DIGITAL BANKING AND FINANCIAL INCLUSION: A NEW FRAMEWORK FOR STUDENT LOAN ACCESS IN INDONESIA

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Abstract – *Access to affordable higher education remains a major challenge in Indonesia, where student loans are still rarely utilized compared to developed countries. While financial constraints continue to prevent many students from low- and middle-income families from pursuing university education, the rise of digital banking and fintech presents new opportunities for inclusive education financing. This study explores how digital banking platforms and mobile applications can support student loan schemes by offering more accessible, flexible, and technology-driven financial solutions. Through a qualitative descriptive method and literature review, the study identifies key features, benefits, and challenges of implementing digital-based student loan systems. Findings show that digital banking can help overcome traditional lending barriers such as rigid requirements and geographic limitations, while promoting financial inclusion through automation and alternative credit assessments. In light of Indonesia's upcoming income-contingent loan (ICL) scheme, digital infrastructure, national ID systems, and tax administration improvements are expected to play a critical role in supporting sustainable implementation. The study concludes that digital banking has the potential to transform education financing into an inclusive and equitable system, but success will depend on regulatory readiness, institutional coordination, and digital literacy advancement.*

Keywords: *digital banking, student loan, financial inclusion, higher education, Indonesia.*

I. INTRODUCTION

Education is a powerful weapon that every person on Earth can possess for their well-being, both in thinking and in achieving financial independence (Anjani et al., 2023). This is not limited to formal education within academic settings, but also includes how Indonesian people can fully and freely maximize all the intellectual and physical abilities they have (Anjani et al., 2023).

Funding source for college applicants in Indonesia is still very few. However in fact, many college students feel burdened with the high tuition fees (Hardinawati, 2015) .While almost every college student's funding source is their parents, student's parents in fact came from various source, such as relative loan, and bank loan. Actually, the student's age when entering Higher Education is old enough to be independent to manage their financial, they should have rights to receive loan (Hardinawati, 2015) . The loan from the Bank for Student to pay their tuition fees is still rare in Indonesia, meanwhile in other countries, a student loan is a common loan .The loan named student loan, where the recipient of the loan pay the loan after they graduated from University and has a job The loan from the Bank for Student to pay their tuition fees is still rare in Indonesia, meanwhile in other countries, a student loan is a common loan (Hardinawati, 2015).The loan named student loan, where the recipient of the loan pay the loan after they graduated from University and has a job (Hardinawati, 2015).

In the 1980s, indeed, Indonesia had already issued educational credits better known as KMI. (Kredit Mahasiswa Indonesia). BNI began facilitating student loans in Indonesia, but the program was stopped in 1981-1982 because it had no impact on economic accumulation at that time. The program failed because creditors had to prove their ability to repay the loans, but in practice, obtaining a student job only required a photocopy of the legalized degree, not the original. Based on this experience, financial planners recommend individual assessments after graduation. Education credits are preferred for students who want to pursue an S2 or S3 degree and already have a job. For S1 students, more filters are needed, such as parental assessments, as well as the implementation of the 5Cs of banking (capital, character, capacity, condition, and collateral) to reduce the risk of credit default (Hidayat et al., 2023).

The Financial Services Authority (OJK, abbreviated in Indonesia) has aided the development of banking digitalization), with many regulations that must be made and adhered too. In Indonesia, several digital banks have an operation, so the number of transactions using this method is growing (Antoneous Sorongan et al., 2022) . In addition to traditional banks, fintech lending platforms have emerged as alternative providers of student loans in Indonesia that offering short- to medium-term financing for tuition, living expenses, and vocational programs. They operate entirely through mobile applications and use alternative credit scoring, which makes them more accessible to students without formal credit histories.

Previous studies have shown that the growth of fintech in student loan services in Indonesia is considered significant. A key milestone was the student loan initiative launched by President Joko Widodo in 2018, which became a major driver for the development of fintech-based education financing. Since then, there has been a noticeable increase in the number of fintech institutions offering student loan products, indicating rising interest and adoption among Indonesian students (Avrilia Lantana & Digdowiseiso, 2023) .

II. LITERATURE REVIEW

Limited access to affordable credit is a key reason why many eligible students do not pursue higher education, especially in contexts where the private return to education is high but upfront costs are unaffordable without loans (Gurgand et al., 2023). Digital banking has transformed the landscape of education financing, making student loans more accessible, efficient, and tailored to the needs of college students. By leveraging technology, digital banking platforms and fintech companies have addressed many of the barriers associated with traditional lending, such as rigid requirements, slow processing, and limited access for students without established credit histories (Noviani & Jesica, 2024). Digital education fintech plays a crucial role in enabling economic self-reliance and financial inclusion by extending access to underserved communities, reducing skill gaps, and supporting long-term economic growth (Bhonsle, 2024).

Digital Banking and Financial Inclusion

Agbeve et al. (2025) Digital banking has played a pivotal role in expanding financial inclusion by offering accessible services such as mobile banking, e-wallets, and contactless payments, thereby reducing the reliance on traditional banking infrastructure. Supportive regulatory frameworks—particularly from institutions like the Federal Reserve and FDIC—have facilitated innovation while maintaining financial stability and consumer protection. Despite these advancements, several structural barriers remain, including cybersecurity concerns, unequal broadband access, and limited digital literacy, which continue to hinder the equitable distribution of financial services. Furthermore, digital banking offers a critical opportunity to extend financial access to underserved populations, particularly in areas lacking physical banking infrastructure. When implemented effectively, digital banking systems can reduce transaction costs and enhance service reach, contributing to more inclusive and efficient financial systems. However, its full potential remains constrained by regulatory uncertainties, privacy risks, and the digital divide among users.

Rafaqat Ahmad (n.d.)To unlock the full benefits of digital banking for financial inclusion, it is essential to implement coordinated efforts among financial institutions, policymakers, and technology providers. This includes investing in digital infrastructure, promoting user-friendly platforms, and designing targeted financial literacy programs tailored to marginalized communities. Moreover, inclusive product design that considers the needs of women, rural populations, and informal workers can improve adoption rates and long-term financial resilience. By addressing these systemic challenges, digital banking can evolve from being a convenience for the banked to becoming a catalyst for closing financial access gaps in both developed and developing economies.

How Digital Banking Supports Education Financing

Zhang et al. (2024) Digital banking platforms employ alternative data and advanced algorithms to assess creditworthiness, enabling students without traditional collateral or credit history to obtain loans. The ability to apply remotely via online platforms eliminates geographic barriers, making education financing more inclusive, especially for students in rural or underserved regions. Automation of loan application, verification, and disbursement processes reduces paperwork and processing times, allowing faster loan approvals and fund access. Digital banking services operate 24/7, providing students with the flexibility to manage their finances and applications at any time.

How Mobile Banking Apps Support Education Financing

Mobile banking allows students to conduct transactions anytime and anywhere, eliminating the need to visit physical bank branches. This convenience is crucial for timely payment of tuition fees, accommodation, and other education-related costs. Research shows that the perceived ease of use of mobile banking strongly influences students' intention to adopt these services, making financial transactions simpler and more accessible (Kusuma Wardani & Usman, 2022). Additionally, mobile banking services positively affect students' saving behavior, which can help them manage education expenses more effectively.

Mobile banking apps incorporate advanced security features such as biometric authentication and encryption, which enhance students' trust and willingness to use these platforms for financial transactions, including education payments (Baby & Sv, 2025). Mobile banking is also linked to improved financial literacy among students. Studies highlight that mobile banking usage encourages better money management and saving habits, which are essential for managing education expenses responsibly (Kumar & Assistant Professor, 2025).

Regulatory and Institutional Frameworks in Indonesia

Indonesia is preparing to implement a formal student loan scheme aimed at improving access to higher education by alleviating financial barriers, particularly for middle- to low-income students. The Ministry of Higher Education, Science, and Technology (Kemdiktisaintek) plans to launch this program in August or September 2025 in collaboration with the Education Fund Management Institution (LPDP) and banking institutions (Azzahra, 2025).

Saleh (2024) Elza Elmira, a scholar with a PhD in Development Research from the University of Bonn, emphasized that Indonesia's previous student loan schemes experienced extremely high default rates—reaching up to 95%—which created a substantial fiscal burden on the government. This historical failure has made banks hesitant to participate in the education financing sector. One of the main issues, she argues, was the lack of an effective system to track graduates and enforce repayment, particularly due to underdeveloped tax and population data systems. However, with the recent advancement in national ID systems and improved tax administration, she believes that an income-contingent loan (ICL) scheme is now more feasible in the Indonesian context.

In a study conducted between 2014 and 2015, Elza found that low-income students in Indonesia faced annual undergraduate education costs of up to IDR 49 million, not including personal expenses such as books, transportation, and living costs. Tuition fees alone could reach IDR 100 million or more, especially in private institutions. She also highlighted that fixed-payment mortgage-style loan schemes impose heavy repayment burdens—up to 30% of income for middle-class borrowers in Java and as high as 85% for low-income earners in Sumatra. In contrast, ICL schemes, which adjust repayment based on post-graduation income (typically 8–11%), offer a more equitable and sustainable model. They reduce financial anxiety among students and provide repayment flexibility in times of economic hardship, as adopted in many developed countries.

In many developed countries, particularly the United States, student loans serve as a primary source of education financing for both domestic and international students. By 2024, total outstanding student loan debt in the U.S. has reached approximately $1.77 trillion, a significant increase from $0.52 trillion in 2006, reflecting both rising tuition costs and growing reliance on educational credit. According to the U.S. Department of Education, 95% of education borrowers utilize student loans, far exceeding other sources such as credit cards or collateral-based loans, positioning student debt as the backbone of the country's higher education funding system. Furthermore, the annual growth rate of student loan debt, at 7.23%, surpasses the national GDP growth rate of 4%, indicating that student debt is expanding faster than the broader economy. This trend underscores the urgency for sustainable student loan policies that ensure accessibility without imposing excessive long-term financial burdens on graduates (Sidik A & Intan, 2025).

III. METHODS

This study uses a qualitative descriptive approach with a literature review method. Literature review is a method of collecting and analyzing data from various academic literature and scientific publications, including journals, books, official reports, and secondary data from government or financial institutions.

Data Sources

The data sources for this study include the following:

1. National and international scientific journals discussing topics such as student loans, digital banking, financial inclusion, and education financing.
2. Official documents from financial institutions, such as Bank Indonesia's and the Financial Services Authority's (OJK) annual reports, as well as reports on the development of the digital banking industry in Indonesia.
3. Government policies and regulations related to financial inclusion and the digitalization of the education sector were also used.

Data Collection Techniques

Data was collected through:

1. Systematic searches using academic databases such as Google Scholar, Scopus, and ResearchGate.
2. Searches through official websites of banks and regulators (OJK, BI, Kemdikbud).
3. Secondary data collection from trusted media reports and white papers from industry sectors.

Informants

This study does not involve direct human informants or primary interviews, as it is based entirely on secondary data. However, the analysis incorporates documented insights and perspectives from key stakeholders in the literature, such as government officials, academics, fintech practitioners, and policymakers, whose views are cited from publicly available sources. These stakeholders serve as indirect informants, providing contextual depth to the issues being studied.

Data Analysis Techniques

A content analysis approach was used to identify themes, patterns, and relationships between concepts from the reviewed literature. The steps included:

1. Selection of literature based on relevance to the topic and time period (prioritizing the last 5-10 years).

2. Coding key information, such as types of student loan services, digital banking application features, implementation barriers, and development opportunities.
3. Synthesizing and comparing the findings to support the research arguments and conclusions.

Research Limitations

Since this study uses a literature review approach, its results are conceptual and do not reflect the direct perceptions of application users or banks. Further empirical research through surveys or case studies is expected to supplement these results.

IV. RESULTS AND DISCUSSION

The analysis shows that financial constraints remain a primary obstacle for students seeking access to higher education, especially among those from middle- to low-income households. Despite the growing importance of tertiary education for economic and social mobility, the high upfront costs continue to limit enrollment. In many cases, students lack access to affordable and flexible credit mechanisms that could support their academic aspirations.

Digital banking has introduced major advancements in education financing by offering alternative credit models and user-oriented services. The integration of digital platforms enables more inclusive access to student loans by removing traditional barriers such as the need for collateral, rigid application procedures, and geographical limitations. Mobile banking and fintech applications also provide greater convenience through remote loan application processes, real-time fund disbursement, and user-friendly financial management tools tailored for students.

Beyond credit access, digital banking contributes to broader financial inclusion by extending formal financial services to previously underserved populations. The availability of mobile and online banking platforms reduces the reliance on physical bank infrastructure and opens access to essential services in rural or remote areas. Despite this progress, several challenges persist, including digital literacy gaps, cybersecurity risks, and unequal access to digital infrastructure.

In response to these challenges and opportunities, the national education financing policy is shifting toward a more structured student loan framework. The planned implementation of an income-contingent repayment model is designed to ensure affordability and reduce default risks. This approach aligns repayment obligations with the borrower's income after graduation, providing greater flexibility and sustainability. Additionally, improvements in national identification systems and digital tax administration enhance the feasibility of tracking graduates and supporting repayment enforcement.

Overall, the integration of digital banking into student loan programs represents a promising strategy to increase higher education participation while promoting financial inclusion. However, its success will depend on coherent regulatory support, administrative efficiency, and continuous investment in digital infrastructure and public awareness.

V. CONCLUSION

This study concludes that the development of digital banking presents a valuable opportunity to address long-standing barriers in education financing. The integration of digital financial services, particularly through mobile and online platforms, has enabled more inclusive access to student loans by simplifying procedures, removing geographic constraints, and accommodating students without formal credit histories. These innovations have the potential to close the financing gap that prevents many students from pursuing higher education.

Furthermore, digital banking contributes to broader goals of financial inclusion by expanding formal financial services to marginalized communities, especially those living in rural areas. When aligned with appropriate regulatory frameworks and institutional collaboration, these digital tools can increase participation in higher education, promote responsible financial behavior, and support economic self-reliance.

The introduction of income-contingent loan schemes, supported by national data and financial systems, signals a strategic shift in Indonesia's approach to student financing. By linking repayment to graduate income and providing grace periods, such programs offer a more sustainable and equitable model for both students and the government. However, to ensure long-term success, it is essential to address digital literacy gaps, strengthen administrative systems, and build public trust through transparent, secure, and user-friendly platforms.

In conclusion, digital banking has the potential to transform education financing from a structural barrier into a catalyst for inclusion, economic growth, and social mobility. Its effectiveness, however, will ultimately depend on coordinated implementation and continuous policy innovation.

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