

High-Tech Counselor in the Digital Era: Integrating Information Technology into Modern Guidance and Counseling Practices

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ARTICLE INFO	ABSTRACT
<p>Keywords: Information Technology, Guidance and Counselling, Technology Integration, Counselor</p> <p>DOI: http://dx.doi.org/ 10.22437/jssh.v8i2.39231</p> <p>Received: December 7, 2024</p> <p>Reviewed: December 10, 2024</p> <p>Accepted: December 10, 2024</p>	<p><i>In digital era, integrating information technology with guide and counselling services is crucial. This article looks at how information technology might improve the quality of counselling services, including accessibility and intervention efficacy. It takes a qualitative approach, based on a literature review, to investigate the possibilities, challenges, and best practices for using information technology into counselling. The findings demonstrated that information technology employed in guidance and counseling has the potential to increase the breadth of counselling services while also raising ethical, privacy, and counselor readiness concerns. The proposals include counselor training, the development of user-friendly technology, and legislation that promotes data privacy.</i></p>

1. Introduction

In this day and age, the advancement of information technology has brought about unprecedented growth. The rapid advancement of information technology in society cannot be ignored and affects every aspect of life (Ilfana & Herdi, 2022). This speed increases the possibility of receiving information in a universal format without interruption. (Said et al., 2010). From the speed and ease of data transmission to the efficiency of communication and service, as well as the ease of daily activities, the use of technology with the system that has already been established. The rate of growth is determined by the ability and potential of the people to use knowledge and integrate technology to increase productivity (Diana, 2018).

The digital revolution has had a significant influence on how people communicate, work, and learn. Schwab (2016) state that the Fourth Industrial Revolution ushered in the era of digitalization, in which technology has become the foundation of global contact. Such advancements in the times need the use of information technology as a kind of positive change, based on the premise that humans have the powers of creativity, emotion, will, and work to increase work productivity (Prasetiawan, 2017). This is evidenced by a variety of innovations in every aspect of human life that make use of information technology, particularly in critical

sectors (Andi Setiawan, 2016). Technology may change how people communicate, work, and learn, as well as the social and culture structures they build. This technology also makes it easier for people to connect and access a variety of information (Lesmana & Sri Ginanti, 2024).

Technology advancement for two sides not only has the potential for profit, but it also provides an opportunity for growth. First, the use of information technology may improve the effectiveness and efficiency of education, and second, it can provide a more current learning experience that meets the needs and requirements of the learner. In other cases, if technology is not properly controlled, it has the potential to harm mental development through various media content. As a result of this lack of control, it is critical for education and counseling to provide preventive and curative services in tandem with the advancement of society. (Kusumawati, 2020). Aside from that, not everyone has access to technology, and using technology requires expertise. Without access and expertise, it is impossible to create an appropriate digital program (Suryahadikusumah & Nadya, 2020).

In the context of guidance and counseling, information technology provides options that were previously unavailable. Guidance and counseling must adapt to the times in order to reach the objective of offering better services (Ilfana & Herdi, 2022). The advancement of information technology in guidance and counseling is hoped to make services more efficient in terms of time and money (Andi Setiawan, 2016). This also leads to a focus on the use of technology in the form of media services that have the potential to improve affective, cognitive, and psychological functions. (Prasetiawan, 2017).

In design, technology provides flexibility in terms of time and location, which is extremely important for providing clients with improved access or mobility. This will greatly enhance personalization, since consultants will be able to provide digital materials tailored to the needs of each individual client (Corey, 2016). In today's digital era, there are several tools and media based on information technology, both online and offline, that facilitate the purpose of goods or services by customers (Kusumawati, 2020). Digital platforms such as video conferencing, mobile apps, and chatbots based on artificial intelligence have changed the way decisions are made, allowing for faster and more efficient communication. Aside from that, applications based on technology, such as a basic writing system, can assist counselors in quickly and accurately identifying client needs, increasing service efficiency.

Other innovations focus on the development of technology for data guidance and counseling service evaluation. A digital management system enables consultants to store, organize, and analyze client data in a more secure and systematic manner. Heppner dkk. (2008) emphasizes the importance of this technology in delivering evidence-based services (evidence-based practices), in which data is used to guide more effective interventions. Aside from that, the use of social media and digital education platforms to disseminate information on mental health and personal development has become an innovation that has helped to improve the psychosocial literacy of the general public, particularly the younger generation. This demonstrates that information technology not only supports guidance and counseling services, but also serves as a strategic tool in developing public awareness of the importance of psychological health.

However, despite its broad scope, the incorporation of information technology in design has significant implications. The primary concerns that must be addressed are data security, the availability of consultants to use technology, and ethical development. In other words, information technology necessitates not only user safety but also security, resulting in the development of effective services to meet needs (Setiawan, 2016). (Creswell (2012) It is stated

that with the development of technology in the field of education, protection of student privacy must be prioritized. Aside from that, counselors must improve their digital literacy to ensure that the use of technology does not replace the importance of human communication in the counseling process. The incorporation of information technology into guidance and counseling programs necessitates appropriate management, which includes paying attention to both the quality of technology use and the process of providing quality counseling services (Wulandari et al., 2024). As a result, the goal of this research is to thoroughly examine the merits and cons of integrating information technology into consulting services, as well as to make strategic recommendations for their implementation.

2. Research Methodology

This study used a qualitative approach based on a literature review. This literature review technique attempts to thoroughly investigate the issue of information technology in guidance and counseling. Some of the activities included thorough reading, examination of library resources, and study of research papers. Data were gathered from a variety of sources, including academic publications, scientific journals, and research papers related to this issue. The purpose of this research is to critically and comprehensively examine relevant studies, collect information from various sources, identify new trends from previously collected data, develop skills, and expand knowledge.

Theoretically, this technique is chosen to explain and investigate associated concepts and theories about information technology in guiding and counseling. Critical study of literature source collecting data can assist reveal limits as well as future opportunities for the development of information technology in guiding and counseling. Thematic analysis was used to find patterns and significant themes connected to Guidance and Counseling information technology integration potential, problems, and initiatives. This procedure is carried out methodically by searching for sources using keywords and utilizing sources that meet certain inclusion and exclusion criteria. Validation was carried out by comparing the results of several studies to confirm the reliability and validity of the finding.

3. Findings

Several studies demonstrate that the ability to use information technology in guidance and counseling throughout the 4.0 industrial revolution is critical (Azhari et al., 2023; Kushendar et al., 2019; Rahmadhea, 2024; Wardani & Aswar, 2024; Wulan, Ahmad, et al., 2023). Counselors must be able to adapt to technology in order to transform obstacles into growth possibilities, given the rapid development of the digital world (Wulan, Ahmad, et al., 2023). Integrating information technology into current guidance and counseling services has a positive impact not only on the processes, but also on the private consultant. Some of the advantages of integrating technology in guidance and counseling include: (1) ease of access; (2) cost-effectiveness; (3) ease of program management; (4) semi-anonymity; (5) ease of direct interaction; (6) flexibility; (7) structured and systematized protocol; (8) proactive decision-making capability; and (10) ability to change service provider (Kusumawati, 2020).

The use of information technology in guidance and counseling can assist overcome resource, personnel, and time constraints and maximize client service goals (Yulianti et al., 2024). Suraida Utami dkk., (2024) found that there are three types of counselors who have the ability to integrate information technology into modern guidance and counseling practices: (1) making services more interesting and interactive; (2) assisting in understanding and resolving socio-emotional issues; and (3) advancing their careers. It also states that counselors who can effectively use technological advancements will improve their effectiveness in meeting the

needs of their students, have a better and more organized workspace, reduce waste, and make it easier to find information about classes, curricula, and other topics (Faqih Isro & Rahmawati (2022).

The various conveniences and benefits provided by the use of information technology into guidance and counseling also pose obstacles in its application. To deliver effective and efficient services, counselors must be competent and skilled in the use of information technology. Counselors' low levels of digital literacy provide a significant difficulty in utilizing information technology in guiding and counseling. (Azhari et al., 2023; Isro'i, Sauyah, et al., 2022; Kushendar et al., 2019; Putu, 2020; Rahmadhea, 2024). In addition, the lack of technological facilities in certain areas provide a unique opportunity for counselors to engage in creative pursuits while addressing the existing challenges. (Kurniasih et al., 2022; Kusumawati, 2020; Utami et al., 2024b; Vany, 2020). The next challenge is to provide a secure data management system that complies with the code of ethics for professional counselors while providing counseling and consultation services (Diana, 2018; Firmani et al., 2024; Muhammad, 2024; Rahmadhea, 2024; Wardani & Aswar, 2024).

4. Discussion

4.1 The urgency of integrating information technology in guidance and counseling

Information technology has become indispensable in a variety of fields, including the practice of problem solving. The advancement of technology has led to the modernization of traditional ways of doing things, resulting in a variety of conveniences and advantages for business and management (Kusumawati, 2020). Guidance and counselling, as a proactive and methodical endeavor, necessitates the use of information technology to satisfy its requirements, resulting in current services. (Diana, 2018). Not only can information technology improve service quality, but it also creates opportunities for more innovative approaches to problem solving (Firmani et al., 2024). Information technology is utilized in both research and practice to help and improve the performance of guidance and counseling professionals. The Indonesian counselor competence standards emphasize the use of information technology in guidance and counseling, allowing counselors to enhance their abilities in using technology to give services to clients (Putu, 2020). This is inextricably linked to the notion of comprehensive guidance and counseling, which includes information technology as a method of service delivery (Lisinus et al., 2024).

Information technology in guidance and counseling focuses on the use of digital tools to assist consultants in providing more effective, efficient, and flexible services to customers. This has also been reported by (Muhammad, 2024) That integrating technology into consulting may improve accessibility, flexibility, ease, adaptability, and consultant compatibility in service delivery. Information technology has advanced at an incredible rate in our era. The fast growth of information technology in society cannot be stopped, and it affects every element of existence. (Said et al., 2018). Heppner dkk. (2008) this technology not only simplifies administration, but it also has the potential to build a more inclusive and accessible management environment. This technology not only helps to make administration easier, but it also provides an opportunity to create a more inclusive and accessible management environment.

The inclusion of information technology into counseling holds enormous promise. One of the primary benefits of technology integration in guidance and counseling is the provision of more comprehensive counseling services. Clients may get guidance and counseling services online from anywhere, owing to specific platforms and applications that make it easier for counselors to communicate with clients. This is especially beneficial for reaching out to customers in

locations where direct counseling services are difficult to find (Creswell, 2012). Aside from that, the availability of technology, particularly the internet, allows consultants and counselors to tailor their services to their needs in order to make them more comfortable. Integrating information technology into building and design creates flexible spaces for interaction that meet the needs (Prasetya, 2017). All of these technological applications are likely to make it easier to create and manage business services, resulting in a more efficient and productive work environment (Kusumawati, 2020). There are several types of technological integration that help to reduce the cost of purchasing business services, such as: (1) the availability of business or consulting services online via chat, phone, or video; (2) the dissemination of information and education via social media platforms; (3) the use of business tools via mobile or website; (4) Utilization of virtual and augmented reality for service delivery.

Aside from that, data-driven technology significantly increases service efficiency. Counselors can use data management systems to track client activity in real time. Data gathered may be evaluated to generate more appropriate intervention recommendations. For example, artificial intelligence has been used to analyze client behavior, provide initial feedback, and even function as a chatbot for general consultation (Heppner et al., 2008). The use of this information technology can improve the efficiency of guiding and counseling services from preparation to implementation, assessment, and follow-up (Prayoga et al., 2024). Wardani & Aswar (2024) It is claimed that guidance and counseling may use technology such as blockchain to establish digital identities, store data distributed on the cloud, and perform decentralized monitoring.

The use of information technology in guidance and counseling services has had a significant impact on the performance of consultants in serving clients. Technology enables the improvement of administrative processes, increased service accessibility, and efficiency in the execution of transactions. According to Heppner dkk., (2008), Technology has created a new opportunity to address geopolitical challenges and time constraints through scheduling. Counselors can use data management tools and communication apps to provide more flexible and effective services, particularly in schools and educational institutions. Guidance and counseling teachers or counselors that incorporate technology into their service procedures will acquire skills and inventiveness in maximizing their own or their clients' potential. (Said et al., 2018).

4.2 The potential integration of information technology in guidance and counseling

The integration of technology in education has a significant impact on service quality. In order to continue providing services in a user-friendly and interactive manner while also taking into account azaz and the ethics of bimbingan and counseling, they must also adapt to changes in the world (Diana, 2018). Various technologies used in guidance and counseling services have one primary goal: to optimize guidance and counseling services in order to facilitate decision-making in accordance with the changing world (Kusumawati, 2020). In this situation, counselors must have knowledge, skills, and experience in adapting to technological advancements in guidance and counseling services to maximize their potential (Prayoga et al., 2024).

Guidance and counseling services can be made more successful by incorporating information technology. Counselors can use information technology to develop a long-term integrated and methodical management information system for guiding and counseling. This enables counselors to increase the quality of guiding and counseling services. (Harahap et al., 2023). Counselors must continue to innovate by utilizing information technology to create more practical and efficient means for providing services to their clients (Ardini & Rosmila, 2021).

This innovation accelerates the technological, physical, and intellectual processes to create new products and/or services that provide new solutions to problems in the service process (Azhari et al., 2023).

Counselors now have limitless access to information technology, allowing them to give advice and counseling services. Online services like Zoom or Google Meet make it possible to conduct counseling sessions without regard to geography, making them ideal for persons living in rural places or with physical restrictions. Online guidance and counseling services have also been widely introduced in a number of educational institutions, allowing services to be delivered without the need for in-person encounters (Fadhilah et al., 2021). The availability of online guidance and counseling services can assist clients who do not have the time or resources to meet with a counselor in person (Isro'i, Saayah, et al., 2022). This is likely to be very useful in reducing the amount of time and energy spent by counselors and decision-makers during the course of service delivery (Lisinus et al., 2024).

The use of information technology allows counselors to collect and organize data in a more structured manner. Sullo's (2012) state that the use of case management software allows consultants to reduce administrative burdens such as manual data entry and storage. Data collected by consultants, such as surveys, reports, and personal data, can be stored in digital format, either on a local network or in the cloud. This method can make it easier for counselors to collect and save data in a timely manner, reducing the risk of data loss. Using technology to administer guidance and counseling services allows for more efficient and effective services. (Fadhilah et al., 2021). With technology, counselors may focus more on developing programs that are tailored to the needs of their students.

Today's highly advanced information technology facilitates counselors' collaboration with other stakeholders in order to provide counsees with suitable guidance and counseling services. Technology can be used to help collaborate with parents, internet service providers, subject teachers, homeroom teachers, and school administration in order to provide the counselee with a comprehensive guidance and counseling service program (Kushendar et al., 2019). Utilizing information technology can improve the quality of guidance and counseling as a contemporary system of support (Lisinus et al., 2024). Information technology has recently developed a stable work network that enables people to access the development of children and facilitates the sharing of information. and facilitate the process of referring ahli to a konseli if necessary.

Technology also increases the accessibility of guidance and counseling services for younger generations who are more familiar with digital media. Students are more willing to share their problems using obrolan applications or daring platforms that provide informal communication support (Creswell, 2012) Additionally, this method allows clients to open up without the humiliation that sometimes accompanies in-person meetings. The several technologies that are now being developed and used in counseling have an impact on raising the standard of service delivery (Said et al., 2018). In this context, technology may provide more intimate and introspective experiences.

4.3 Information Technology in Modern Guidance and counselling

Technological innovations are also increasingly enriching the approach in guidance and counseling services. Some digital technologies utilized in guidance and counseling services include mobile applications, websites, virtual messages, video modeling, online meetings, and even online assessments. (Muhammad, 2024). Prayoga dkk. (2024) mentioning that there are two potential uses of information technology, both online and offline. Some online-based technologies that can be utilized in guidance and counseling include hardware connected to the

internet, online communication applications, applications or websites for online classes, and applications for communication networks such as text, calls, and video. Additionally, offline-based technologies that are not connected to the internet include audio player applications, video player applications, computer programs, and media editor applications for guidance and counseling services (Prayoga et al., 2024).

Case studies in several schools show that the use of technology in guidance and counseling yields positive results. For example, a high school in West Java that uses an online counseling application reported an increase in student participation in counseling services. Students feel more comfortable sharing their problems through the app than in face-to-face sessions. (Sullo, 2010). These findings indicate that technology can help create a safer and more supportive counseling space for students. If modern counselors can optimally and appropriately leverage advancements in information technology, then guidance and counseling services can progress further without diminishing the essence of the service itself. (Kusumawati, 2020).

Globally, the trend of using technology in guidance and counseling continues to grow. Developed countries like the United States and Canada have integrated e-counseling services into their education systems as part of the solution for mental health services (Heppner et al., 2008). However, in Indonesia, the implementation of technology in guidance and counseling still faces challenges, such as uneven technological infrastructure and a consultation culture that is still predominantly face-to-face. Technology adaptation must consider the local context, including cultural needs and resource availability.

4.4 Challenges of Integrating Information Technology in Modern Guidance and Counseling

Technology integration in counseling has many benefits and advantages, but there are drawbacks as well. Guidance and counseling services require collaboration and integration from a variety of internal and external stakeholders. In addition to counselors' expertise, other stakeholders—such as school administration and support networks—play a significant part in providing services to clients that meet the demands of the modern world (Kusumawati, 2020).

The gap in technology infrastructure possessed by educational institutions, counselors, and counsees is the primary obstacle to incorporating information technology into contemporary guidance and counseling services. Particularly in 3T locations (remote, deepest, and outermost), there are still a lot of educational institutions with restricted access to technology and the internet. One obstacle to the adoption of information technology integration in guidance and counseling services is the absence of technology-based infrastructure and facilities in certain institutions (Harahap et al., 2023). This is demonstrated by the fact that around 149,400 educational facilities in Indonesian educational institutions still do not have technological connectivity (Suryatni, 2021). The growth of counselors in investigating guidance and counseling information technology advances to maximize service delivery to counselors will be hindered by limited access to technology.

One of the problems of integrating information technology is dealing with client data security issues, which include the potential for cyberattacks, data leaks, and unauthorized use of data. Given how quickly technology is developing, counselors need to prioritize client data security and confidentiality in addition to honing their skills in integrating technology into guidance and counseling services (Muhammad, 2024). This pertains to the ethics of counselors who, as part of their duty to provide services to their clients, must defend their rights. (Diana, 2018). According to Heppner et al. (2008) Client and counselor trust may be weakened by poorly safeguarded personal data, which increases the possibility of privacy violations. It is difficult

to protect counselor data while utilizing technology, particularly the internet, for guidance and counseling services, yet it is a requirement of the counselor's ethical duty to uphold. (Syamila & Marjo, 2022). Counselors should operate in a professional setting, and data usage and preservation should include ethics including confidentiality, legislation, licenses, and certifications (Putra et al., 2017). A foundation for data protection is provided by laws like the Personal Data Protection Law in Indonesia and the General Data Protection Regulation (GDPR) in Europe, but its application necessitates a deep comprehension and dedication from counselors. In order to foster trust and safety for the counselor, it is crucial that certain rules and standards of behavior be followed in order to safeguard the counselor's privacy and personal confidentiality while they are offering guidance and counseling services (Rahmadhea, 2024)

In addition, the low level of digital literacy skills of counselors is also an obstacle to the optimisation of technology. Corey (2009) emphasizes how crucial it is that counselors have professional and ethical technology training. Counselors may find it difficult to fully utilize a variety of technical tools if they lack digital competency. Counselors who are unable to keep up with technology advancements may affect their clients' service delivery, which is often less flexible and repetitive (Kusumawati, 2020). Guidance and counseling services may be less advanced and useful if counselors lack the digital literacy skills necessary to stay current (Diana, 2018). This is also evidenced in research (Suryahadikusumah & Nadya, 2020) approximately 50% of counselors lack digital literacy, which hinders their ability to connect with clients' routines, lives, and needs. This leads to gaps in processing accurate information about clients. To fully utilize the benefits and possibilities of technology, counselors must shift their conventional attitude to a modern one by becoming more perceptive and proactive in the times they work in (Nursalim, 2020). Because of this, educational institutions or professional organizations must provide students with engaging instruction to ensure that they can adapt to the demands of the digital age and that they constantly improve their own skills. Institutions, organizations, and counselors must constantly improve their skills through various programs, activities, and facilities that have been provided in a professional manner (Masagca & Londerio, 2008).

Information, media, and counselor competencies must all be taken into account as a whole for guidance and counseling services to be delivered successfully. For guidance and counseling programs to consistently deliver the finest services, they must address the issues of data security and counselors' digital literacy (Firmani et al., 2024). In order to stay ahead of trends and thrive in the face of change, modern counselors need to be able to keep up with the times, particularly with regard to technology use in the digital age (Fadhilah et al., 2021). This is required to ensure that counselors have a thorough awareness of the field from an all-encompassing perspective and are able to employ technology in guidance and counseling while still paying attention and abiding by their code of ethics (Suraida Utami et al., 2024a). Putra dkk., (2017) stated that there are eight ethical standards for using technology in guidance and counseling services: acknowledging the positive and negative effects of services, using supporting technology, ensuring the accuracy of the service form, granting access to services using technology, adhering to laws and ethical technology use, respecting the counselees' willingness to use technology in the services they receive, and using websites in guidance and counseling services.

6. Conclusion

Integrating information technology into guidance and counselling is a deliberate approach to increase service accessibility, efficacy, and efficiency. However, the effectiveness of this integration is heavily dependent on how issues such as data security, technological competency, and ethics are handled. Counsellor training, the creation of user-friendly technology, and

explicit client data protection procedures are among the strategic suggestions. With the correct attitude, technology may be an effective partner in assisting counsellors to deliver better services in this digital age.

The absence of longitudinal data on the effects of technology on the counselor-client relationship is one of the study's shortcomings, despite the fact that technology has numerous advantages. It is sometimes challenging to replace the intimate, human connection between counselors and their clients with technology, particularly in circumstances requiring a high level of emotional sensitivity. It is still necessary to conduct thorough study on how well case management apps, media, and technology-based advice and counseling tools work to build lasting connections with clients.

In light of these advantages and difficulties, this study suggests that counselors keep enhancing their digital literacy. In addition, educational institutions need to develop policies that support the application of technology in counselling services. In order to meet the requirements and problems of clients in the digital age, technology may be a useful tool for enhancing the quality of counseling services when used strategically and adaptively.

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