DEVELOPMENT OF A *MICROSOFT ACCESS*-BASED ADMINISTRATIVE INFORMATION SYSTEM FOR GUIDANCE AND COUNSELING (E-BK) AT SMK NEGERI 2 MAJENE

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Abstract
The main problems in this study are (1) How is the description of the needs of BK teachers regarding the E-BK administration information system based on Microsoft Access at SMK Negeri Majene. (2) How is the prototype of the E-BK administration information system based on Microsoft Access at SMK Negeri Majene. (3) How is the level of validity of the E-BK administration information system based on Microsoft Access at SMK Negeri Majene. (4) How is the practicality of the E-BK administration information system based on Microsoft Access at SMK Negeri Majene. This study was conducted by describing the R&D (Research & Development) approach using the ADDIE (Analysis, Design, Development, Implementation and Evaluation) model. This research was conducted at SMK Negeri 2 Majene. The subjects of this study were 7 BK teachers and 10 students. Data collection techniques were by interview, observation and trial questionnaire. The objectives of this study were (1) To describe the level of need for an E-BK administrative information system based on Microsoft Access at SMK Negeri Majene. (2) To understand the prototype of an E-BK administrative information system based on Microsoft Access at SMK Negeri Majene. (3) To measure the validity of an E-BK administrative information system based on Microsoft Access at SMK Negeri Majene. (4) To determine the level of practicality of an E-BK administrative information system based on Microsoft Access at SMK Negeri Majene. The results of the study indicate that (1) BK teachers need an administration system that can facilitate service recording, as well as student data management. (2) The prototype system developed contains student data input features, simple and easy-touse BK service recording. (3) The validation results show that the system has a high validation level with an average assessment of 90% by material experts and media experts. (4) The practicality test shows that this system is very helpful and easy to use by BK teachers, with a practicality score reaching 85%. Thus, the E-BK system based on Microsoft Access is declared valid and practical to be used as a tool in managing the administration of guidance and counseling services at SMK Negeri 2 Majene
Keywords: Information System, Guidance and Counseling, E-BK, Administration, Microsoft Access

Abstrak
Pokok masalah pada penelitian ini adalah (1) Bagaimana gambaran kebutuhan guru BK tentang sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri

Majene. (2) Bagaimana prototype sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. (3) Bagaimana tingkat validitas sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. (4) Bagaimana kepraktisan sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. Penelitian ini dilakukan dengan menggambarkan pendekatan R&D (Research & Development) dengan menggunakan model ADDIE (Analysis, Design, Development, Implementation dan Evaluation). Penelitian ini dilakukan di SMK Negeri 2 Majene. Subjek dari penelitian ini adalah 7 guru BK dan 10 peserta didik. Teknik pengumpulan data dengan cara wawancara, observasi dan angket uji coba. Tujuan penelitian ini yakni (1) Menggambarkan tingkat kebutuhan sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. (2) Untuk memahami prototype sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. (3) Mengukur validitas sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. (4) Untuk mengetahui tingkat kepraktisan sistem informasi administrasi E-BK berbasis Microsoft Access di SMK Negeri Majene. Hasil penelitian menunjukkan bahwa (1) Guru BK membutuhkan sistem administrasi yang mampu mempermudah pencatatan layanan, serta pengelolaan data peserta didik. (2) Prototype sistem yang dikembangkan memuat fitur input data peserta didik, pencatatan layanan BK yang sederhana dan mudah digunakan. (3) Hasil validasi menunjukkan bahwa sistem memiliki tingkat validasi tinggi dengan penilaian rata-rata 90% oleh ahli materi dan ahli media. (4) Uji kepraktisan menunjukkan bahwa sistem ini sangat membantu dan mudah digunakan oleh guru BK, dengan skor kepraktisan mencapai 85%. Dengan demikian sistem E-BK berbasis Microsoft Access dinyatakan valid dan praktis untuk digunakan sebagai alat bantu dalam pengelolaan administrasi layanan bimbingan dan konseling di SMK Negeri 2 Majene

Kata kunci*: Sistem Informasi, Bimbingan Konseling, E-BK, Administrasi, Microsoft Access*

INTRODUCTION

With the rapid development of technology, the use of information systems in education has become increasingly important, including in administrative processes in schools. Computer technology is not only used as a learning medium, but also as a tool in managing administrative data, including Guidance and Counseling (BK) administration. With the support of a good information system, the management of educational services can run more effectively and efficiently. The use of information technology in guidance and counseling services enables more systematic and documented data management. According to Pal, (2020), the guidance and counseling administration information system can help guidance counselors in recording and processing student information. This is important because guidance and counseling play a strategic role in helping students overcome personal, social, learning, and career problems (Aqib, 2020). Therefore, the implementation of an information system is an urgent need in improving the quality of BK services.

Based on interviews with guidance and counseling (BK) teachers at SMK Negeri 2 Majene, it was revealed that the BK administration management process is still carried out manually. This manual management includes recording student data, documenting

services, compiling reports, and archiving assessment results. This condition causes various significant obstacles, especially when schools enter the digital era, which demands that guidance and counseling services be more professional, accountable, and well-documented. Guidance and counseling teachers pointed out that manual recording is prone to data corruption due to non-standard storage, such as paper that is easily damaged, lost, or scattered. Errors in recording also often occur because the entire process is done manually without an automatic verification system that can minimize human error. Delays in decision-making are another impact of manual administration.

Guidance counselors need more time to search for student data, trace service history, and compile student progress reports. This ultimately hinders the effectiveness of guidance services, especially in the context of resolving student issues that require a quick response. In addition, the manual process makes the workload of guidance counselors unrealistic, especially with an increasingly large scope of responsibility (Karisma et al., 2025). In practice, a guidance counselor not only conducts individual and group counseling, but also has to carry out responsive services, basic services, individual planning services, and system support. All of these services require adequate documentation so that their implementation can be accounted for.

This challenge becomes even more difficult when linked to government regulatory requirements. Permendikbudristek No. 25 of 2024 states that in secondary education units, each guidance counselor is required to handle a minimum of five study groups. If one study group consists of 32–36 students, then the guidance counselor's workload can reach more than 150 students. With this number, manual administration becomes irrational because it requires a great deal of time, energy, and precision. On the other hand, Permendikbud No. 111 of 2014 emphasizes that guidance counseling services must be carried out in a systematic, structured, measurable, and well-documented manner as part of the accountability of guidance counselors' performance. This means that documentation is not just a supplement, but an important aspect that must be managed properly to ensure that services run according to professional standards (Lilis & Herdi, 2023; Saputra et al., 2024).

In addition to these regulations, national policy directions also encourage digital transformation in the education sector. The Ministry of Education, Culture, Research, and Technology's Strategic Plan (Renstra) for 2020–2024 clearly underlines the importance of utilizing technology in all aspects of education, including non-instructional services such as guidance and counseling. The digitization of guidance counseling administration is considered to support work efficiency, improve data accuracy, and expand access to information for stakeholders in schools. Thus, the manual guidance counseling administration at SMK Negeri 2 Majene is no longer in line with government policy direction or the demands of service professionalism.

In view of these various issues, a comprehensive solution is needed to help guidance counselors perform their duties more effectively. One solution offered is the development

of a guidance counseling administration information system based on Microsoft Access. The use of Microsoft Access is considered appropriate because the application is relatively easy to understand, lightweight when run on school computers, and does not require an internet connection. This is particularly relevant for schools that do not yet have strong network infrastructure or still face limitations in terms of digital devices.

Microsoft Access has a variety of features that greatly support the needs of guidance counseling administration. The table creation feature allows for the structured storage of student data, service data, progress notes, assessment results, and referral data. Forms can be used as a more user-friendly data input interface, making it easier for guidance counselors to enter information without having to deal directly with complex table displays. The query feature enables fast and accurate data searches, for example, to display students who have specific counseling records or to identify students who need follow-up services. Meanwhile, the report feature helps guidance counselors compile service reports automatically based on stored data, making the document preparation process much more efficient.

The development of an Access-based guidance counseling information system aims not only to reduce the administrative burden but also to improve service quality. With an integrated system, guidance counselors can quickly access student service histories, enabling them to provide more targeted interventions. In addition, this system can help guidance counselors plan more comprehensive service programs based on valid data. The time efficiency gained from using a digital system allows guidance counselors to focus more on their core task, which is providing counseling services to students. This is very important considering that students' counseling needs are increasingly diverse, ranging from personal, social, and academic issues to career planning (Dianovi et al., 2022).

The implementation of a guidance counseling administration information system also provides benefits in the context of accountability and transparency (Rahim, 2023). Digitally stored data is easy to evaluate, monitor, and report to the principal or guidance counseling supervisor. Thus, service quality can be measured objectively and continuously. In addition, the digital system helps schools meet the demands of national education policies that emphasize professionalism, efficiency, and effectiveness of services (Morris, 2020).

Overall, the development of a Microsoft Access-based guidance counseling administration information system is a strategic step to overcome the various administrative obstacles that guidance counselors at SMK Negeri 2 Majene have faced. This system not only facilitates data processing but also supports the overall improvement of guidance counseling service quality. With more efficient, accurate, and structured administration, guidance counselors can provide more optimal services according to the needs of students and the demands of 21st-century education. Thus, the development of this information system is an important investment for the sustainability of guidance counseling services in schools and the improvement of education quality in general.

METHOD

This research is a type of research and development (R&D). The objective is to produce a product in the form of a Microsoft Access-based counseling administration information system (E-BK). The development model used in this research is the ADDIE model. This model consists of five stages, namely Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009). Each stage is carried out systematically to ensure that the resulting product meets user needs. This research was conducted at SMK Negeri 2 Majene, West Sulawesi. The location was chosen based on preliminary observations that showed that the administration of counseling services at the school was still manual and inefficient. The research was conducted from November 2024 to April 2025. During that period, data collection, system development, and product testing were carried out.

The subjects in this study were guidance and counseling teachers and students at SMK Negeri 2 Majene. Guidance and counseling teachers were the main users of the system and played a role in product validation, while students were indirectly involved as part of the data being managed. The research steps referred to the ADDIE stages. The Analysis stage was carried out through interviews and observations to identify user needs. Next, the Design stage included the design of the system flow and interface display. In the Development stage, the system was developed using Microsoft Access. This process included the creation of databases, forms, and reports. The Implementation stage was carried out by testing the system with guidance and counseling teachers, accompanied by training on its use.

The final stage is Evaluation. The evaluation is carried out by distributing questionnaires to experts and users to assess the quality and feasibility of the developed system. Data collection is carried out through interviews, observations, questionnaires, and documentation. Interviews aim to explore user needs, while observations are used to understand the ongoing administrative processes. Questionnaires are used to assess the quality of the system at the evaluation stage. Documentation assists in system design by referring to existing guidance counseling administration formats. The instruments used include interview guides, observation sheets, feasibility assessment questionnaires, and administrative document checklists. All of these instruments are compiled based on indicators of effective and efficient guidance counseling service needs.

RESULTS AND DISCUSSION

The results of this study indicate that there is an urgent need for the digitization of guidance and counseling administration at SMK Negeri 2 Majene. Based on initial observations and interviews with guidance counselors, it was found that administrative processes are still carried out manually. This makes it difficult to record service data, recap reports, and track student history. Guidance counselors said that time constraints and piles of documents are often the main obstacles to performing administrative tasks effectively.

In response to these issues, the researcher designed a guidance counseling administration information system using Microsoft Access. The design stage was carried out by considering user needs and ease of operation. The system was designed with a simple and user-friendly interface, including important features such as student data input, service recording, schedule management, and report printing. Microsoft Access was chosen because it is easily accessible, does not require an internet connection, and supports efficient data integration.

During the development stage, the system was developed in stages according to the design results. Several main forms were created, including a student biodata form, an individual and group counseling service form, a problem recording form, and a counseling activity recap report form. In addition, the system also provides a menu for printing summons letters, event reports, and semester reports. All features have been tested internally to ensure that they function properly without errors. The implementation stage involved one guidance counselor at SMK Negeri 2 Majene as the initial user. The teacher was given training on how to use the E-BK system. The results of the implementation showed that the system was easy to understand and use, and helped speed up the work process. The guidance counselor said that this system was very helpful in archiving data and compiling reports, which previously took a long time to do manually.

The evaluation of the Microsoft Access-based BK administration information system was carried out in several stages to ensure its feasibility, quality, and effectiveness before wider implementation. This evaluation involved validation tests by subject matter experts and media experts, as well as direct trials by users, namely the guidance counselors who were the main subjects in the use of the system. This comprehensive evaluation approach aimed to look at the system from two perspectives: first, in terms of the suitability of the content and the substantive needs of guidance counseling services; and second, in terms of the appearance, practicality, and ease of use of the system by guidance counselors as end users.

Validation by subject matter experts focused on assessing the completeness of the system's content. The aspects reviewed included the suitability of the data displayed with the guidance counseling administration standards in accordance with Permendikbud No. 111 of 2014, the appropriateness of the documentation format, the clarity of service categories, and the accuracy of the information generated by the system. Subject matter experts assessed that the system was able to accommodate the needs of comprehensive service administration, ranging from basic service recording, responsive services, individual planning, to system support. In addition, subject matter experts also assessed that this system was in line with the principles of accountability, objectivity, and measurability, which are the main standards in BK service management. This shows that the content and data structure in the system have been designed with the professional needs of BK teachers in mind (Febrianti et al., 2025; Sri et al., 2020).

On the other hand, validation by media experts was aimed at assessing the functionality and appearance of the user interface. Media experts assessed that the system has a clear, easy-to-understand, and consistent menu structure. The database features run well without errors, while the input forms, queries, and reports generated are considered responsive and function according to user needs. The interface is designed to be simple, without excessive visual elements, making it easy for guidance counselors to operate the system even if they do not have an in-depth background in information technology. The clarity of the buttons, navigation, and instructions in each part of the system also contributed to the media expert's positive assessment.

Based on the assessments of both experts the subject matter expert and the media expert the Microsoft Access-based guidance counseling administration information system falls into the "highly suitable" category for use. This assessment covers three important aspects, namely content completeness, functionality, and interface display. The "highly suitable" category indicates that the system not only meets minimum standards but also provides above-average quality in supporting guidance counseling administration in schools. This validation is an indicator that the system has met the principles of good instructional design in the context of educational technology development.

In addition to the expert evaluation, user trials were conducted involving guidance counselors as direct users of the system. These trials were important because they provided a realistic picture of how the system is used in authentic conditions in schools. Guidance counselors provided positive feedback regarding the system's speed in processing data, the ease of inputting service information, and its ability to generate complete and structured automatic reports. The guidance counselors also highlighted that this system is very helpful in lightening the administrative burden that was previously done manually. Student data stored in the database can be accessed quickly, facilitating the decision-making and service planning processes.

This feedback is an important consideration because guidance counselors are the ones who directly experience administrative constraints in schools. They stated that this system is very suitable for widespread implementation, especially for guidance counselors who have a high administrative burden due to the large number of study groups. With this digital system, guidance counselors no longer need to fill out pages of manual forms or compile reports manually, which takes a long time (Habsy et al., 2025).

The system automatically manages data, allowing guidance counselors to focus on providing more in-depth and higher-quality counseling services. Overall, the results of this study indicate that the development of a Microsoft Access-based guidance and counseling administration information system can be an effective and efficient solution in supporting the implementation of guidance counseling services in schools. This system improves data accuracy because all information entered is automatically processed by the database, minimizing the risk of recording errors. In addition, the system speeds up the

administrative process because guidance counselors no longer need to search for documents manually, but can directly use the search and filter features in the system.

In terms of reporting, the system allows guidance counselors to generate service reports quickly and accurately. Monthly, semester, and annual reports can be printed directly through the report feature without having to recompile the data from scratch. This not only saves time but also improves the quality of reporting, as the report format is neatly arranged and complies with guidance counseling administration standards. The existence of this system also has an impact on improving communication with the school and parents. Information about student development can be reported more accurately and in a timely manner. Guidance counselors can show concrete data on the services that have been provided, making the evaluation and follow-up process easier. This system also opens up opportunities for schools to integrate guidance counseling data with other school information systems in the future.

Thus, the development of the Microsoft Access-based E-BK system can be used as an alternative for modern, practical, and needs-based guidance counseling administration. This system not only supports administrative efficiency but also improves the overall quality of guidance counseling services. The implementation of the E-BK system is a strategic step in realizing the digital transformation of counseling services in schools, while also responding to government regulations regarding the provision of professional, systematic, and well-documented guidance counseling services. This system is expected to become a model that can be adapted by other schools as part of innovation in guidance and counseling services in the digital era.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the development of a Microsoft Access-based counseling administration information system is highly relevant to the needs of guidance counselors in schools. This system provides a solution to the problem of manual administration, which is time-consuming and prone to errors. Through a thorough needs analysis process, this system was developed to facilitate more systematic, faster, and more accurate data management. The use of the ADDIE model in the development process proved to be effective in producing a structured product that meets user needs and is substantively and technically feasible. Each stage from analysis, design, development, implementation, to evaluation contributed greatly to perfecting the developed system. This systematic approach also ensures that the final result is not only functional but also user-friendly and easy to implement by guidance counselors with basic technological skills.

The resulting E-BK system has various features that support all administrative needs of guidance and counseling services, including service recording, student data management, and automatic report generation. With this system, the efficiency and effectiveness of guidance counselors' work has increased significantly. This shows that the use of appropriate technology is very important in supporting the administrative tasks of

teachers, especially in today's digital era. Validation by subject matter and media experts shows that this system is in the "highly feasible" category, both in terms of content and technical aspects. This reinforces that the resulting product is of high quality and can be directly applied in the context of guidance and counseling services in schools. In addition, user trials show that this system has received positive responses from guidance counselors as the main users, as it helps them to be more organized and efficient in their work.

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