SOSHUM *Jurnal Sosial dan Humaniora*

Volume 15, Number 2, 2025 p-ISSN. 2088-2262 e-ISSN. 2580-5622
ojs.pnb.ac.id/index.php/SOSHUM/

Digital Competence of Christian Education Teachers in Blended Learning: A Case Study in Southwest Maluku

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Article Info

Article History
Received
May 2025
Accepted:
Jun 2025
Published:
Jul 2025

Keywords:
Digital competence, Christian Education, Blended Learning, Technology Integration, Teacher training

ABSTRACT

This study explores the digital competencies of Christian Education teachers in Tiakur City, located in the Southwest Maluku Regency, with a focus on their ability to implement blended learning. Although blended learning has been implemented in the research location since the onset of the COVID-19 pandemic, there has been no prior study specifically examining this issue, particularly in the context of Christian Education teachers in Tiakur, Southwest Maluku. This research aims to assess their current digital skills, identify the challenges they face, and determine effective strategies for integrating technology into teaching. A total of 20 teachers from both junior and senior high school levels participated in the study. Using a mixed-methods approach, the research combined surveys, interviews, and classroom observations. The quantitative data from the surveys were analysed using both descriptive and inferential statistics to evaluate and compare the levels of digital competence. In contrast, the qualitative data collected through interviews and observations were analysed thematically to identify common patterns and insights. The findings of quantitative data revealed that the average level of teachers' digital competencies is moderate to high proficiency, with a score of 3.2 out of 5. In addition, the findings of qualitative data identified some key challenges for the teachers, such as limited access to technology, a lack of sufficient training, and insufficient technical support. However, the teacher always tried to use various strategies to integrate technology into their instruction. Therefore, this study emphasises that improving digital competence and addressing technological barriers are vital to enhancing the quality of Christian Education in remote regions like Southwest Maluku.

INTRODUCTION

The use of digital technology in education today presents several challenges. In regions where infrastructure and facilities to support learning with technology are already well-developed, the transition has been relatively smooth, even though student learning outcomes have not fully met expectations. However, in areas lacking adequate infrastructure, the shift to the learning process using technology has introduced significant difficulties. Many schools struggle to implement digital technology in learning effectively, leading to a noticeable decline in education quality. Hodges et al. (2020) stated that the transition to online learning has highlighted significant disparities in digital access and teacher preparedness, particularly in remote areas. Numerous academic publications in recent years have highlighted this issue. Fully digital learning environments demand that teachers adapt quickly to sudden changes in the education system. In practice, all instructional materials initially designed for face-to-face learning must be converted into digital formats suitable also for online delivery. Compounding the problem is the limited preparation time available for this transition, which does not align with the extensive curriculum and basic competencies that must still be addressed. Furthermore, the evaluation of student learning outcomes in these settings has often been less than optimal.

One notable development is the adoption of blended learning. This approach merges various instructional methods by integrating both virtual and traditional (face-to-face) learning resources. According to Driscoll & Carliner (2005) in (Istiningsih & Hasbullah, 2015), blended learning refers to the integration—or blending—of learning formats to achieve shared educational objectives. In essence, it involves combining different teaching strategies and formats to reach common learning goals. Therefore, blended learning can be understood as an instructional model that brings together two or more teaching methods to support the overall success of the learning process. In practical terms, it combines conventional classroom teaching with online learning systems. The implementation of blended learning serves as an effort to recover and enhance the quality of education. It has also been found to have a significant impact on students' learning motivation (Gusti Ayu Dewi Paramita et al., 2021). Moreover, this approach helps elevate the standard of Indonesia's education system, especially considering that digital-based virtual learning is a crucial requirement for 21st-century learning competencies.

Learning with a blended learning approach that is currently being widely implemented in the world of education has even been predicted to exist into the future. In future learning, learning with blended learning has a great opportunity to dominate the learning process. This will be realised with the possibility of a percentage or availability of time allocation for internet-based learning (online learning), which is greater than the percentage of time allocation given for face-to-face learning. Thus, face-to-face learning that is carried out will only be a reinforcement of internet-based learning (online learning). For example, if in the learning process there are students who have difficulty understanding the learning content presented virtually, then the teacher can conduct face-to-face learning to explain or re-discuss the learning topic with the students. Below is a classification of learning prototypes that show the involvement of digital information technology-based learning with a more dominant internet network.

Online Implementation Percentage	Types of Learning	Learning Activity Overview
0%	Conventional (face-to-face)	Learning without involving online-based technology
1-29%	Website-Based Learning	Learning by utilising websites as a means to share information in the form of materials, syllabi, etc.
30-79 %	*Blended/Hybrid*	Learning that combines conventional approaches with internet-based (virtual) learning.
80-100%	On line	Learning is where almost all learning content is delivered online. There is no face-to-face learning at all.

Table 1 : Illustration of Learning Prototype Classification
Elaine Allen, et.al (2007) [source]

The emergence of 21st-century skills is largely driven by the gap in global education systems, which have yet to fully align with the demands of the digital age. Traditionally, education has fostered a competitive paradigm, where learners are conditioned to compete rather than collaborate. This is reflected in practices such as academic rankings, accelerated programs, and the emphasis on prestigious schools. While this competitive mindset may enhance cognitive abilities, it often sidelines the values of teamwork and cooperation. Such an approach clashes with the realities of the 21st century, where individuals operate in technology-rich environments that offer vast information access and foster new forms of communication and collaboration. To thrive in this digital era, students must develop foundational skills such as critical thinking, problem-solving, communication, and collaboration. This shift necessitates that teachers innovate and design digital-based learning models that respond to present and future educational needs. In the 21st century, teachers must possess digital literacy skills that enable them to navigate and utilise various digital platforms, which are essential for fostering an engaging learning environment (Hamzah et al., 2023)

This raises an important question: Has the implementation of blended learning in recent years indirectly influenced teachers' digital competence? And what does the current state of teachers' digital competence look like within the context of blended learning? These questions motivated the author to conduct a study focused on evaluating teachers' digital skills as a component of 21st-century competencies in the ongoing practice of blended learning. According to Siregar et al. (2024), teachers' digital competence is crucial in the era of blended learning, as it directly influences their

ability to engage students and facilitate meaningful learning experiences. This research is crucial, as the digital proficiency developed by teachers during the COVID-19 pandemic continues to play a vital role in shaping the future of education. Today's educators must be able to adapt to evolving educational trends, especially as students become increasingly adept at using digital platforms. Digital technology has become an integral part of students' everyday lives. Therefore, teachers with strong digital competence will find it much easier to implement effective blended learning approaches. Integration of blended learning approaches has been shown to significantly improve teachers' digital competencies, as they are required to adapt their instructional strategies to meet the demands of a digital learning environment (Muvid, 2022).

In the context of 21st-century education and the implementation of blended learning, Christian Religious Education teachers are expected to develop transformative strategies to enhance their teaching. One practical approach is to digitise all instructional materials. Wati & Nurhasannah (2024) proposed that Blended learning provides a unique opportunity for teachers to enhance their pedagogical skills by combining traditional teaching methods with innovative digital tools, thus improving their overall teaching competence. These teachers should guide students to become more innovative in using digital information technology to enrich their learning experiences. This can be achieved by incorporating interactive media and offering accessible learning resources through relevant online platforms. However, it is equally important to remain aware of the potential risks associated with digital technology, particularly its influence on students' moral values. As such, Christian Religious Education teachers must take on the role of gatekeepers, ensuring that digital content aligns with ethical and educational standards. When these efforts are implemented effectively, the learning process can achieve greater depth and purpose, beyond merely fulfilling the requirements of 21st-century education. The effectiveness of blended learning is largely dependent on teachers' digital skills, which enable them to create interactive and collaborative learning experiences for their students (Sitompul, 2022).

This study is important because it examines the digital competence of Christian Education teachers in Tiakur City, the capital of Southwest Maluku Regency, Indonesia—a remote area with limited infrastructure that presents distinct challenges and opportunities for using technology in education in blended learning. Althubyani (2024) explained that the digital technology integration in education, especially in remote areas, has the potential to bridge educational gaps, yet it requires a significant investment in infrastructure and teachers' training. However, **t**he effectiveness of blended learning in this region hinges on teachers' digital competencies, their ability to integrate technology into instruction, and their adaptability to new teaching methods. As a result, the teaching and learning process will have a significant impact on students' learning outcomes**.** This is in line with Chintya Pradilla Putri & Muhammad Irwan Padli Nasution (2023) that the implementation of blended learning has shown positive effects on students' engagement and learning outcomes, particularly in remote areas with limited resources. Therefore, this study aims to assess the current digital proficiency of these teachers, identify the obstacles they face in applying blended learning, and explore strategies to enhance their digital capabilities. It operates on the understanding that digital competence involves various skills, such as operating digital tools, managing information, creating digital content and participating in online collaboration and communication.

METHODS

This study employed a mixed-methods research design, integrating both quantitative and qualitative approaches to data collection and analysis. This methodology provided a well-rounded understanding of the research questions by combining statistical data on teachers' digital competencies with detailed insights into their personal experiences and viewpoints (Creswell & Plano Clark, 2018). The quantitative aspect involved administering a survey to evaluate teachers' self-assessed digital skills and their use of technology in teaching. Meanwhile, the qualitative aspect included interviews and classroom observations to gather contextual information about the teachers' experiences, challenges, and strategies in implementing blended learning. The study involved 20 Christian Education teachers from different schools in Tiakur City, Southwest Maluku. Participants were selected through purposive sampling to ensure diversity in teaching experience, educational background, and digital proficiency. The sample included educators from both Junior and Senior High Schools to reflect a range of perspectives and teaching practices. All participants were

informed about the study's objectives and procedures and provided their consent to take part. A summary of their characteristics is presented in the table below.

Characteristic	**Description**	**Number of Teachers**
Gender	Male	8
	Female	12
Teaching Experience	< 5 years	6
	5-10 years	8
	> 10 years	6
Education Level	Bachelor's Degree	18
	Master's Degree	2

Table 2 : Characteristics of Teachers
Research's Primary Data (2024) [source]

Data for this study were gathered through three primary methods: survey questionnaires, interviews, and classroom observations. During the observations, field notes and photographs were taken to document classroom activities in detail. The analysis of the collected data combined both quantitative and qualitative approaches. Survey responses were examined using descriptive and inferential statistical techniques. Descriptive statistics—including means, standard deviations, and frequency distributions—were used to outline teachers' self-reported digital competence levels. Inferential methods, such as t-tests and ANOVA, helped identify differences in digital competence among teacher groups based on factors like experience or educational background. These statistical analyses were performed using SPSS software. Meanwhile, qualitative data from interviews and observations were analysed using thematic analysis.

RESULTS AND DISCUSSION

The survey results show differences in the level of digital competence among Christian Education teachers in Tiakur City. The average scores for each competency area are summarised in Table 3.

Competency Area	**Mean Score (SD)**
Basic Computer Skills	3.8 (0.7)
Information Literacy	3.5 (0.8)
Content Creation	2.9 (0.9)
Pedagogy	3.1 (1.0)
Technical Skills	2.7 (0.8)

Table 3 : Mean Scores of Digital Competence Areas (N=20; Scale: 1-5)
Research's Primary Data (2024) [source]

The average scores for digital competence areas showed that teachers rated themselves highest in basic computer skills (M = 3.8) and information literacy (M = 3.5), while content creation (M = 2.9) and technical skills (M = 2.7) were notably lower. This disparity suggests that while teachers are comfortable with fundamental technology use, they lack the advanced skills necessary for creating engaging digital content and troubleshooting technical issues.

The findings indicated that teachers generally rated themselves as having moderate to high proficiency in basic computer operations and information literacy. However, they reported lower levels of competence in areas such as digital content creation, pedagogical application of technology, and technical problem-solving skills. Specifically:

- Basic Computer Skills: Teachers showed a solid grasp of fundamental computer functions, including tasks like word processing, using email, and browsing the internet. They also expressed confidence in using standard software programs.
- Information Literacy: Teachers indicated they were capable of locating information online, assessing the reliability of sources, and effectively utilising search engines.

- Content Creation: This was the area where teachers reported the lowest skill levels. It involved creating presentations, using multimedia tools, and designing instructional materials.
- Pedagogy: Teachers reported moderate competence in incorporating technology into their teaching plans and utilising online learning platforms. However, the wide range in responses suggests considerable differences in ability among teachers.
- Technical Skills: Teachers generally showed limited ability in handling technical issues, installing software, and operating specific educational technologies.

Further statistical analysis using t-tests and ANOVA identified significant variations in digital competence based on teaching experience and educational background. Teachers with greater experience and higher levels of education generally reported higher digital proficiency.

In addition, qualitative data gathered through interviews and classroom observations offered a more nuanced understanding of the obstacles teachers face and the methods they employ to implement blended learning. Thematic analysis highlighted several key themes:

- Limited Access to Technology and Infrastructure: A major challenge in Tiakur City is the lack of technological resources. Many teachers reported insufficient access to computers, unstable internet connections, and minimal technical support in their schools. As one teacher noted, “The internet is very slow and often unavailable. It is difficult to conduct online lessons.”
- Insufficient Training and Professional Development: Teachers frequently emphasised the need for more training in using specific digital tools and integrating technology into their teaching practices. Many felt unprepared to apply technology effectively in their classrooms. One teacher remarked, “I need to learn how to use these tools more effectively to make my lessons engaging.” The importance of continuous professional development was a recurring theme.
- Lack of Technical Support: Technical difficulties such as software issues and hardware malfunctions were common, with teachers often having no one to turn to for help. As one teacher explained, “When the projector is not working, I don’t know who to turn to for help.”
- Teacher Attitudes and Beliefs: While most teachers had a generally positive outlook on the use of technology, some were concerned about the time and effort required to design tech-integrated lessons. A few expressed a preference for traditional methods. Shifting mindsets was seen as essential for successful technology integration.
- Student Access and the Digital Divide: Students also faced significant barriers, including a lack of access to computers and stable internet at home. This digital divide hindered the implementation of blended learning approaches.

Despite these obstacles, teachers employed various strategies to integrate technology into their instruction:

- Use of Basic Technology: Teachers often utilised accessible tools such as projectors, smartphones, and basic applications like Microsoft PowerPoint to deliver content.
- Incorporation of Online Resources: Educational websites and platforms like YouTube were used to supplement lessons and provide additional learning materials.
- Collaborative Learning Approaches: Teachers promoted group work and interactive projects to enhance student engagement.
- Utilisation of Blended Learning Platforms: Some teachers adopted tools like Google Classroom, WhatsApp, and Zoom to support blended learning through a structured learning management system (LMS).

Discussion

The findings from the research on teachers' digital competence in blended learning reveal significant insights into both quantitative and qualitative aspects of their abilities. The quantitative data indicated that while teachers demonstrated moderate to high proficiency in basic computer skills and information literacy, they struggled with content creation,

pedagogical application of technology, and technical skills. This aligns with the qualitative data, which highlighted the challenges teachers face in effectively integrating technology into their teaching practices. According to Voogt and Roblin (2012), in Findeisen & Wild (2022), digital competence encompasses not only the ability to use technology but also the capacity to integrate it into pedagogical practices effectively. The lower scores in content creation and technical skills indicate a gap in the necessary competencies for successful blended learning implementation. Qualitative data gathered through interviews and classroom observations provided a deeper understanding of the obstacles teachers face. Themes such as limited access to technology, insufficient training, and lack of technical support emerged as significant barriers. For instance, many teachers reported inadequate access to reliable internet and technological resources, which aligns with the findings of Ika Sari et al. (2024), who noted that infrastructure challenges in remote areas hinder the development of digital competencies among educators.

The findings of this study align with existing research emphasising the critical role of digital competence in 21st-century teaching. The study revealed that digital competence among teachers varies, with some educators demonstrating higher proficiency than others. This disparity appears to be influenced by factors such as teaching experience, level of education, and access to professional development and technological resources (Jogezai et al., 2023). These barriers impede the successful implementation of blended learning and restrict the effective use of technology to enhance instruction. Despite these difficulties, teachers in Tiakur City have adopted practical strategies to support blended learning. These include using accessible technology, incorporating online resources, and encouraging collaborative learning—all of which are consistent with best practices for blended learning that combine face-to-face instruction with digital tools. However, the reliance on such strategies also underscores the urgent need for targeted support and systemic interventions to help teachers overcome the existing barriers and integrate technology more effectively.

The results carry important implications for teacher education and professional development. Training initiatives should aim to strengthen teachers' digital competencies across all key areas—basic computer use, information literacy, content creation, pedagogical integration, and technical troubleshooting. These programs should be tailored to the specific conditions and needs of teachers in Tiakur City, considering their current skill levels, available resources, and the unique constraints they face in a remote educational setting. This study also underscores the essential role of school leaders and policymakers in facilitating the successful implementation of blended learning. Their support should include ensuring access to adequate technology and infrastructure, providing ongoing technical assistance, and fostering a culture that encourages innovation and collaboration among educators. Additionally, the findings stress the need to address the digital divide by ensuring all students have equal access to devices and reliable internet connectivity.

The results align with existing research on blended learning and teacher digital competence. They reinforce the idea that digital skills are vital for teachers in modern education. The study also confirms that digital competence levels are shaped by variables such as teaching experience and educational qualifications. The challenges encountered by teachers in Tiakur City mirror those documented in studies of educators working in remote or disadvantaged areas. Teachers' use of basic technology and online resources demonstrates their proactive efforts to navigate these constraints.

However, this study has a few limitations. The relatively small sample size may restrict the generalizability of the findings beyond the specific context of Tiakur City. Future studies should consider involving a larger and more diverse group of schools and teachers across Southwest Maluku to gain broader insights. Additionally, as the research relied on self-reported data, responses may have been influenced by social desirability bias. Future investigations could incorporate more objective methods of assessing digital competence to enhance data accuracy.

CONCLUSION

This research offers important insights into the digital competence of Christian Education teachers in Tiakur City, Southwest Maluku, and the obstacles they encounter in adopting blended learning. The results highlight a range of

competency levels among teachers—stronger skills were observed in basic computer operations and information literacy, while notable gaps were found in areas like content creation, pedagogical integration, and technical troubleshooting. The study also identified major barriers, including limited access to technological resources, insufficient training opportunities, and a lack of technical support. Despite these challenges, teachers have adopted various strategies to incorporate technology into their instruction, such as using basic tools, leveraging online resources, and promoting collaborative learning. The findings emphasise the need for focused and sustained efforts to enhance teachers' digital skills and support the broader adoption of blended learning in this remote context. Based on the study's findings, the following recommendations are proposed:

- Improve Infrastructure and Access to Technology: Ensure schools are equipped with adequate hardware, stable internet connections, and reliable electricity to support digital learning.
- Provide Ongoing Professional Development: Implement regular, context-specific training programs that focus on all domains of digital competence, especially content creation, pedagogy, and technical problem-solving.
- Strengthen Technical Support Systems: Establish dedicated support personnel or helpdesks to assist teachers with technical issues promptly and effectively.
- Promote a Culture of Innovation: Encourage school leadership to support experimentation with new teaching methods and provide platforms for teachers to share best practices and collaborate.
- Address the Digital Divide Among Students: Develop strategies to ensure students also have access to necessary technology and internet connectivity, including community-based learning centres or device-sharing programs.
- Encourage Blended Learning Adoption: Provide guidance and resources for teachers to effectively integrate blended learning models, such as using Learning Management Systems (LMS) and digital content tailored to their curriculum.

For future research, it is recommended to conduct a longitudinal study to track the progress of teachers' digital competencies over time and assess the impact of professional development programs. Furthermore, it would be useful to investigate students' perceptions of blended learning and the impact of technology integration on their learning outcomes. Finally, future research should consider the cultural context of Tiakur City and explore how technology can be used to promote cultural preservation and enhance the relevance of Christian Education to the local community.

ACKNOWLEDGEMENT

The researchers would like to extend their sincere gratitude to the Christian Education teachers in Tiakur City who took part in this study. Their openness in sharing their experiences and insights was indispensable to the success of this research. We also wish to thank the local education authorities for their valuable support and cooperation throughout the study. Additionally, this research was made possible through a grant from the Institute for Research and Community Service, IAKN Ambon.

REFERENCES

Althubyani, A. R. (2024). Digital Competence of Teachers and the Factors Affecting Their Competence Level: A Nationwide Mixed-Methods Study. *Sustainability (Switzerland)*, *16*(7). https://doi.org/10.3390/su16072796

Chintya Pradilla Putri, & Muhammad Irwan Padli Nasution. (2023). Metode Pembelajaran Blended Learning Untuk Meningkatkan Motivasi Belajar. *DIAJAR: Jurnal Pendidikan Dan Pembelajaran*, *2*(3), 326–331. https://doi.org/10.54259/diajar.v2i3.1767

Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-Methods Research: A Discussion on Its Types, Challenges, and Criticisms. *Journal of Practical Studies in Education*, *2*(2), 25–36. https://doi.org/10.46809/jpse.v2i2.20

Elaine Allen, Jeff Seaman, and Richard Garrett. (2007). Blending In The Extent and Promise of Blended Education in the United States: USA

Findeisen, S., & Wild, S. (2022). General digital competences of beginning trainees in commercial vocational education and training. *Empirical Research in Vocational Education and Training*, *14*(1). https://doi.org/10.1186/s40461-022-00130-w

Gusti Ayu Dewi Paramita, I., Wayan Dana Ardika, I., & Yudhi Setyono, E. (2021). The Effect of Blended Learning on Student Motivation in Civil Engineering Politeknik Negeri Bali Article Info. *Journal of Social Sciences and Humanities*, *11*(2), 2021.

Hamzah, A. R., Mesra, R., Br Karo, K., Alifah, N., Hartini, A., Gita Prima Agusta, H., Maryati Yusuf, F., Endrawati Subroto, D., Lisarani, V., Ihsan Ramadhani, M., Hajar Larekeng, S., Tunnoor, S., Bayu, R. A., & Pinasti, T. (2023). *Strategi Pembelajaran Abad 21*.

Hodges, C. B., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). View the full-text article online : *Educause Review*, *April*, 2–3.https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online learning%0AView

Ika Sari, G., Winasis, S., Pratiwi, I., Wildan Nuryanto, U., & Basrowi. (2024). Strengthening digital literacy in Indonesia: Collaboration, innovation, and sustainability education. *Social Sciences and Humanities Open*, *10*(August), 101100. https://doi.org/10.1016/j.ssaho.2024.101100

Istiningsih, S., & Hasbullah, H. (2015). Blended Learning, Trend Strategi Pembelajaran Masa Depan. *Jurnal Elemen*, *1*(1), 49–56. https://doi.org/10.29408/jel.v1i1.79

Jogezai, N. A., Koroleva, D., & Baloch, F. A. (2023). Teachers' digital competence in the post COVID-19 era: The effects of digital nativeness, and digital leadership capital. *Contemporary Educational Technology*, *15*(4), ep466. https://doi.org/10.30935/cedtech/13620

Muvid, M. B. (2022). Konsep Pembelajaran Berbasis Blended Learning dalam Mensinergikan Aspek Pembelajaran di Era Digital. *Jurnal Pendidikan Dan Kebudayaan*, *1*(1), 29–39. https://doi.org/10.5281/zenodo.7030486

Siregar, T., Wijaya, A., Rangkuti, A. N., & Nasution, M. (2024). *Keterampilan dan Kecakapan Abad 21 : Kompetensi Digital Pendidik Masa Depan*. *01*(02), 1–11.

Sitompul, B. (2022). Kompetensi Guru dalam Pembelajaran di Era Digital. *Jurnal Pendidikan Tambusai*, *6*(3), 13953–13960. https://doi.org/10.31004/jptam.v6i3.4823

Wati, S., & Nurhasannah, N. (2024). Penguatan Kompetensi Guru Dalam Menghadapi Era Digital. *Jurnal Review Pendidikan Dasar : Jurnal Kajian Pendidikan Dan Hasil Penelitian*, *10*(2), 149–155. https://doi.org/10.26740/jrpd.v10n2.p149-155