

**Analysis of Digital Financial Literacy and Transaction Security Levels among
Vocational High School Students in Tangerang City, Banten**

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ARTICLE INFO	ABSTRACT
Published: September 2026	<i>This study investigates the levels of digital financial literacy and transaction security awareness among Vocational High School (SMK) students in Tangerang City, Banten. As Indonesia transitions toward a cashless society, digital financial tools like e-wallets, mobile banking, and fintech platforms have become widely integrated into daily life. However, this rapid technological adoption introduces risks such as cyber threats, predatory online lending, and privacy violations. Using a qualitative approach, data were collected in January 2023 through semi-structured interviews with five vocational students and one teacher, alongside school documentation analysis. The findings reveal a significant gap between students' high frequency of digital payments and their understanding of transaction security protocols, interest rate mechanics, and data privacy. While students comfortably navigate e-wallet interfaces, they rely heavily on social proof rather than technical verification, leaving them vulnerable to fraud and debt cycles. The study emphasizes the urgent need for structured educational interventions in vocational curricula to combine financial management instruction with cybersecurity awareness, empowering students to navigate the digital economy safely and responsibly.</i>
Keywords: <i>digital financial, Transaction security, Vocational High School</i>	

INTRODUCTION

The rapid evolution of the global financial landscape, driven by the proliferation of digital technology, has fundamentally altered how individuals manage their economic activities. In Indonesia, this transformation is particularly evident in the widespread adoption of e-wallets, mobile banking, and various fintech platforms. As the nation moves toward a cashless society, the integration of digital financial services has become an inevitable reality for all segments of the population. However, this technological shift brings with it a complex set of challenges that necessitate a critical examination of how specific demographics, such as Vocational High School (SMK) students in Tangerang City, navigate this digital ecosystem. The urgency of this issue is underscored by the observation that while digital tools offer convenience and potential for financial inclusion, they also expose users to significant risks if not accompanied by adequate knowledge and behavioral maturity.

Recent scholarly discourse highlights that the transition toward a digital economy is not merely a matter of infrastructure but a matter of human capital development. As noted by Widjiantoro et al. (2025), the development of digital technology has brought significant changes to the financial sector, particularly in enhancing financial inclusion. Nevertheless, a substantial portion of the

population still lacks a sufficient understanding of financial technology, which hinders the optimal utilization of digital financial services. This gap in understanding is a critical barrier that prevents individuals from fully leveraging the benefits of the digital economy. For vocational students, who are at a formative stage of their financial independence, this lack of understanding can lead to suboptimal financial decision-making and increased vulnerability to digital threats.

The challenges associated with digital finance are multifaceted, encompassing both technical literacy and psychological factors such as trust and security. Nurfadhilah et al. (2025) point out that service users of e-wallets face a number of issues, including a lack of knowledge about digital finance as well as concerns about security and trust in e-wallet services. This problem is further exacerbated by the broader socio-economic context, where even educated individuals—including educators—have been found to be trapped in predatory online loans. This phenomenon serves as a stark warning that formal education does not automatically equate to digital financial literacy. If professionals are susceptible to the pitfalls of the digital financial world, it is highly probable that vocational students, who are often early adopters of new technology without formal training in financial management, are at an even greater risk of falling into similar traps.

The necessity for targeted intervention is further emphasized by the increasing complexity of online transactions. Setyawan and Suhendi (2025) argue that programs aimed at enhancing digital literacy and digital financial literacy are highly relevant due to the increasing use of the internet and digital financial transactions. They stress that it is essential for community members to understand online ethics and financial security to navigate the digital space safely. For students in Tangerang City, an urban area characterized by high internet penetration and a competitive job market, the ability to manage digital finances securely is not just a personal skill but a professional requirement. Vocational students are expected to enter the workforce with practical skills; therefore, their ability to handle digital payments and understand the security protocols of fintech platforms is a vital component of their vocational readiness.

Furthermore, the pressure to adapt to digital systems is not limited to individual consumers but extends to the broader economic environment, including the micro-enterprises that many vocational graduates may eventually manage or work for. Alfiana et al. (2025) highlight that the transformation toward a cashless society demands that Micro, Small, and Medium Enterprises (MSMEs) adapt to the development of digital financial technology. They observe that low digital financial literacy is often the main obstacle in the implementation of non-cash payment systems. This suggests that if vocational students are not equipped with the necessary literacy during their schooling, they will face significant hurdles when entering the professional world, where digital payment systems are becoming the standard.

The intersection of these factors—the rapid adoption of e-wallets, the prevalence of security concerns, the risk of predatory lending, and the necessity of digital literacy for professional success—creates a compelling case for this study. Tangerang City, as a hub of industrial and educational activity, provides an ideal setting to analyze these dynamics. Vocational students in this region are at the forefront of the digital shift, yet they remain vulnerable to the risks inherent in a system they may not fully comprehend. By examining the levels of digital financial literacy and transaction security among these students, this research aims to bridge the gap between technological adoption and informed, secure usage.

Ultimately, the goal is to move beyond the mere usage of digital tools and toward a state of financial empowerment. As suggested by the collective insights of the aforementioned researchers, building financial awareness through digital literacy is a strategic imperative. It is not enough to provide access to technology; society must ensure that the users of this technology possess the critical thinking skills to evaluate security risks, the knowledge to manage digital assets, and the ethical grounding to avoid the dangers of predatory digital finance. This study seeks to provide a comprehensive analysis that will inform future educational policies and intervention programs, ensuring that the next generation of workers in Tangerang City is not only technologically proficient but also financially resilient in an increasingly digital world. Through this analysis, we can begin to formulate strategies that transform the challenges of the digital age into opportunities for sustainable financial growth and security for all students.

METHOD

This study employs a qualitative research design to explore the digital financial literacy and transaction security awareness among vocational high school students in Tangerang City. Qualitative research was selected to gain an in-depth understanding of the participants' personal experiences, perceptions, and behaviors regarding digital financial tools. The data collection process was conducted in January 2023, utilizing semi-structured interviews as the primary instrument. This approach allowed for flexible, open-ended discussions, enabling the researchers to probe deeper into the students' understanding of online ethics, security risks, and their habits in using e-wallets.

The participants consisted of five vocational high school students and one teacher, selected through purposive sampling to ensure a diverse range of perspectives. The students provided insights into their daily digital transaction habits and their awareness of potential cyber threats, while the teacher offered a broader pedagogical perspective on the current state of financial education within the school curriculum. In addition to interviews, documentation was collected, including school records related to extracurricular activities on technology and samples of digital financial literacy materials used in the classroom.

The data analysis followed a thematic analysis approach, involving data reduction, data display, and conclusion drawing. The interview transcripts were coded to identify recurring patterns, such as the students' reliance on e-wallets for convenience versus their lack of knowledge regarding account security protocols. The findings revealed a significant gap between the students' high frequency of digital transactions and their actual understanding of financial security. While students are adept at using technology, they often overlook critical security measures, such as password management and the risks of predatory online lending. The teacher's feedback corroborated these findings, noting that while digital tools are integrated into daily life, formal instruction on digital financial literacy remains insufficient. In conclusion, the study highlights an urgent need for structured digital financial literacy programs in vocational schools to ensure that students in Tangerang City can navigate the digital economy safely and responsibly, moving beyond mere technological adoption toward informed and secure financial behavior.

RESULT AND DISCUSSION

The analysis of the data collected from the five vocational high school students in Tangerang City reveals a complex intersection between high technological adoption and a concerning deficit in foundational digital financial literacy. During the interviews conducted in January 2023, it became evident that while all five respondents are active users of various e-wallet platforms for daily transactions such as school canteen payments, transportation, and online shopping, their understanding of the underlying financial mechanisms and security protocols remains superficial. This discrepancy aligns with the findings of Widjiantoro et al. (2025), who argue that while the development of digital technology has significantly enhanced financial inclusion, a substantial portion of the population—including the younger generation—lacks the adequate understanding of financial technology required to utilize these services optimally. The students demonstrated a high level of comfort with the user interfaces of digital applications, yet they struggled to articulate the risks associated with data privacy, the mechanics of interest rates in digital credit, or the importance of multi-factor authentication.

To probe these issues, two critical questions were posed to the respondents: "How do you verify the security and legitimacy of a digital financial platform before conducting a transaction?" and "To what extent do you understand the long-term financial implications of using 'pay-later' or digital credit features?" The responses to these questions were revealing. Regarding the first question, most students admitted to relying solely on the popularity of the application or the fact that their peers used it, rather than verifying security certifications or privacy policies. This lack of critical evaluation mirrors the concerns raised by Nurfadhilah et al. (2025), who noted that e-wallet users face significant issues, including a lack of knowledge about digital finance and persistent concerns regarding security

and trust. The students' reliance on social proof rather than technical verification exposes them to potential phishing and fraud, as they lack the "digital skepticism" necessary to navigate the modern financial landscape safely.

The second question regarding digital credit features highlighted a dangerous gap in financial maturity. Several students viewed "pay-later" features as a convenient tool for immediate consumption without fully grasping the associated interest rates or the potential for debt accumulation. This behavior is particularly alarming when viewed through the lens of the phenomenon described by Nurfadhilah et al. (2025), where even educators have been trapped in predatory online loans. If students begin their financial lives by normalizing the use of high-interest digital credit without understanding the terms of service, they are at a high risk of falling into the same cycle of debt that currently plagues many adults in the workforce. The students' responses indicated that they perceive digital credit as a "feature" of the app rather than a financial obligation, suggesting that their digital financial literacy is currently limited to the mechanics of spending rather than the principles of financial management.

The teacher interviewed during the study provided a crucial perspective, noting that the school curriculum often focuses on theoretical economics but fails to address the practical realities of the cashless society. This observation is supported by Alfiana et al. (2025), who emphasize that the transformation toward a cashless society demands that individuals—and especially future workers—adapt to the rapid development of digital financial technology. The teacher noted that the low level of digital financial literacy is a major barrier to the effective adoption of non-cash payment systems, not just for MSMEs, but for the students themselves as they prepare to enter the professional world. Without formal intervention, these students are entering a digital economy with the tools to spend but without the guardrails to protect their financial future.

The discussion of these findings must also incorporate the necessity of online ethics and security, as highlighted by Setyawan and Suhendi (2025). They argue that programs aimed at enhancing digital and financial literacy are highly relevant in the current climate, as it is essential for community members to understand online ethics and financial security. In the context of the five students, the lack of awareness regarding "online ethics" was evident in their casual sharing of account information or their disregard for the terms and conditions of the platforms they use. They often treat digital financial accounts with the same level of casualness as they do social media accounts, failing to recognize that the former involves real-world financial consequences. This lack of distinction between social and financial digital spaces is a primary driver of their vulnerability.

Furthermore, the study found that the students' perception of "security" was largely limited to the presence of a PIN or a fingerprint scanner on their phones. They did not consider the broader risks of data harvesting, the security of the merchant platforms they interact with, or the importance of monitoring their transaction history for unauthorized activity. This narrow view of security is exactly what Widjiantoro et al. (2025) warn against; they suggest that without a comprehensive understanding of financial technology, the benefits of digital inclusion are undermined by the risks of exploitation. The students are essentially operating in a digital financial environment that they do not fully comprehend, making them susceptible to both external cyber threats and internal mismanagement of their own financial resources.

The synthesis of these findings suggests that there is an urgent need for a structured educational intervention. As Setyawan and Suhendi (2025) suggest, the implementation of digital literacy programs is not just an academic exercise but a practical necessity for community safety. For the students in Tangerang City, this means moving beyond basic computer literacy to a more nuanced "financial citizenship." This includes teaching students how to read digital contracts, how to identify the signs of predatory lending, and how to protect their digital identity. The current state of affairs, where students are left to learn these lessons through trial and error, is unsustainable and potentially damaging to their long-term economic well-being.

CONCLUSION

In conclusion, the analysis of the five students confirms that while the digital transformation is well underway, the human element—specifically the cognitive and behavioral capacity to manage digital finance—is lagging behind. The students are active participants in the cashless society, yet they lack the literacy to navigate it securely. The low level of digital financial literacy is the primary obstacle to the successful implementation of digital payment systems. If we are to prepare the next generation for the realities of the modern economy, we must prioritize programs that integrate financial education with digital security training. This study serves as a call to action for educators and policymakers in Tangerang City to bridge this gap, ensuring that students are not only capable of using digital tools but are also empowered to make informed, secure, and ethical financial decisions that will serve them throughout their lives. By fostering this level of awareness, we can mitigate the risks of digital financial exclusion and protect students from the pitfalls of an increasingly complex and interconnected financial world.

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