

FROM FINANCIAL KNOWLEDGE TO FINANCIAL CAPABILITY: THE ROLE OF TEACHING AND LEARNING APPROACHES AMONG UNIVERSITY STUDENTS - A CONCEPTUAL PAPER

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Abstract: Financial literacy has become an increasingly important competency among university students as they navigate complex financial decisions and prepare for greater financial independence. However, conventional approaches to financial education that primarily emphasize transmitting financial knowledge may be insufficient to develop students' ability to apply it in real-life situations. This conceptual paper examines the role of teaching and learning approaches in strengthening financial literacy and financial capability among university students. Three key strategies are proposed: implementing practical, contextualized financial education programs, aligning the curriculum with national financial literacy initiatives, and adopting teaching and learning approaches that empower students to make informed financial decisions. Furthermore, collaboration between educational institutions, government agencies, and financial industry stakeholders can strengthen the relevance and sustainability of financial education initiatives. This conceptual perspective contributes to the development of a more holistic approach to financial education. It provides implications for educators and policymakers seeking to enhance students' financial capability and long-term financial well-being.

Keywords: *Financial Literacy, Financial Capability, Teaching and Learning*

Introduction

Nowadays, financial literacy among university students requires greater emphasis. The importance of financial literacy must be highlighted, given the increasingly complex financial landscape resulting from the evolution of modern financial systems. Students are increasingly required to make independent financial decisions about budgeting, saving, credit, digital payments, loans, and financial planning. However, possessing financial knowledge does not necessarily mean students can apply it effectively. Financial literacy encompasses the knowledge, skills, and responsible practices required to manage personal finances effectively. It is the understanding and application of a wide range of financial skills, such as managing personal finances, creating an appropriate budget, and investing (Wan Nawang & Abdul Shukor, 2023). As financial environments rapidly digitize and personal credit options become more widely available, the money management landscape facing undergraduate students has become much more complex (Xiao et al., 2022). National education policies should encourage financial education to improve financial literacy and safeguard economic stability during future crises (Cannistrà et al., 2022).

Teaching economic concepts or procedural knowledge alone is not enough to build financial capability. People need to consider interlinked variables, weigh the risks and opportunities, think about what might happen in the long run, and make judgments when they are not sure what will happen. These processes demand cognitive capabilities associated with complex thinking, such as critical analysis, systems reasoning, problem solving, and reflective decision-making. Within this approach, complex thinking can be defined as a fundamental competence that promotes responsible financial conduct and adaptive decision-making in dynamic social and economic contexts (Ramírez-Montoya et al., 2026).

Problem Statement

The rapid advancement of contemporary financial systems has made personal financial management more complex. Major changes in the current financial system, for example, the rapid adoption of buy now, pay later (BNPL), impose significant financial obligations on university students and indirectly affect their financial management. As young adults transition into higher education, they must independently navigate critical financial decisions, including personal budgeting, debt management, student loans, and digital payment ecosystems. The emergence of digital payment ecosystems, such as BNPL (including ShopeePay Later, Atome, and GrabPay Later), influences consumers' spending patterns, particularly among the younger generation (Nusir et al., 2026). However, a significant gap exists between acquiring basic financial knowledge and translating that understanding into effective, responsible financial behaviours. Current educational frameworks often treat financial literacy as purely theoretical, relying on traditional pedagogical models that emphasize abstract concepts rather than practical, real-world applications. Some degree of literacy in digital finance is required to make wise financial decisions and avoid costly mistakes when using financial technology products (Gallego-Losada et al., 2021; Peter J. Morgan et al., 2019). Accordingly, young adults need to be educated in digital and financial literacy and understand the technological limitations, risks, and dangers of internet use.

According to Morris et al. (2022), the pedagogical approaches used in higher education pose a significant obstacle to the development of financial competence. This is because standard

lecture formats do not reduce the amount of extraneous cognitive load during periods of financial stress. Morris et al. (2022) and Xiao et al. (2022) found that financial education remains largely theoretical, lacking digitally connected, interactive, and experiential teaching methods that reflect real-world financial situations. In general, internet use is widespread among teenagers and young adults globally. Hence, it is widely recognized that the younger generations are proficient in digital technologies, often referred to as digital natives. They have adapted to digital finance through online banking and e-commerce. However, it cannot be assumed that they have all the necessary knowledge, skills, and understanding to use the technology (Raj, 2021).

Despite increasing scholarly attention to student financial literacy, a persistent theoretical limitation concerns the insufficient conceptual distinction between financial knowledge acquisition and its behavioural application. Financial literacy has been conceptualized in earlier research as a passive, linear accumulation of theoretical information, based on the untested premise that cognitive knowledge directly determines behavioural outcomes. With a strong emphasis on traditional direct-instruction techniques that prioritize abstract economic principles over practical applications, current educational frameworks treat financial literacy as essentially theoretical. However, empirical research suggests that the behavioural efficacy and knowledge retention achieved through such passive modes of education deteriorate dramatically over time. According to Morris et al. (2022), standard lecture formats create a structural barrier to financial competence by failing to reduce the superfluous cognitive load that arises during financial stress or in real-time digital credit exchanges. Although the gap between financial knowledge and its behavioural application is well acknowledged in the literature, the educational mechanisms that explain this relationship remain inadequately theorized. Prevailing frameworks offer limited explanations of how instructional design may influence learners' cognitive demands and cultivate the self-regulatory processes necessary for translating financial understanding into situated financial action. Specifically, the theoretical function of digitally mediated, interactive, and experiential pedagogical methods in managing cognitive load and enabling the behavioural application of financial knowledge is insufficiently examined (Morris et al., 2022; Xiao et al., 2022).

The absence of an integrated conceptual framework that explains the interplay among instructional design, cognitive load, and situated financial decision-making is a significant limitation in contemporary financial literacy education. Hence, a reoriented conceptual framework that shifts the focus from passive knowledge acquisition to experiential pedagogical interventions to foster holistic financial capacity within digital finance ecosystems is urgently needed.

Literature Review

There is a significant difference in financial literacy levels across age and income groups. Generally, individuals in middle age tend to exhibit higher financial literacy, whereas both the oldest and youngest groups are more likely to score lower (Atkinson, 2012). The study also confirms that higher-income respondents are more likely to achieve higher scores than their lower-income peers. Similarly, there is also a positive relationship between education and financial literacy. Higher-educated individuals are more likely to exhibit positive behaviors and attitudes and to demonstrate advanced levels of knowledge.

Relationship between Financial Knowledge and Capability

Financial capability is a multidimensional concept comprising financial knowledge, attitudes, and behaviours that enable individuals to make informed decisions and manage their resources effectively (Álvarez-Espino et al., 2026). Financial literacy serves as the fundamental cognitive foundation. However, financial competence requires individuals to apply that knowledge through practical, real-life activities, such as monitoring daily expenditures, building emergency savings, responsibly managing credit, and reducing risk within actual or hypothetical constraints (Kee & Anwar, 2024; Xiao et al., 2022). Students with a strong financial knowledge base are better able to manage their money, save, and invest (James et al., 2012). Individuals with more financial knowledge are more likely to seek external help and achieve better financial outcomes. Strengthening financial education can enhance the benefits of financial advice (García-Santillán et al., 2025). One of the key limitations of knowledge-centered views is that they do not sufficiently explain the procedures via which financial understanding is transformed into practical action. Students may possess adequate financial knowledge without consistently applying it in everyday decisions. This discrepancy shows that financial capability also depends on attitudes, self-regulation, and the ability to cope with cognitive demands in particular financial circumstances (Kee & Anwar, 2024; Wan Nawang & Abdul Shukor, 2023). To maximize the benefits of financial advice, strengthening financial education is beneficial. Financial knowledge alone is not sufficient; it needs positive attitudes and practical behaviours to translate into true financial capability.

Influence of Teaching and Learning Approach

Colleges and universities currently play a vital role in ensuring that students in higher education gain early exposure to financial management. Courses related to financial management are offered at both public and private universities; however, the question remains whether the knowledge acquired is applied in students' daily lives. Participation in structured financial education programs, for example, the curriculum-based interventions, significantly enhances both domains of financial literacy, which are affective (attitude) and cognitive (knowledge), the foundation for building financial capability (Delgadillo & Lee, 2021). In China, effective teaching approaches, such as ADDIE-based curriculum, have been implemented to improve and further strengthen students' engagement and self-efficacy in financial management. ADDIE is an effective curriculum-design tool that carefully designs, develops, and tests educational content to meet learners' needs (Marisa, Raharjo, & Wardani, 2024).

Notwithstanding these curriculum design frameworks, conventional personal finance education in higher education has mostly depended on passive direct instruction methods, including lecture-based presentations and unchanging textbook readings (Morris et al., 2022). Empirical research suggests that the effects of direct education on long-term money management behaviour diminish rapidly over time (Mandell & Klein, 2009; Morris et al., 2022). This is even though direct instruction is effective in imparting cognitive financial knowledge and theoretical numeracy.

Cordero et al. (2022) found that the availability of financial education is positively and significantly associated with students' financial literacy, regardless of the strategy used to teach financial concepts. In addition, social learning mechanisms such as peer influence and parental guidance play an important role in shaping financial literacy, particularly in these emerging economies, where the widespread use of digital payments, including BNPL, encourages youngsters to take on debt. The practical application of financial knowledge is enhanced when

teaching methods focus on real-life scenarios and decision-making, which involves not only the theoretical concepts (Farnsworth et al., 2011).

A critical synthesis of higher education curricula indicates that while direct instruction successfully conveys structured content, it fails to reduce extraneous cognitive load when students face pressing financial decisions (Morris et al., 2022). Although past studies have frequently documented patterns of short-term improvement that diminish over the long term (Mandell & Klein, 2009), few integrated models have been proposed to incorporate active experimentation or gamified digital platforms into core university courses.

Although foundational literature establishes that cognitive knowledge is a prerequisite for financial literacy (James et al., 2012; Wan Nawang & Abdul Shukor, 2023), recent behavioural perspectives emphasize that knowledge alone is insufficient to predict responsible decision-making (Álvarez-Espino et al., 2026; Kee & Anwar, 2024). The literature indicates that financial knowledge enhances financial capability; however, the conversion of this knowledge into consistent financial behaviour remains insufficiently elucidated. Previous studies have explored financial literacy and educational interventions; however, there has been insufficient focus on the relationship between instructional design, cognitive load, and financial self-regulation. The gap points to the need for an integrated conceptual framework to investigate how digital and experiential pedagogical techniques can promote cognitive processing, self-regulation, and the translation of financial knowledge into practical financial capabilities.

Methodology

As a conceptual paper, this study employs a systematic, integrative literature review to synthesize multidisciplinary literature spanning financial literacy, behavioural finance, and educational pedagogy. To ensure transparency and integrity in the material selection process, the literature was searched and evaluated using the literature search strategy and sources, as well as the inclusion and exclusion criteria.

A comprehensive literature search was conducted using major academic databases, including Scopus, Web of Science (WoS), ScienceDirect, and Google Scholar. The search strategy employed a combination of Boolean operators (AND, OR) alongside key terms: ("financial literacy" OR "financial capability") AND ("teaching and learning" OR "pedagogy" OR "experiential learning") AND ("university students" OR "higher education"). Publication dates were primarily restricted to recent literature (2018–2026) to reflect the current digital financial ecosystem, while also accounting for key foundational works in financial education theory.

Inclusion Criteria: (1) Peer-reviewed journal articles and book chapters focusing on financial literacy, financial capability, or higher education pedagogy; (2) Studies examining the relationship between financial knowledge transfer and behavioural outcomes; and (3) Studies focusing on teaching methodologies in higher education institutions. Exclusion Criteria: (1) non-peer-reviewed reviews, opinion pieces, and editorial letters; (2) Studies focusing solely on primary or secondary school students without applicability to the higher education context.

Recommendation

Implement Practical, Contextualized Financial Education Programs

Financial education approaches based solely on traditional information delivery are often insufficient to equip students to manage their finances effectively. While knowledge of concepts such as saving, budgeting, investing, credit, and debt management is important, mastering this knowledge does not necessarily lead to changes in financial behaviour. Therefore, financial education in higher education institutions needs to shift from a predominantly theory-oriented approach to one that is more practical, contextual, and experiential. Programs that link financial concepts to real-life situations have the potential to boost student motivation and help them understand how financial knowledge can be applied in making daily decisions. A study conducted by Luukkanen & Uusitalo (2019) examines the concept of empowerment through the lens of financial empowerment, encompassing both top-down and bottom-up approaches. It proposes two methods for empowerment, which are contextual change and cognitive change, that explore the roles and potential of these approaches in enhancing financial capability among young people. The study proposes a new framework to foster financial capability based on empowerment dimensions, while also offering practical approaches to support and strengthen youth financial capability.

Moreover, the incorporation of dynamic educational instruments, like stock trading simulations, budgeting role-playing activities, and gamified digital platforms, establishes low-risk practice settings (Chock & Chin, 2024; Liu, 2024). The critical gap between cognitive financial literacy and long-term financial capability is bridged by experiential programs, which strengthen financial self-efficacy and internalize prudent habits through continuous cycles of active experimentation and reflective observation (Delgadillo & Lee, 2021; Morris et al., 2022).

Align Curriculum with National Financial Literacy Initiatives

Aligning educational curriculum with national financial literacy initiatives is a strategic move to strengthen students' financial capabilities while supporting the nation's educational and economic goals. This approach ensures that financial education content is relevant, systematic, and aligned with current needs. By integrating elements such as budgeting, savings, investing, debt management, and financial planning into the curriculum, students can develop practical financial knowledge and skills. Digital literacy is also important nowadays to ensure that students are proficient with financial tools and online banking (Patala & Bruce, 2024). This is to ensure that students understand the safe and responsible use of financial technology, including cybersecurity awareness.

Collaborative Efforts

Reliance solely on academic instructors for personal finance education may lead to discrepancies between theoretical knowledge and the rapidly changing dynamics of financial markets (Morris et al., 2022; Sawatzki et al., 2024). Collaboration among educational institutions, government agencies, and the financial industry expands students' access to appropriate financial literacy resources and programs, thereby fostering a generation that is more financially resilient and responsible. Collaboration enables the integration of practical expertise from the financial industry with educational best practices, resulting in more comprehensive financial literacy curricula. The program should focus beyond basic money management to include critical topics such as planning, risk management, and long-term financial outlooks, which are often overlooked in isolated efforts. Zilouchian et al. (2024) suggested implementing professional development through the financial literacy Informational

program for STEM mentors to empower STEM students. Collaborative and cooperative learning approaches empower learners to leverage diverse perspectives, solve problems collectively, and achieve a deeper understanding, which enhances financial literacy outcomes (Rutherford, 2014).

Conclusion

Overall, financial literacy is a crucial element in developing students' capacity to make wise, responsible, and resilient financial decisions. While financial knowledge serves as a vital foundation, educational approaches that focus solely on delivering information and theoretical concepts have proven insufficient to ensure that students can apply that knowledge to real-life situations. Therefore, financial literacy education must be strengthened through more practical, contextual, and experience-oriented teaching and learning approaches.

Integrating activities such as budgeting, case studies, financial decision simulations, personal financial planning, and problem-based learning can help students connect financial concepts with real-life needs. Simultaneously, aligning the curriculum with national financial literacy initiatives and fostering collaboration among educational institutions, government agencies, and industry can expand opportunities for relevant, continuous financial learning. An empowerment-oriented approach is also essential to build not only knowledge but also the confidence, skills, and capacity of students to make financial decisions independently. Consequently, educational institutions should view financial literacy as an integral part of holistic student competency development. Such concerted efforts have the potential to produce a generation that is more financially literate, confident, and prepared to face future financial challenges.

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