

The Role Of Economics and Entrepreneurship Education On Students' Financial Behavior: A Systematic Literature Review

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Abstract: This study aims to synthesize recent empirical evidence on the role of economics, entrepreneurship, and financial education in shaping students' financial behavior, with particular attention to psychological mechanisms and behavioral biases. A systematic literature review was conducted using the PRISMA 2020 framework. Scopus-indexed empirical articles published between 2020 and 2025 were identified and screened according to explicit eligibility criteria. The synthesis focused on educational interventions, financial literacy, financial behavior, self-control, financial self-efficacy, overconfidence, and herding behavior. The review indicates that educational interventions can improve financial knowledge, but behavioral change is not always automatic. Financial behavior is more consistently strengthened when financial literacy is supported by self-control, self-efficacy, locus of control, and awareness of cognitive biases. Contextual factors such as gender, family background, peer influence, and digital environments also shape the effectiveness of education. The review is limited by its reliance on Scopus, the heterogeneity of included studies, and the dominance of cross-sectional designs. This study contributes by integrating economics and entrepreneurship education with behavioral finance mechanisms to explain the knowledge-action gap in students' financial behavior.

Keywords: behavioral biases, economics education, entrepreneurship education, financial behavior, financial literacy

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INTRODUCTION

Students' financial behavior has become a central issue in contemporary higher education discourse. In this review, students' financial behavior refers to the ways in which learners manage, evaluate, and make financial decisions in relation to saving, spending, borrowing, investing, and using digital financial services. Young people, particularly university students, face an increasingly complex financial landscape with a myriad of digital financial products and services. However, they are often ill-equipped with the necessary competencies to navigate this complexity (Yanto et al., 2021). The rising phenomenon of student debt, irresponsible credit card use, and susceptibility to illegal investment schemes and online gambling indicates a significant gap between financial knowledge and actual behavior (Barceló, 2025; Song et al., 2024).

The urgency of this study is particularly relevant in the Indonesian context, considering that Generation Z and millennials dominate the demographic composition and are primary targets of the digital finance industry. Empirical studies show that while students have broad access to financial information through social media and digital platforms, their understanding of fundamental concepts such as compound interest, risk diversification, and inflation remains relatively low (Blay et al., 2024). More problematically, an "overconfidence" phenomenon often emerges; students tend to overestimate their financial abilities, ultimately leading to suboptimal decision-making (Sebastião et al., 2024).

Economics and entrepreneurship education are positioned as strategic instruments to address these issues. This study treats economics education, entrepreneurship education, and financial education as related but distinct educational domains: economics education provides conceptual understanding of resource allocation, entrepreneurship education develops opportunity recognition and risk management, while financial education focuses more directly on personal financial knowledge and decision-making skills. Theoretically, economics education equips students with an understanding of basic resource allocation principles, while entrepreneurship education develops capacities for identifying opportunities and managing risks (Colombelli et al., 2022; Hasan et al., 2024). Nevertheless, the effectiveness of these educational interventions remains debated. Some studies report significant positive impacts (İlbasmış et al., 2025; Sconti et al., 2024), while others find that increased objective knowledge does not always correlate with improved behavior (Johan et al., 2021; Carlson & Eadens, 2023).

At least three research gaps are identified in the literature. First, although previous studies and reviews have examined financial literacy and financial education, limited synthesis has explicitly connected economics and entrepreneurship education with behavioral finance mechanisms such as self-control, financial self-efficacy, overconfidence, and herding behavior. Second, understanding of the mediating mechanisms linking educational interventions to financial behavior outcomes remains limited. Third, discussion of contextual factors moderating educational effectiveness such as gender, socio-economic background, and social environmental influences remains incomplete.

This article aims to address these gaps by conducting a systematic literature review that answers three main questions.

1. How do economics and entrepreneurship education contribute to enhancing financial literacy and financial behavior among university students?
2. What are the psychological and cognitive mechanisms that mediate the relationship between educational interventions and financial behavior?
3. What factors moderate the effectiveness of economics and entrepreneurship education in shaping financial behavior?

By answering these questions, this study is expected to contribute to developing a more nuanced theoretical framework on the role of education in shaping economic behavior, while also providing practical implications for curriculum design in higher education. Therefore, the contribution of this review lies not in claiming that financial education is an unexplored topic, but in clarifying how educational experiences may influence financial behavior through psychological and behavioral mechanisms.

METHOD

This systematic literature review was conducted following the PRISMA 2020 guidelines (Page et al., 2021). This approach was chosen to ensure transparency, reproducibility, and rigor in the process of identifying, selecting, and synthesizing literature.

Eligibility Criteria

Included studies had to meet the following criteria: (1) empirical research articles using quantitative, qualitative, mixed-method, experimental, or quasi-experimental designs; (2) published in Scopus-indexed journals between 2020 and 2025; (3) focused on students, university students, young adults, or education-based samples relevant to financial behavior; (4)

explicitly addressed economics education, entrepreneurship education, financial education, financial literacy, or learning-related interventions connected to financial behavior; (5) written in English, in accordance with the Scopus search filter; and (6) available in full text.

Studies were excluded if they: (1) were conceptual articles, editorials, book reviews, or conference proceedings; (2) focused on populations that were not relevant to education-based financial behavior; (3) discussed financial literacy without any connection to education, learning, students, or behavioral outcomes; (4) lacked full-text access; or (5) did not provide sufficient methodological information for synthesis.

Information Sources and Search Strategy

Literature searches were conducted in the Scopus database, considering its comprehensive coverage and indexing quality. The search was conducted on [insert exact search date], and all retrieved records were exported for screening, eligibility assessment, and synthesis. The search strategy combined keywords representing three main domains.

- Population: "student" OR "university student" OR "college student" OR "young adult" OR "generation Z"
- Intervention: "economic education" OR "entrepreneurship education" OR "financial education" OR "financial literacy education"
- Outcome: "financial behavior" OR "financial behaviour" OR "financial decision-making" OR "investment behavior" OR "saving behavior" OR "overspending" OR "overconfidence" OR "herding behavior"

To ensure a comprehensive and replicable search process, the specific search string applied in the Scopus advanced search engine was:

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TITLE-ABS-KEY ("financial behavior" OR "financial behaviour" OR "behavioral finance" OR "financial decision making" OR "financial literacy" OR "financial education" OR "financial self-efficacy" OR "overconfidence" OR "herding behavior") AND ("economic education" OR "economics education" OR "entrepreneurship education" OR "financial education" OR "financial literacy education" OR "learning strategy" OR "educational intervention") AND ("student" OR "university student" OR "college student" OR "young adult" OR "generation Z"))
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AND PUBYEAR > 2019 AND PUBYEAR < 2026
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AND LIMIT-TO (DOCTYPE, "ar")
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AND LIMIT-TO (LANGUAGE, "English").
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The initial search yielded 487 documents. After applying publication year and document type filters, 312 documents formed the basis of the analysis.

Study Selection Process

The selection process was conducted in four stages according to the PRISMA 2020 protocol, as illustrated in Figure 1. During the identification phase, 14 duplicate or irrelevant documents were removed, leaving 298 unique documents. The initial screening phase based on titles and abstracts excluded 189 irrelevant documents. In the eligibility assessment phase, 109 full texts were reviewed, and 64 were excluded for not explicitly discussing financial behavior, having non-student samples, or lacking full-text access. A total of 45 studies ultimately met all criteria and were included in the qualitative synthesis.

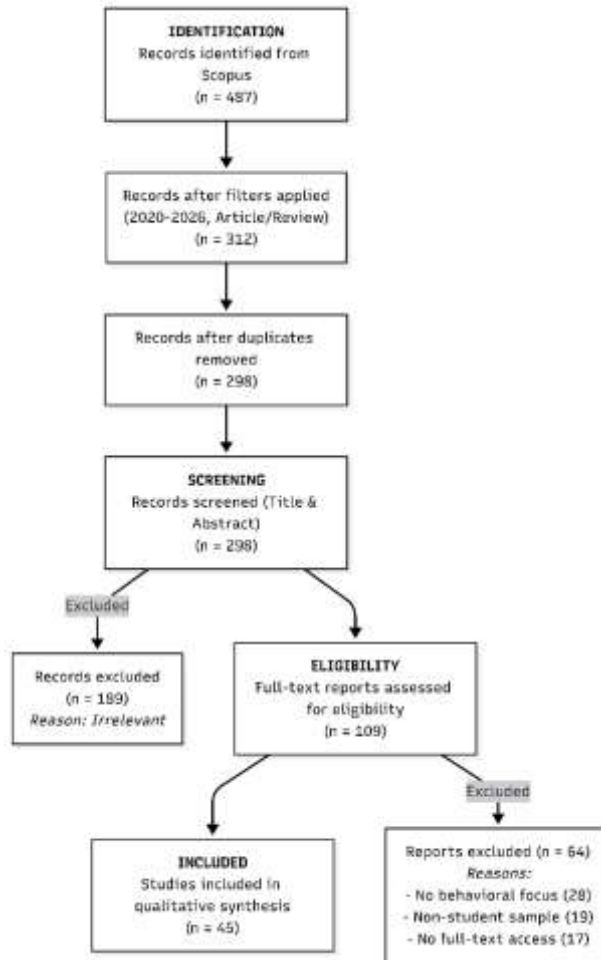


Figure 1. PRISMA 2020 Flow: Diagram of the Study Selection Process

Data Extraction and Synthesis Process

Data extraction was performed using a standardized form capturing information such as authors, year, title, journal, country, sample characteristics, research design, key variables, and findings. The screening and data extraction process was conducted by the first reviewer and independently checked by a second reviewer. Any disagreement was resolved through discussion until consensus was reached. This process was conducted by one researcher and verified by a second to ensure accuracy. Given the heterogeneity across studies, a thematic synthesis approach was chosen to identify cross-study patterns and group findings into conceptual themes.

To ensure the quality and validity of the synthesized literature, a structured quality appraisal was integrated into the eligibility phase. Each study was assessed based on clarity of research design, relevance of population, appropriateness of measurement, transparency of analysis, and direct relevance to the relationship between education and financial behavior. Studies with weak methodological reporting or unclear relevance to the review questions were excluded from the focused synthesis.

RESULTS AND DISCUSSION

Characteristics of Included Studies

Of the 45 studies analyzed, the geographical distribution shows a concentration of research in Asia (n=21), Europe (n=14), North America (n=6), and other regions (n=4). The majority of studies used quantitative designs with cross-sectional surveys (n=38), while the remainder employed experimental or qualitative designs. The primary population focus was undergraduate students from various disciplines.

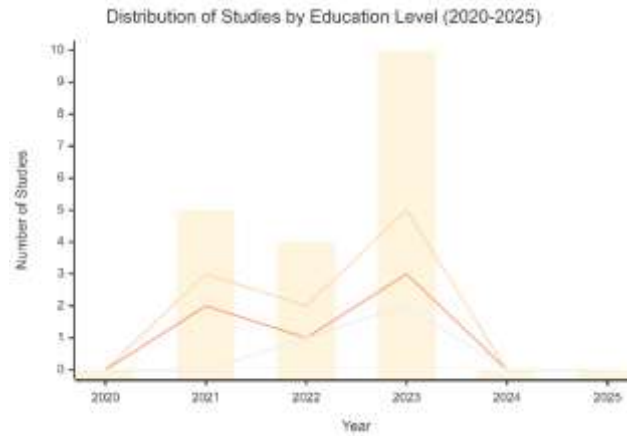


Figure 2. Distribution of Studies by Publication Year and Educational Level

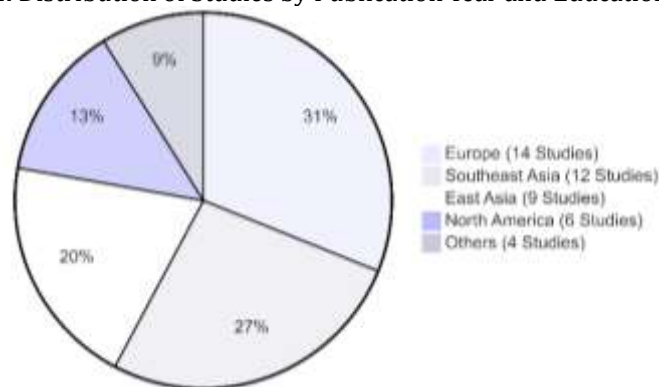


Figure 3. Geographical Distribution Map of Studies

Contribution of Economics and Entrepreneurship Education

Cross-study findings reveal a pattern that is not entirely consistent regarding the effectiveness of formal education. Therefore, the findings should be interpreted as evidence of potential educational influence rather than as conclusive proof of causal effectiveness across all contexts. On one hand, experimental studies provide strong evidence of the positive impact of educational interventions. These studies offer stronger causal evidence than cross-sectional studies because they examine changes after structured interventions rather than merely observing associations among variables. İlbasımış et al. (2025) in Turkey found that structured financial literacy training, although brief, significantly improved objective financial literacy and encouraged more prudent financial behaviors. Similar findings were reported by Sconti et al. (2024) through a Randomized Control Trial in Southern Italy.

On the other hand, non-experimental studies present a more complex picture. Because most non-experimental studies rely on cross-sectional survey data, their findings are better understood as associational patterns rather than causal relationships. Johan et al. (2021) in Indonesia found that a 14-week personal finance course successfully increased financial knowledge but had no impact on attitudes and behavior. Carlson and Eadens (2023) even reported no significant differences in young adults' financial literacy and capability related to the level of financial education they received in high school. These findings indicate a significant knowledge-action gap.

Entrepreneurship education also shows positive contributions. Hasan et al. (2024) found that entrepreneurship education plays an important role in the entrepreneurial readiness of Generation Z students, strengthened by digital business literacy and financial literacy. Colombelli et al. (2022) through a Challenge-Based Learning program demonstrated significant improvements in entrepreneurial mindset and skills, including financial literacy, creativity, and planning.

While a total of 45 articles were ultimately included in the qualitative synthesis, due to space constraints, Table 1 highlights 20 selected representative studies. The 20 studies were selected to illustrate the strongest evidence across intervention-based, cross-sectional, and behavioral-mechanism studies; however, the broader synthesis was based on the full set of 45 included studies. These 20 studies were selected based on explicit criteria, including methodological clarity, direct relevance to education-related financial behavior, inclusion of psychological or cognitive mechanisms, and contribution to answering the review questions.

Table 1. Summary of Selected Representative Studies

No	Author & Year	Country	Research Design	Sample	Main Focus	Main Findings
1	Yanto et al. (2021)	Indonesia	Quantitative SEM	327 university students	Effect of social media and peers	Formal education ↑ knowledge, behavior ← social media & peers (58% variance)
2	Johan et al. (2021)	Indonesia	Quasi-experimental	521 university students	Effect of personal finance course	↑ knowledge, ⇄ attitude & behavior; family socialization is the strongest predictor
4	Sconti et al. (2024)	Italy	RCT	Middle school students	Financial education intervention	↑ decision-making quality, ↑ intertemporal choice consistency
5	Shankar et al. (2022)	India	Quantitative PLS-SEM	271 university students	Gen Z financial well-being	Financial behavior → FWB (+); literacy & fintech ⇄ FWB
6	Sebastião et al. (2024)	Portugal	Quantitative	University & non-students	Literacy bias comparison	Students are more overconfident; gender & field of study are significant predictors
7	Pangestu & Karnadi (2020)	Indonesia	Quantitative	430 university students	Literacy, materialism, savings	Literacy → savings (+); materialism → savings (-)
8	Mudzingiri & Koumba (2021)	South Africa	Experimental	193 university students	Risk preferences & literacy	Literacy helps predict risk preferences more accurately
9	Rahyuda & Candradewi (2023)	Indonesia	Quantitative	179 university students	Crypto investment	Literacy → investment decisions via mediation of perceived risk & herding
10	Aryan et al. (2024)	Jordan	Quantitative SEM	627 millennials	Digital financial literacy	Digital literacy (knowledge, experience, skills) → financial behavior (+)
11	Blaschke (2022)	Germany	Quantitative	High school students	Gender gap & confidence	Confidence moderates gender gap; gap still exists for complex tasks
12	Morris et al. (2022)	Canada	Quantitative SEM	Young adults	Knowledge, confidence, learning	Financial confidence plays a crucial role; learning capacity → confidence
13	Widagdo & Roz (2022)	Indonesia	Quantitative PLS	341 university students	Investment intention	Personality, literacy → intention; financial behavior as a mediator
14	Hasan et al. (2025)	Indonesia	Quantitative SEM-PLS	700 Gen Z	Family education & behavior	Literacy & locus of control mediate the effect of family education
15	Lončar & Svilokos (2025)	Croatia	Quantitative	590 high school students	Financial knowledge	Very low level of knowledge; work

16	Berlinger et al. (2025)	Hungary	Quantitative	229 university students	Behavioral gender gap	experience & income are positive predictors No knowledge & attitude gap; gap exists in opportunity exploration behavior
17	Choung et al. (2023)	South Korea	Quantitative	1615 adults	Digital literacy & well-being	Digital financial literacy → life satisfaction; self-protection vs fraud is the strongest
18	Lone & Bhat (2024)	India	Quantitative SEM	203 lecturers	Literacy, self-efficacy, well-being	Financial self-efficacy mediates the effect of literacy on financial well-being
19	Mireku et al. (2023)	Ghana	Quantitative Logit	3932 university students	Literacy & behavior linkage	Literacy → financial behavior; father's education & family discussion are predictors
20	Pitthan & De Witte (2025)	Belgium	RCT	814 middle school students	Behavioral biases education	Behavioral biases education ↑ bias awareness → ↑ financial literacy

Psychological and Cognitive Mechanisms

Thematic synthesis identified three main mediating mechanisms.

1. **Self-Control and Self-Regulation.** Students with higher self-control tend to exhibit better financial behavior. Alshebami and Aldhyani (2022) found that self-control moderates the relationship between financial literacy and saving behavior. Widiyanto et al. (2022) showed that locus of control mediates the influence of financial literacy and peer groups on consumptive behavior.
2. **Mitigation of Cognitive Biases.** Higher financial literacy correlates with reduced overconfidence bias and herding behavior. Rahyuda and Candradewi (2023) demonstrated that perceived risk and herding behavior mediate the effect of financial literacy on cryptocurrency investment decisions. Pitthan and De Witte (2025) found that education encompassing understanding of heuristics increases bias awareness, which in turn enhances financial literacy.
3. **Financial Self-Efficacy and Confidence.** Morris et al. (2022) found that financial confidence plays a crucial role in explaining financial behavior. Lone and Bhat (2024) demonstrated that financial self-efficacy mediates the effect of financial literacy on financial well-being.

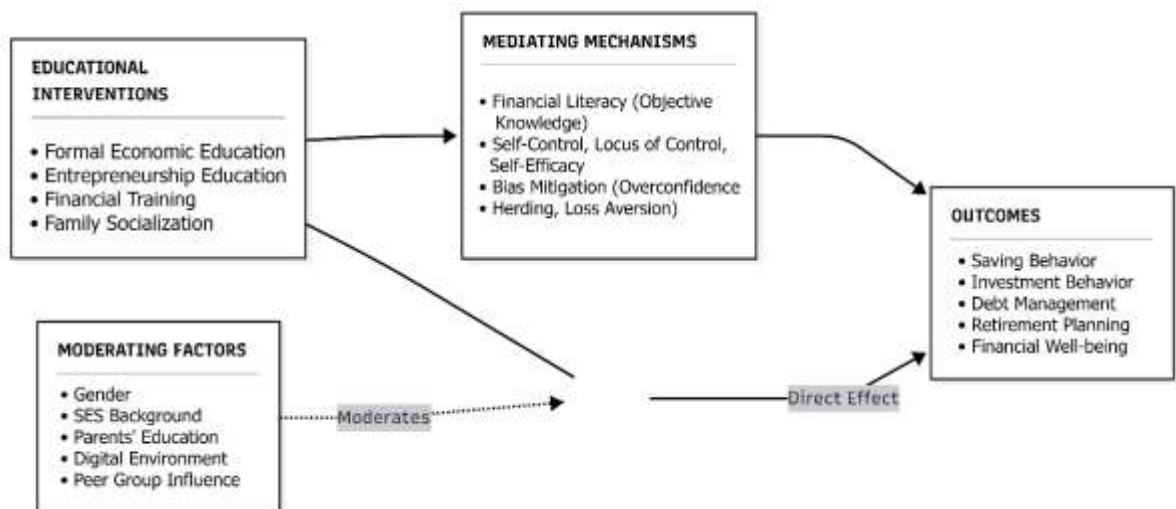


Figure 4. Conceptual Framework of the Relationship between Education and Financial Behavior

Factors Moderating Educational Effectiveness

Gender is the most extensively studied moderating factor. Males consistently exhibit higher financial literacy (Blay et al., 2024), yet females demonstrate more prudent financial behavior (Long et al., 2024). Berlinger et al. (2025) found a persistent behavioral gender gap, where females are less likely to explore advantageous financial opportunities.

Socio-economic background and parental education are also significant. Böhm et al. (2023) in Slovakia found that father's education, family financial background, and part-time work experience are important determinants of financial literacy.

Social and technological environment emerge as new moderating factors. Yanto et al. (2021) showed that social media exposure and peer influence explain 58% of the variance in Indonesian students' financial management behavior. Faturohman et al. (2024) found that social media mediates the relationship between psychological factors and financial well-being.

Table 2. Summary of Moderating Factors in the Education-Financial Behavior Relationship

Moderating Factor	Direction of Influence	Supporting Studies	Implications
Gender (Male)	Higher literacy, but more overconfident	Blay et al. (2024); Sebastião et al. (2024); Blaschke (2022)	Different approaches are needed to increase bias awareness in males
Gender (Female)	Lower literacy, more prudent behavior, less exploration	Long et al. (2024); Berlinger et al. (2025)	Need to strengthen confidence and exposure to investment opportunities
Parents' Education	Significant positive effect on children's literacy	Böhm et al. (2023); Mireku et al. (2023)	Programs need to involve parents and strengthen family socialization
Family Income	Positive effect on access and literacy	Wahab et al. (2024); Blay et al. (2024)	Underprivileged students need additional support
Work Experience	Positive effect on literacy and behavior	Lončar & Svilokos (2025); Blay et al. (2024)	Internships and part-time jobs need to be facilitated
Social Media Exposure	Can be positive or negative depending on the content	Yanto et al. (2021); Faturohman et al. (2024)	Digital literacy is crucial for information filtration
Peer Influence	Significant, especially for speculative investments	Rahyuda & Candradewi (2023); Yanto et al. (2021)	Education needs to strengthen resilience against herding behavior

Socioeconomic background and parental education are also significant factors. Böhm et al. (2023) found that in Slovakia, a father's education, family financial background, and part-time work experience are important determinants of financial literacy. Furthermore, Mireku et al. (2023) in Ghana added that financial discussions at home and a father's educational background serve as predictors of healthy financial behavior. These findings underscore the crucial role of the family as the primary agent of financial socialization.

The social and technological environments have emerged as new moderating factors. Yanto et al. (2021) demonstrated that social media exposure and peer influence account for 58% of the variance in the financial management behavior of Indonesian university students. Faturohman et al. (2024) discovered that social media mediates the relationship between psychological factors and financial well-being. Additionally, digital financial literacy is becoming increasingly crucial in the FinTech era, where an understanding of digital platforms, cybersecurity, and online transactions has become a prerequisite for sound financial behavior (Aryan et al., 2024; Choung et al., 2023).

Discussion

Integrating Findings: From Knowledge to Action

The synthesis of 45 studies suggests that economics, entrepreneurship, and financial education may contribute to shaping students' financial behavior, although the strength of this contribution may vary across study designs, populations, and contextual conditions. However, their effectiveness heavily depends on pedagogical design and contextual factors. The inconsistency between increased knowledge and behavioral change indicates that traditional cognitive models assuming a linear relationship between knowledge and action are inadequate. This finding implies that financial literacy should not be treated as a sufficient condition for behavioral change, because students' financial decisions are also shaped by self-control, confidence, social influence, and cognitive biases. This financial literacy paradox can be explained through the lens of behavioral finance. Humans, including educated students, do not always act as "homo economicus"; they are susceptible to various cognitive biases and emotional influences (Spytska, 2024).

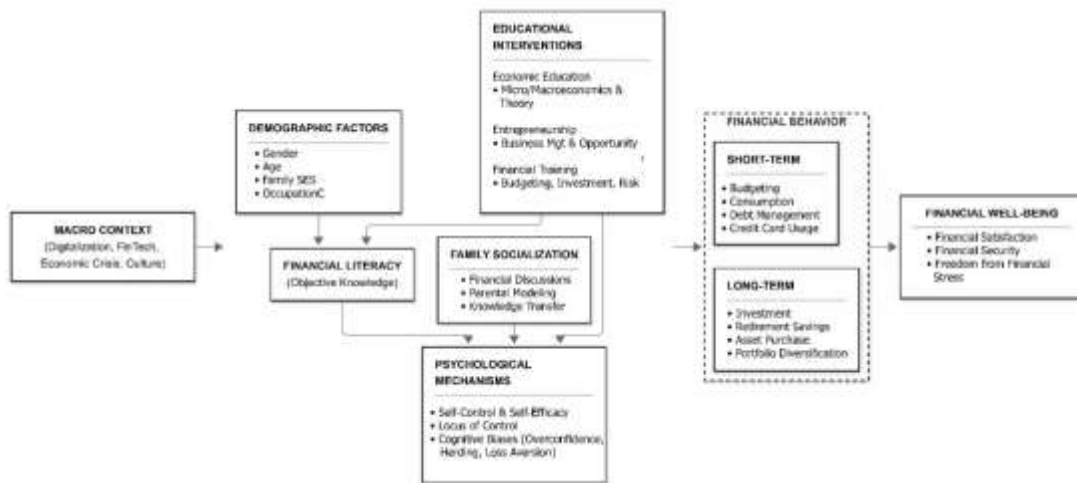


Figure 5. Integrative Conceptual Model of the Role of Education in Students' Financial Behavior

The Mediating Role of Self-Control and Cognitive Biases

Findings on the mediating role of self-control, locus of control, and mitigation of cognitive biases strengthen the argument that effective financial education must go beyond mere knowledge transfer. These mechanisms can be understood as behavioral bridges that translate educational exposure into actual financial decisions, especially in contexts involving saving, investment, debt management, and speculative financial behavior. Education needs to encompass the development of self-regulatory capacities and metacognitive awareness of decision-making biases. As demonstrated by Pitthan and De Witte (2025), learning about behavioral biases can enhance financial literacy through increased awareness. Findings on the role of herding behavior in cryptocurrency investment decisions (Rahyuda & Candradewi, 2023) and panic selling during crises (Lal et al., 2024) underscore the importance of understanding social dynamics in financial behavior.

Implications for Curriculum Development

The findings of this study have direct implications for higher education curriculum design. However, these implications should be framed as curriculum development directions rather than universal policy prescriptions, given the heterogeneity of the evidence base.

Table 3. Practical Implications for Curriculum Development

Curriculum Aspect	Conventional Practice	Recommendations Based on SLR Findings
Content	Focus on economic theory and financial concepts	Integration of behavioral finance, cognitive psychology, and bias awareness

Learning Methods	Lectures, memorization, and written tests	Experiential learning, market simulations, project-based learning, and gamification
Evaluation	Objective knowledge exams	Behavioral assessments, self-reflection, and financial decision portfolios
Family Involvement	Limited to formal activities	Parent collaboration programs, family workshops, and financial communication
Technology Integration	Optional, limited to e-learning	Digital financial literacy, FinTech simulations, and financial data analysis
Gender Aspect	Uniform for all students	Gender-sensitive approach: strengthening confidence in females and bias awareness in males

First, curricula need to integrate experiential learning components through simulations and projects. Second, material on behavioral finance and awareness of cognitive biases must be explicitly included. Third, financial education needs to be designed with gender sensitivity. Fourth, collaboration with families and optimization of digital technology need to be enhanced.

Limitations and Future Research Directions

This review has several limitations, including the dominance of cross-sectional studies limiting causal conclusions, and measurement heterogeneity hindering cross-study comparisons. In addition, the review relied only on the Scopus database, which may have excluded relevant studies indexed in Web of Science, ERIC, ScienceDirect, Google Scholar, or national databases. Furthermore, studies from Africa, Latin America, and the Middle East are underrepresented. The included studies also varied in population characteristics, covering university students, school students, young adults, and several broader educational samples, which limits the comparability of findings. Future research needs to adopt longitudinal and experimental designs, develop standardized instruments, and explore the effectiveness of various educational intervention models in diverse cultural contexts. Future reviews should also provide a complete evidence matrix showing all included studies, exclusion reasons, quality appraisal scores, and the specific review questions addressed by each study.

Table 4. Future Research Agenda

Domain	Research Gap	Future Research Questions	Suggested Methods
Causality	Dominance of cross-sectional studies	What are the long-term effects of educational interventions on financial behavior?	Longitudinal studies, field experiments, RCTs
Measurement	Heterogeneity of instruments	What instruments are valid and reliable across cultures for measuring literacy and behavior?	Cross-cultural validation, Item Response Theory (IRT), scale development
Context	Dominance of studies in Asia and Europe	What are the relationship patterns in Africa, Latin America, and the Middle East?	Cross-country comparative studies
Digitalization	FinTech and new financial behaviors	How does digital literacy moderate the education-behavior relationship in the FinTech era?	Mixed-methods, big data analysis
Specific Interventions	Lack of studies focusing on entrepreneurship education	Which components of entrepreneurship education are most effective in shaping financial behavior?	Quasi-experiments, component analysis
Cognitive Biases	Mitigation mechanisms are largely untested	What types of educational interventions are effective in reducing overconfidence and herding?	RCTs, pre-post test with control group

CONCLUSIONS

This systematic literature review indicates that economics, entrepreneurship, and financial education may play an important role in shaping students' financial behavior, particularly when educational interventions are supported by psychological and behavioral mechanisms. However, their effectiveness is mediated by psychological factors such as self-

control, self-efficacy, and locus of control, and is influenced by cognitive biases including overconfidence and herding behavior. The main findings confirm a knowledge-action gap: increased objective financial literacy does not automatically lead to improved behavior unless accompanied by strengthened self-regulatory capacities and awareness of decision-making biases. However, this conclusion should be interpreted cautiously because the included studies are heterogeneous and many rely on cross-sectional designs that cannot fully establish causal relationships.

Practical implications for higher education include the need for curriculum redesign integrating experiential learning approaches, behavioral finance material, gender-sensitive pedagogical strategies, and collaboration with families along with optimization of digital technology. Future research should adopt longitudinal and experimental designs to test causal relationships, develop standardized instruments, and explore the effectiveness of various educational intervention models across diverse cultural contexts. Thus, the contribution of higher education to students' financial behavior can be strengthened through curriculum designs that integrate conceptual understanding, experiential learning, behavioral finance, digital financial literacy, and reflective decision-making practice.

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