

# Process for Improving the Quality of Digital Literacy Education for Bankers in Timor Leste

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## Abstract

*Digital literacy is crucial for economic and social development, particularly in regions like Timor Leste aiming to enhance educational standards among professionals such as bankers. This study aims to investigate the process of improving digital literacy education for bankers in Timor Leste, focusing on enhancing their skills in using digital tools and platforms effectively. The research adopts a qualitative approach, using interviews and surveys to gather insights from bankers regarding their current digital literacy levels and educational needs. Data analysis will involve thematic analysis to identify key areas for improvement. Initial findings indicate a significant gap in digital literacy among bankers in Timor Leste, highlighting a need for tailored educational programs. Recommendations include the development of specialized training modules focusing on digital security, data analytics, and digital communication tools. In conclusion, enhancing digital literacy among bankers in Timor Leste is essential for their professional growth and the economic development of the region. Effective educational interventions can empower bankers with the necessary skills to navigate the digital landscape competently and contribute to sustainable development goals.*

**Keywords:** Digital Literacy, Education, Bankers, Banking

## INTRODUCTION

The development of information technology and digitalization has changed the landscape of the global financial sector significantly. According to Rehman et al. (2020), digitalization allows banks to increase operational efficiency, expand the range of services, and optimize risk management. In Timor Leste, the banking sector is facing pressure to adopt digital technologies to remain relevant in an increasingly connected global economy (McKinsey & Company, 2021). Increasing digital literacy among bankers is crucial because it allows them to understand and implement technology that supports safer, faster and more efficient banking transactions.

Digital literacy for bankers is not only about using technological tools and applications, but also about understanding the regulatory and security implications of using this technology (Ahmad et al., 2019). For example, implementing data protection and cybersecurity policies is an important aspect in managing operational risks in an ever-evolving digital environment. With the increasing integration of technology in the global banking sector, bankers in Timor Leste need to continue developing their digital literacy skills to manage and utilize technology effectively to maintain a competitive edge in this competitive market.

Various studies show that the level of digital literacy in Timor Leste is still relatively low when compared to neighboring countries in Southeast Asia. A study conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) found that only around 30% of Timor Leste's population had access to the internet in 2020. This reflects the major challenges in increasing the ability to access and utilize technology. digital in the country, including in the banking sector. This weakness could have a negative impact on the competitiveness of Timor Leste's banking sector, considering that banks are increasingly relying on technology to provide efficient and affordable services (Abidin, 2021).

Digital Divide Theory can provide additional insight into this phenomenon. This theory suggests that inequality in access, use, or mastery of information and communication technology can deepen economic and social disparities between countries, and even on a national scale within a country. In the context of Timor Leste, low

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levels of digital literacy can be understood as part of a global phenomenon of digital underdevelopment, which affects key sectors such as banking in achieving international standards (Padu, 2024).

In an era of rapid digitalization, banks face pressure to adopt digital technology to improve efficiency and enhance customer experience. According to adopter categories theory, bankers need to understand and master digital technology to follow industry trends and take advantage of the latest innovations (Marlina, & Bimo, 2018). Strong digital literacy plays a crucial role in ensuring that they can not only manage day-to-day operations, but also develop innovative solutions to meet the needs of increasingly digital-savvy customers (Kaplan & Haenlein, 2010). Mastery of technology such as data analysis and information security is also key in protecting sensitive customer information and maintaining trust in digital banking services.

Bankers who are skilled in digital literacy can also optimize marketing and communication strategies through digital platforms, as theorized in the digital marketing concept which focuses on customer interaction and experience (Chaffey & Smith, 2017). They can leverage data and analytics to design more effective campaigns and personalize services according to customers' individual preferences. Thus, investment in developing digital literacy not only increases operational efficiency and security, but also supports long-term business growth and banking market resilience in this digital era (Riswanto, et , al., 2024).

literacy in the country, especially in the banking sector. For example, national policies such as the National Strategic Plan for Information and Communication Technology (ICT) have been implemented to facilitate the adoption of digital technology in various economic sectors, including banking (Sukomardojo, 2022). However, the implementation of this policy still faces challenges, especially in ensuring that the necessary training and infrastructure is available evenly throughout the Timor Leste region (Supriyanto, 2022).

These policy measures are based on innovation adoption theory, which suggests that the adoption of new technologies such as digital literacy in the banking sector requires comprehensive support from the government and the private sector (Rogers, 2003). The application of this theory highlights the importance of understanding the factors that influence the acceptance of digital technology, such as perception, social conditions, and supporting public policies. By integrating this theory into digital literacy policies, the Timor Leste Government can increase the effectiveness of policy implementation to achieve the goal of sustainable technology-based economic development (Rosidah, 2023).

To improve the quality of digital literacy education for bankers in Timor Leste, it is important to implement systematic and sustainable training and development programs. According to professional development theory, continuous training can increase individual competence in dealing with new technology and strengthen the skills needed to utilize digital innovation in the banking sector (Purnama, 2023). In addition, constructivist learning theory underlines the importance of a supportive learning environment, where bankers can learn from real experiences and share knowledge to develop their digital literacy competencies (Jonassen, 2004).

To overcome the challenges faced during the pandemic, the adoption of digital technology in the banking sector has accelerated significantly. A study by McKinsey & Company (2020) shows that the COVID-19 pandemic accelerated the transition to digital banking services, with increased use of banking applications and online services. This emphasizes the importance of digital literacy for banking practitioners in managing remote services, improving data security, and providing innovative banking solutions amidst rapid changes in consumer behavior. In addition, research by Sasmitha, et al., (2024) highlights that adaptation to digital technology is not only a response to the crisis, but also as a strategy to face future industrial transformation.

To increase digital literacy in Timor Leste's banking sector, this research will explore various case studies and best practices from other countries. According to social learning theory, which emphasizes the importance of modeling and imitation in the learning process, case studies from developed countries such as Singapore and South Korea can provide valuable insights in implementing similar initiatives in Timor Leste. Apart from that, technology acceptance theory is also relevant, because it discusses the factors that influence technology adoption, including perceptions of benefits, ease of use, and organizational support.

## **METHOD**

This research uses a qualitative approach with a phenomenological research design. This approach was chosen because it aims to understand the subjective experiences and perceptions of bankers in Timor Leste regarding digital literacy improvement programs. Phenomenology allows researchers to explore in depth how digital literacy affects the work and daily lives of participants (Syahrizal, & Jailani, 2023).

The subjects of this research are bankers who work in various banks in Timor Leste. Participants were selected using purposive sampling techniques to ensure wide variation in their experiences and views regarding digital literacy. Participants involved include operational staff, managers and digital literacy trainers. This selection aims to obtain a comprehensive and in-depth perspective on the digital literacy program being implemented (Sari, et al., 2022).

Data collection techniques in this research include in-depth interviews, participant observation, and document analysis. In-depth interviews were conducted to gather detailed information about participants' experiences and views. Participant observation was carried out to see firsthand how digital literacy is applied in the work environment. In addition, document analysis was carried out to review existing policies and programs related to digital literacy. The data collected was then analyzed using thematic analysis techniques, which enabled the identification of main patterns and themes that emerged from the data (Sugiyono, 2020).

## **RESULTS AND DISCUSSION**

### **Intensive Training and Workshops**

One of the main efforts is to organize intensive training and workshops that focus on improving the digital skills of bankers. This training is a strategic step to ensure that bankers have the knowledge and skills needed to adapt quickly to developments in digital technology in the banking industry. With the rapid development of technology, bankers are expected to be able to follow the latest trends and implement this technology in their daily operations to increase the efficiency and effectiveness of their work.

This program is designed to provide practical knowledge about the use of digital technology in daily banking operations. The material presented in the training covers various important aspects relevant to the needs of the banking industry. For example, participants will be taught how to use the latest banking software that can help them manage transactions and customer data more efficiently. In addition, training will also include the use of data analysis tools that can help in making more informed decisions based on available data.

Apart from banking software, this training also covers cyber security. Cyber security is a crucial aspect in the banking industry because there is a lot of sensitive data that must be protected from cyber threats. Training participants will gain an in-depth understanding of various techniques and strategies to protect data and banking systems from cyber attacks. This includes knowledge of firewalls, data encryption, as well as best practices in identifying and responding to cyber threats.

Digital data analysis techniques are also an important part of this training. In the digital era, the ability to analyze data quickly and accurately has become very important for bankers. Through this training, bankers will learn how to use various data analysis tools and methods to interpret relevant information and make better decisions. With strong data analysis capabilities, bankers can identify market trends, understand customer needs, and develop more effective business strategies.

This training and workshop not only provides technical knowledge, but also focuses on developing soft skills needed in an increasingly digital work environment. For example, participants will be trained in effective communication and collaboration skills using digital platforms. This is important because good teamwork and effective communication are becoming increasingly relevant in modern banking operations which often involve many different teams and departments.

By attending this training and workshop, it is hoped that bankers can significantly increase the efficiency and effectiveness of their work. They will be better prepared to face the challenges that exist in the ever-growing banking industry, and be able to utilize digital technology to provide better services to customers. Apart from

that, improving digital skills is also expected to have a positive impact on the growth and sustainability of the banking business in Timor Leste.

Intensive training and workshops that focus on improving bankers' digital skills are a very important strategic effort in facing rapid technological developments in the banking industry. The program is designed to provide practical knowledge relevant to daily operational needs, such as the use of the latest banking software and data analysis tools. Apart from that, cyber security aspects are also emphasized in this training to protect sensitive data from cyber threats. By gaining an in-depth understanding of data protection techniques and strategies, bankers are expected to be able to maintain the integrity and security of the banking system. Through this training, bankers will be equipped with strong data analysis skills, enabling them to interpret information quickly and accurately, so they can make better decisions in managing transactions and customer data.

Not only focusing on technical knowledge, this training also develops soft skills that are essential in a digital work environment, such as communication and collaboration skills using digital platforms. This is important because modern banking operations often involve disparate teams and departments, so effective teamwork is the key to success. By improving their digital skills, bankers are expected to be able to increase work efficiency and effectiveness, as well as provide better services to customers. Overall, this training and workshop not only strengthens the technical competence of bankers, but also supports the growth and sustainability of the banking business in Timor Leste through optimal use of digital technology (Adhim, & Suherman, 2024).

### **Collaboration with Educational Institutions**

Collaborating with universities and other educational institutions is a key strategy in increasing digital literacy for bankers in Timor Leste. This collaboration not only involves local institutions, but also opens up opportunities to collaborate with universities and international institutions that have expertise in the fields of digital literacy and banking. In this way, bankers can access the latest resources and knowledge relevant to the needs of the global banking industry.

Developing a curriculum that is relevant to the needs of the banking industry is one of the main focuses in this collaboration. The curriculum is designed to cover various aspects of digital literacy, including the use of banking software, cybersecurity, data analysis and the latest financial technologies. Apart from that, this curriculum must also be flexible and can be adapted to technological developments and changing industry needs. This ensures that bankers always have the skills needed to face new challenges in the world of digital banking.

One of the main benefits of developing a digital literacy study program specifically for the banking sector is increasing the professional competence of bankers. This program gives them the opportunity to learn and develop new skills relevant to their work. With this study program, bankers can increase their understanding of digital technology and how this technology can be used to increase the efficiency and effectiveness of banking operations. This program also serves as a form of continuing education that helps bankers continue to learn and develop throughout their careers.

Collaboration with universities and educational institutions also enables the integration of theory and practice in the learning process. Bankers not only learn about digital literacy concepts theoretically, but also have the opportunity to apply them in real contexts through practical projects and case studies. This approach helps them to better understand and master the material being taught, as well as see firsthand the impact of applying digital literacy in their daily work.

To ensure that the material taught is always up-to-date with the latest technological developments, the curriculum needs to be revised and updated regularly. Universities and educational institutions must work closely with industry experts and banking practitioners to identify the latest trends and developments in the field of digital technology. This information is then used to update learning materials and ensure that bankers always have information and skills relevant to current and future industry needs.

Through close collaboration between universities, educational institutions and the banking industry, it is hoped that digital literacy among bankers in Timor Leste will increase significantly. This will not only improve the

quality of their work but also strengthen Timor Leste's position in the global digital economy. By having a workforce that is skilled and knowledgeable in digital literacy, the banking industry in Timor Leste can be more competitive and adapt quickly to technological and market changes.

Collaboration with universities and educational institutions is an essential strategy in increasing digital literacy among bankers in Timor Leste. Through this collaboration, educational institutions can share their resources and expertise, both from within and outside the country, to provide comprehensive and cutting-edge training. This not only opens up bankers' access to the latest knowledge and technology, but also enables the development of curricula that are relevant to the needs of the ever-evolving banking industry. This curriculum covers various aspects of digital literacy such as the use of banking software, cyber security, data analysis and the latest financial technology, so that bankers have the skills needed to face challenges in the world of digital banking.

The benefits of this collaboration lie not only in increasing professional competence, but also in the integration of theory and practice in the learning process. Bankers get the opportunity to apply their knowledge through practical projects and case studies, which help them understand and master the material in depth. In addition, regular curriculum updates, based on the latest trends and developments in the field of digital technology, ensure that bankers always have relevant information and skills. Thus, collaboration between universities, educational institutions and the banking industry not only improves the quality of bankers' work but also strengthens Timor Leste's position in the global digital economy, enabling the country's banking industry to adapt and compete more effectively in the international market (Purnama, 2019).

### **Use of Interactive Learning Methods**

The implementation of interactive and practice-based learning methods has a very important role in increasing the involvement and understanding of participants. This method is designed to make the learning process more interesting and effective, especially for bankers who need to master digital literacy. Active involvement in learning helps participants to more easily understand the concepts taught and be better prepared to apply them in real situations. Thus, this interactive method not only improves technical skills but also strengthens the conceptual understanding of the participants.

This interactive method includes various techniques such as simulations, case studies, and hands-on exercises with digital devices. Simulations allow participants to experience situations similar to the real world without real risks. For example, simulating the use of banking software or cybersecurity systems can provide valuable practical experience for bankers. Case studies, on the other hand, help participants to analyze real situations that have occurred in the banking industry and understand how digital literacy concepts are applied to solve these problems.

Hands-on practice with digital devices is another important component of this method. This exercise provides an opportunity for participants to interact directly with the technology they will use in their daily work. For example, participants may learn how to operate data management systems, perform data analysis, or use cybersecurity tools. Through hands-on exercises, participants can develop the practical skills necessary to work effectively and efficiently in a digital environment.

This interactive and practice-based approach also helps bankers to better understand and apply digital literacy concepts in the context of their daily work. By learning through simulations and case studies, participants can see firsthand how digital literacy can be applied in various banking situations. This allows them to understand the relevance and importance of digital literacy, as well as how digital technology can be used to improve work performance and productivity.

Apart from that, this interactive learning method can also increase participants' motivation and interest in learning. Active involvement in the learning process makes participants more interested and motivated to learn. They feel more enthusiastic about exploring and learning new technologies, because they see firsthand the practical benefits of the knowledge they gain. This is different from conventional learning methods which tend to be passive and do not actively involve participants.

Finally, interactive and practice-based learning methods can improve bankers' ability to utilize digital technology more effectively. With better skills and understanding, bankers can work more efficiently and productively. They can leverage digital technology to automate routine tasks, analyze data for better decision making, and improve data security. All of this contributes to improving the performance and competitiveness of the banking industry in Timor Leste.

The implementation of interactive and practice-based learning methods has proven to be very effective in increasing the involvement and understanding of digital literacy training participants, especially in the banking sector. Through the use of techniques such as simulations, case studies, and hands-on exercises, participants can gain practical experience that is in-depth and relevant to their daily work. This method allows participants to experience real situations without risk, such as in simulating the use of banking software or cyber security systems, thus providing valuable and immediately applicable experience. In addition, case studies help participants to understand how digital literacy is applied in solving real problems in the banking industry, strengthening their conceptual understanding as well as technical skills. Thus, this interactive learning method not only makes the learning process more interesting and effective but also prepares participants to apply their knowledge in real life.

This interactive and practice-based approach also contributes significantly to increasing participants' motivation and interest in learning. Active involvement in the learning process makes participants more enthusiastic and motivated to learn new technology. Through hands-on experience with relevant digital tools, participants can see the practical benefits of the knowledge they gain, which in turn increases their desire to continue learning and developing their skills. This is different from conventional learning methods which tend to be passive and do not actively involve participants. As a result, bankers in Timor Leste who take part in digital literacy training programs using this method will be better prepared to utilize digital technology effectively, automate routine tasks, analyze data for better decision making, and increase data security. All of these efforts will ultimately improve the performance and competitiveness of the banking industry in Timor Leste as a whole.

### **Evaluation and Continuous Development**

Carrying out regular evaluations of the effectiveness of digital literacy education programs that have been implemented is an important step in ensuring that the program objectives are achieved. This evaluation includes an assessment of how well participants understand and apply the digital skills taught during the training. Through a comprehensive evaluation, accurate data can be obtained regarding the effectiveness of teaching methods, the relevance of the material provided, and the level of participant satisfaction with the program being implemented. The results of this evaluation can then be used to make adjustments and improve the quality of the program in the future.

This evaluation is important to identify areas that need improvement and to adjust the program according to the actual needs of bankers. Each group of participants may have different needs depending on their roles and responsibilities within the bank. For example, a manager may need more in-depth data analysis skills than a teller. Therefore, proper evaluation will help in designing programs that are more specific and relevant for each group of participants. In this way, digital literacy education programs can be tailored to provide maximum benefits for all participants.

In addition, the continuous development of this program ensures that bankers are always updated on the latest digital technology. Digital technology is developing very quickly, and what is relevant today may be out of date in a few months. Therefore, it is important to keep content and teaching methods updated to suit the latest trends and innovations in digital technology. This not only enhances the technical skills of bankers, but also ensures that they are always ready to face new challenges emerging in the banking industry.

Regular updates to digital literacy education programs may also include the introduction of new software and tools that can help improve bankers' work efficiency and effectiveness. For example, more advanced data analysis software or more efficient project management tools may be introduced as part of the update program. Thus, bankers not only learn about new technologies but also how to integrate them into their daily work to achieve better results.

In addition to updating the content, it is also important to continue to develop the teaching methods used in the program. Interactive, practice-based teaching methods have been proven to be more effective in helping participants understand and retain information. Therefore, the development of teaching methods such as simulations, case studies and direct exercises must continue to be carried out. With this approach, bankers can learn in a context that is more realistic and relevant to their work situation.

Lastly, digital literacy education programs must have an effective feedback mechanism to ensure that any changes made based on the evaluation results actually have a positive impact. Feedback from participants is invaluable because it provides direct insight into what works and what doesn't. By listening to and responding to this feedback, the program can continually improve to meet participants' needs more effectively and efficiently, ensuring that they always have the knowledge and skills they need to succeed in an ever-evolving work environment.

Conducting regular evaluations of the effectiveness of digital literacy education programs is a crucial step to ensure the achievement of program objectives. This evaluation includes an assessment of the participants' understanding and application of digital skills during the training. Through comprehensive evaluation, accurate data can be obtained regarding the effectiveness of teaching methods, the relevance of the material, and the level of participant satisfaction. This data is important for identifying areas that need improvement and adapting the program to the actual needs of bankers. Each group of participants may have different needs, depending on their roles and responsibilities within the bank. For example, a manager may need deeper data analysis skills than a teller. Proper evaluation allows the design of more specific and relevant programs, providing maximum benefit to all participants.

Continuous development of digital literacy education programs ensures that bankers are always updated on the latest digital technology. Digital technology is evolving rapidly, and what is relevant today could be out of date in a few months. Therefore, it is important to always update the content and teaching methods to suit the latest trends and innovations. This not only enhances the technical skills of bankers but also ensures their readiness to face new challenges in the banking industry. Regular updates also include the introduction of new software and tools that increase work efficiency and effectiveness. Interactive and practice-based teaching methods, such as simulations and case studies, must continue to be developed to help participants understand and remember information in realistic contexts. Participant feedback is invaluable to ensure that changes made are truly having a positive impact and the program continues to meet participants' needs effectively and efficiently.

## **CONCLUSION**

Based on the description above, it can be concluded that the process of improving the quality of digital literacy education for bankers in Timor Leste is an essential strategic step in facing the rapid development of technology in the banking industry. Intensive training that focuses on digital skills not only increases bankers' technical understanding in using banking software and data analysis, but also strengthens cybersecurity aspects to protect customer data. Developing soft skills such as digital communication and collaboration is also important to improve teamwork efficiency and customer service.

Collaboration with universities and educational institutions expands bankers' access to the latest resources and curricula in digital literacy. This not only supports their professional development but also ensures the relevance of the curriculum to the evolving needs of the banking industry. The implementation of interactive and practice-based learning methods such as simulations and case studies proves their effectiveness in increasing participants' involvement and understanding of digital literacy applications in real situations.

Regular evaluation and ongoing content development are important to ensure the effectiveness and relevance of digital literacy education programs. In this way, bankers in Timor Leste can remain competent and ready to face new challenges in the digital banking industry, as well as contribute to economic growth and sustainability of the banking industry in their country.

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