more continuous communication regarding their children's behavioral and moral development instead of relying solely on scheduled meetings or disciplinary cases (Ni'am, 2025).

These findings indicate that existing counseling management practices do not adequately support integrated educational management. Therefore, a centralized digital platform is required to improve administrative efficiency, facilitate collaboration among stakeholders, and strengthen students' moral development through continuous monitoring and timely interventions.

Based on the identified needs, the proposed application integrates several functional modules within a single web-based information system. The system includes Student Profile Management, Counseling Records, Behavioral Monitoring, Discipline Management, Achievement Records, Parent Communication, Home Visit Management, Reporting Dashboard, and Executive Dashboard (Sudarwan, 2025). These modules enable counselors, teachers, school leaders, and parents to access relevant information according to their respective roles while maintaining data confidentiality through role-based access control.

System Architecture

The application was developed using a three-layer architecture consisting of the presentation layer, application layer, and database layer (Zain, 2026). The

presentation layer provides a responsive web interface that can be accessed through desktop and mobile devices by authorized users, including principals, counselors, teachers, students, and parents. The application layer manages the core functions of the system, including student management, counseling administration, behavioral monitoring, disciplinary management, parent communication, home visit documentation, automated reporting, and executive dashboards (Khofsah, 2026). All information is stored within a centralized database that supports real-time data synchronization, secure information management, and integrated reporting. This architecture enables stakeholders to access accurate and up-to-date counseling information while supporting evidence-based decision-making. By integrating counseling administration, behavioral monitoring, and institutional reporting into a single platform, the application improves administrative efficiency, enhances collaboration among educational stakeholders, and provides continuous monitoring of students' behavioral and moral development.

Application Features, Validation, and Implementation

The developed application integrates multiple modules to support comprehensive guidance and counseling management within a single web-based platform. The Student Profile Module stores demographic information, academic records, attendance, counseling history, achievements, and disciplinary records (Novita, 2025). The Counseling Module enables counselors to document counseling sessions, intervention plans, follow-up actions, and counseling outcomes systematically. In addition, the Behavioral Monitoring Module allows teachers to record both positive and negative student behaviors using standardized indicators, enabling continuous monitoring of students' character development.

To strengthen collaboration between schools and families, the application provides a Parent Communication Module, allowing counselors to share behavioral reports, counseling schedules, and recommendations with parents. School leaders are supported through an Executive Dashboard that presents real-time statistics on counseling activities, disciplinary trends, counselor workload, and student behavioral indicators, facilitating evidence-based decision-making.

Following the development stage, the application prototype was evaluated by experts in educational technology, guidance and counseling, and educational management. The validation results indicated that the application fulfilled the essential requirements for implementation in Islamic Senior High Schools. Several recommendations, including improving dashboard navigation, simplifying menu structures, enhancing mobile responsiveness, and expanding reporting functions, were incorporated into the revised version before pilot implementation (Razaq, 2026).

The validated application was subsequently implemented at MAN 1 Jepara through a pilot project. Prior to implementation, guidance counselors, teachers, administrative staff, and system administrators participated in training sessions covering system operation, counseling documentation, behavioral monitoring, report generation, and user management. During implementation, the application successfully supported daily counseling activities, including counseling documentation, disciplinary management, behavioral monitoring, home visit reporting, and communication with parents. The centralized database enabled counselors to retrieve students' historical

records instantly, while automated reporting significantly reduced administrative workload and improved institutional efficiency.

System Evaluation, Discussion, and Research Contribution

The usability evaluation demonstrated that the application was easy to operate, provided systematic access to counseling information, generated reports efficiently, and received positive responses from counselors, teachers, and school administrators (Aisyah et al., 2022). Users reported that centralized data management reduced repetitive administrative tasks, improved coordination among educational stakeholders, and enabled faster identification of students requiring counseling interventions.

The findings confirm that integrating digital technology into guidance and counseling management can substantially improve educational services in Islamic Senior High Schools. Unlike conventional counseling systems that primarily focus on administrative documentation, the proposed application integrates counseling administration, behavioral monitoring, parent communication, and institutional reporting into a unified information system. This integration supports real-time collaboration among counselors, teachers, school leaders, students, and parents while promoting evidence-based educational management (Hambali et al., 2021).

An important contribution of this application is its emphasis on students' moral development. Besides documenting disciplinary cases, the system also records positive behavioral indicators and student achievements, thereby supporting the development of *akhlaq al-karimah* as an integral objective of Islamic education (Sugiono, 2020). Continuous communication with parents further strengthens collaborative responsibility for students' character development.

This study contributes to educational management in three dimensions. Theoretically, it extends the concept of digital transformation by integrating guidance and counseling management with Islamic moral education. Practically, it offers an integrated digital solution that enhances counseling administration, stakeholder collaboration, and institutional reporting. Methodologically, it demonstrates the applicability of the ADDIE model for developing educational management information systems through systematic analysis, design, validation, implementation, and evaluation.

The principal novelty of this research lies in the development of an integrated digital ecosystem that combines counseling administration, behavioral monitoring, moral development, parent involvement, and executive decision-support dashboards within a single web-based platform specifically designed for Islamic Senior High Schools. Compared with existing counseling information systems, the proposed application provides a more comprehensive approach to educational management by supporting preventive counseling, collaborative interventions, and continuous monitoring of students' behavioral and moral development.

CONCLUSION

This study developed an Integrated Digital Guidance and Counseling Management Application to improve the effectiveness of guidance and counseling services while strengthening students' moral development in Islamic Senior High Schools. Using the ADDIE development model, the study systematically designed, developed, implemented, and evaluated a web-based

information system integrating student profiles, counseling records, behavioral monitoring, disciplinary management, parent communication, reporting, and executive dashboards within a centralized platform.

The findings demonstrate that the application improves administrative efficiency, enhances collaboration among counselors, teachers, school leaders, students, and parents, and supports evidence-based educational decision-making. By integrating counseling administration with continuous monitoring of students' behavioral and moral development, the application contributes not only to the digital transformation of educational management but also to strengthening character education in Islamic schools.

This study is limited by its implementation in a single Islamic Senior High School and its primary focus on system usability and functionality. Therefore, future research should involve broader implementation across different educational institutions and evaluate the long-term impact of the application on students' behavioral and moral development. Further development may also integrate emerging technologies, such as artificial intelligence, learning analytics, and mobile applications, to support personalized counseling services and early identification of students requiring intervention.

Overall, the proposed application provides a practical and scalable digital solution for modernizing guidance and counseling management while supporting collaborative educational governance and sustainable character development in Islamic educational institutions.

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