



The Influence of Information Technology Utilization on Church Workers: A Perspective of Adaptation and Innovation in the Evangelical Christian Church of Indonesia, South Baliem Region, District IV Papua

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Abstrak

Penelitian ini bertujuan untuk mengkaji pengaruh penggunaan teknologi informasi terhadap efektivitas pelayanan pengerja gereja, serta untuk mengidentifikasi tantangan dan peluang yang dihadapi dalam mengadopsi teknologi tersebut. Penggunaan teknologi informasi dalam gereja dapat membantu dalam meningkatkan efisiensi administrasi, memperluas jangkauan pelayanan, serta mempermudah komunikasi antara gereja dan jemaat. Meskipun demikian, tantangan dalam hal keterampilan teknis, keterbatasan infrastruktur, dan biaya perangkat keras yang tinggi menjadi hambatan utama dalam adopsi teknologi. Penelitian ini menggunakan pendekatan kualitatif dengan metode studi kasus, melibatkan wawancara mendalam dengan pengerja gereja yang telah mengimplementasikan teknologi dalam pelayanan mereka dan observasi terhadap penggunaan teknologi di gereja. Hasil penelitian menunjukkan bahwa meskipun terdapat manfaat signifikan dari penerapan teknologi informasi, ada kebutuhan mendalam untuk pelatihan dan peningkatan infrastruktur teknologi di gereja. Penelitian ini merekomendasikan gereja untuk meningkatkan pelatihan teknologi bagi pengerja gereja dan berinvestasi dalam perangkat yang memadai untuk mendukung pelayanan berbasis teknologi. Temuan ini memberikan kontribusi pada pemahaman bagaimana teknologi dapat dioptimalkan dalam pelayanan gereja, serta memberikan panduan bagi gereja dalam menghadapi tantangan teknologi.

Kata Kunci:

Teknologi Informasi, Pengerja Gereja, Efektivitas Pelayanan, Adopsi Teknologi, Gereja Digital.

Abstract

This study aims to examine the impact of information technology utilization on the effectiveness of church workers' ministries and to identify the challenges and opportunities encountered in adopting such technology. The use of information technology in churches can enhance administrative efficiency, expand the reach of ministry services, and facilitate communication between the church and its congregation. However, challenges related to technical skills, limited infrastructure, and high hardware costs remain major obstacles to technology adoption. This research employs a qualitative approach using a case study method, involving in-depth interviews with church workers who have implemented technology in their ministries and observations of technology use within the church. The findings indicate that although there are significant benefits from implementing information technology, there is a profound need for training and improvement of technological infrastructure within the church. The study recommends that churches enhance technology training for church workers and invest in adequate equipment to support technology-based ministries. These findings contribute to a deeper understanding of how technology can be optimized in church ministry and provide guidance for churches in addressing technological challenges.

Keyword: Information Technology, Church Workers, Ministry Effectiveness, Technology Adoption, Digital Church.

INTRODUCTION

In the current digital era, information technology has become an integral part of various aspects of life, including church ministry (Bogdan, 2024). As a religious institution, the church plays a vital role in providing spiritual services to its congregation, and the use of information technology is expected to enhance the effectiveness of these services (Ojo et al., 2024). However, the implementation of information technology in churches does not always proceed smoothly. Many church workers face challenges in adopting technology, particularly in terms of technical skills, infrastructure, and other available resources (Bolu, 2012).

One example of information technology application in churches is the development of church profile websites as a means of religious service. According to Rahayu (2023), developing a church profile website can improve the accessibility of church information for both congregants and the wider community, as well as facilitate communication between the church and its members (Rahayu, 2023).

The use of information technology in churches has become increasingly urgent in response to the evolving times and the growing diversity of congregational needs. Technology can assist churches in multiple areas, including administration, communication, and spiritual services. However, to utilize technology effectively, church workers must possess sufficient skills and understanding of technological tools. In this context, assessing human resource readiness for the diffusion of information technology innovations within institutions, including churches, becomes essential. Bintang et al. (2023) emphasize that human resource readiness is a key factor determining the success of technology adoption in educational institutions, a principle that also applies to religious organizations such as churches (Bintang et al., 2023).

Church workers play a central role in the implementation of information technology in church ministries. Those directly involved in church activities—such as pastors, ministers, and other church staff—need to develop the ability to operate and utilize technology in their duties. However, not all church workers have adequate technical backgrounds, making training and mentoring necessary to enhance their technological competence.

Despite the potential benefits, churches encounter numerous obstacles in adopting information technology. Major constraints include the lack of technical skills among church workers, limited technological infrastructure, and insufficient financial resources to purchase necessary hardware and software. These limitations often hinder churches from fully leveraging technology to support their ministry activities.

Although several studies have explored the application of technology in churches, few have specifically examined the impact of information technology use on the effectiveness of church workers' ministries. Most existing research has focused on the technical aspects of technology adoption, such as infrastructure and hardware, without fully considering its effect on the performance of church workers. Therefore, further research is needed to fill this gap and provide a more comprehensive understanding of how technology influences ministry effectiveness.

Technological innovation in the church context is not merely about adopting new devices but also about transforming how the church serves its congregation. The use of information technology can help churches expand their reach, strengthen engagement with congregants, and simplify administrative

processes. However, to achieve these goals, churches must innovate across several dimensions, including human resource development, infrastructure improvement, and organizational culture change.

This study aims to examine the influence of information technology use on the effectiveness of church workers' ministries, identify the challenges faced in adopting such technology, and provide recommendations for overcoming these challenges to improve church service effectiveness through the optimal use of information technology.

METHODS

This study employs a qualitative approach using a case study method to explore the impact of information technology use on the performance of church workers. The qualitative approach was chosen to gain an in-depth understanding of church workers' experiences and perceptions related to technology adoption, as well as to identify the factors influencing its implementation.

The case study focuses on the Evangelical Christian Church of Indonesia (Gereja Kemah Injil Indonesia) in the South Baliem Region, District IV Papua. This method allows the researcher to examine the specific context of a church that has adopted technology, exploring both its benefits and challenges in practice.

Data were collected through two main techniques: in-depth interviews and participant observation. Ten church workers, including pastors, ministers, and staff, were interviewed to explore their experiences, perspectives, and challenges in using technology for ministry. Semi-structured interviews with open-ended questions were used to allow participants to respond freely. Participant observation was also conducted to observe church activities involving technology, such as online worship, church app use, and social media interactions, providing practical insights into how technology is integrated into daily ministry.

The research site and participants were selected based on criteria such as the level of technology adoption and the church's role in the local community. Data were analyzed using thematic analysis, which involved transcribing interviews, coding data, identifying key themes, and interpreting findings based on relevant theories.

Ethical considerations included informed consent, confidentiality, and transparency. All participants were informed about the study's purpose and gave consent before participating. Their identities were kept confidential, and all findings were reported honestly without data manipulation.

RESULTS AND DISCUSSION

The Use of Technology in Church Services

The use of information technology in church ministry has grown rapidly in recent years, particularly in the digital era marked by technological advancement. Interviews with several church workers revealed that technology plays a vital role in expanding the church's reach, both in administration and spiritual services. One prominent example is live-streamed worship, which allows churches to stay connected with members unable to attend in person. This practice, once common among large urban churches, is now increasingly adopted by smaller congregations seeking to serve members beyond their local areas (Lizardo, 2020).

In administrative aspects, information technology facilitates efficient management of congregation and financial data. Many churches now use cloud-based systems to record attendance, donations, and participation in church activities, making administration faster, more organized, and transparent.

Social media has also become a powerful tool for spiritual communication. According to Muntu (2024), churches increasingly use platforms such as Facebook, Instagram, and YouTube to share worship schedules, announcements, and spiritual messages, helping congregants stay informed and engaged (Muntu, 2024).

Despite these benefits, challenges remain—particularly regarding the technological literacy of church workers. Many lack the necessary skills to operate digital systems effectively, making training essential to ensure successful technology adoption.

Technology Adaptation by Church Workers

Technology adoption among church workers varies significantly. Larger churches with greater resources tend to adopt technology more quickly, while smaller churches with limited funds experience slower implementation. Interviews with church workers revealed that many feel constrained by a lack of technical understanding of the tools they use (Matobobo, 2022).

Church workers with prior technological experience are generally more open and quicker to embrace new tools, whereas those with less experience often struggle and hesitate to use them (Ugboh, 2023). This challenge is compounded by the absence of adequate training or technical support for older or less tech-savvy staff.

According to Rogers (2003), the process of technology adoption follows a diffusion cycle: innovators adopt first, followed by the majority at a slower pace. In church contexts, innovators are typically found in larger congregations or among workers with technological backgrounds, while the majority often belong to smaller churches that face limited access to technology and require additional training.

Barriers to the Use of Technology by Church Workers

Beyond limited technical knowledge, this study found that resource constraints are a major barrier to technology use among church workers. Smaller churches often lack sufficient funds to purchase necessary hardware or software, forcing them to rely on outdated equipment that hampers technological efficiency.

Some church workers also expressed concerns about data privacy and security. While technology offers convenience, it carries risks such as potential misuse of congregational data or information leaks. Therefore, churches must ensure that their systems are secure and well-protected.

To address these issues, training is essential to help church workers use technology responsibly and understand the importance of data protection. Churches should also adopt systems that guarantee privacy and data security in all communications and transactions.

The Positive Impact of Technology on Church Worker Performance

The study found that information technology has a positive impact on the performance of church workers. One key benefit is improved communication between the church and its congregation. Through social media and church apps, information can be shared quickly and directly, enhancing member engagement both physically and virtually.

Technology has also increased transparency in church financial management. Many churches now use online systems to receive donations, allowing members to give more easily while enabling churches to track and manage funds more efficiently, thus improving financial accountability.

Despite these benefits, proper management is essential to prevent issues such as overreliance on technology or risks related to data privacy.

Recommendations for Optimizing the Use of Technology in the Church

Based on the findings, several recommendations can be made to optimize technology use in churches. First, churches should provide regular technology training for church workers to ensure they possess the necessary skills to operate digital tools effectively. Technical support should also be available for those who struggle with technology.

Second, churches need to invest in adequate technological infrastructure, including reliable hardware and software to support ministry operations. Although funding may be limited, churches can seek affordable solutions through sponsorships or partnerships with organizations that offer technological resources at reduced costs.

Third, churches must prioritize data privacy and security by implementing safe systems with strong protection features. Adhering to proper data protection policies is essential to prevent misuse of congregational information.

CONCLUSION

This study aims to identify the impact of information technology use on the performance of church workers in the Evangelical Christian Church of Indonesia, South Baliem Region, District IV Papua, and to examine the challenges and opportunities associated with its adoption. Based on interviews and observations, the findings reveal that technology use—particularly through live-streamed worship, social media, and church applications—has had a positive effect on church ministry by expanding congregational engagement and improving administrative efficiency in data management and decision-making.

However, the adoption of technology faces several challenges, including limited technical skills among church workers, especially older ones, and inadequate infrastructure such as unstable internet connections. These issues hinder the effective use of technology in church services. Younger church workers emphasized the need for regular training to enhance technological competence, as well as improvements in infrastructure—particularly internet quality and technological equipment—to ensure optimal implementation of technology in ministry.

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