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Mapping Economic Literacy: A Systematic Literature Review and Research Agenda

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Abstract

Economic literacy is a crucial skill for navigating the complexities of the modern economy, yet the understanding of this concept remains fragmented and uneven across various groups in society. This research aims to map economic literacy through a systematic review of 36 articles from the Scopus database published between 1990 and 2025. The methods employed involve systematic stages, ranging from searching and filtering to thematic analysis of the findings. The results suggest that economic literacy is influenced by family education, educator competency, and psychological factors, including self-efficacy. Economic literacy also plays a role as a mediator in shaping economic behaviour and entrepreneurial intention. The conclusion emphasizes the importance of an interdisciplinary approach and the integration of digital literacy in the development of future economic policies and education. This research presents a research agenda and practical recommendations to enhance economic literacy worldwide.

INTRODUCTION

Economic literacy is a crucial competency in modern society, enabling individuals to make informed decisions about personal finance, public policy, and global economic trends (Kardanova et al., 2024; Kustiandi et al., 2024b). Economic literacy is a prerequisite for achieving economic autonomy and playing an active role in a developing society (Welsandt et al., 2024). Educational systems aimed at achieving economic equality among learners must include economic literacy as a core component of education. Despite its importance, research reveals a wide gap in economic understanding among students and adults, leading to poor financial decisions and vulnerability to economic crises (Murniawaty et al., 2024; Welsandt & Abs, 2023). Therefore, economic literacy remains an important issue, even in developed countries; this subject has been taught in formal education or embedded in the curriculum for many years (Welsandt & Abs, 2023; Reinhardt et al., 2021; Carter, 2013). Furthermore, the rapid evolution of financial markets and the digital economy demands a continuous update of the economic education framework (Kardanova et al., 2024; Narmaditya & Sahid, 2025). Addressing these challenges requires a comprehensive assessment of existing research to identify effective strategies for enhancing economic literacy across various populations.

The gap between theoretical economic knowledge and practical application is particularly pronounced in marginalized groups with limited access to quality education (Dekker & Kuchař, 2024). Misleading information and cognitive biases increasingly distort economic decision-making, perpetuating cycles of debt and financial instability (Kustiandi et al., 2024b). Policymakers and educators struggle to design interventions that bridge this gap (Suratno et al., 2021; Grol et al., 2017) because economic literacy encompasses not only basic concepts but also critical thinking about complex socioeconomic systems (Wibowo et al., 2023). Without systematic efforts to map and synthesize existing research, interventions may remain fragmented and ineffective. Therefore, a comprehensive literature review is essential to consolidate insights and guide future research towards evidence-based solutions.

The increasing economic volatility, including spikes in inflation, labour market disruptions, and rising inequality, disproportionately affects economic illiteracy (Lusardi & Mitchell, 2014). Klapper and Lusardi (2020) highlight how low financial literacy exacerbates crises, as many individuals lack

the necessary skills to manage sudden income losses or navigate government aid programs effectively. Additionally, digital financial services and crypto currency introduce new complexities, requiring an updated literacy framework to prevent exploitation and fraud (Financial Conduct Authority, 2022). Without proactive measures, this trend could widen the socioeconomic gap, reinforcing the need for a structured research agenda. Moreover, numerous cases exist of communities being trapped in online loans, which severely exacerbate the state of economic literacy and misunderstanding (Threadgold et al., 2025; Cook et al., 2023). By identifying key knowledge gaps, this research aims to inform policies that enhance economic resilience and equitable access to financial education.

Previous research on economic literacy has explored various dimensions, including measurement tools (Kardanova et al., 2024; Lukiani et al., 2024; Oberrauch et al., 2023), pedagogical approaches (Grol et al., 2017; Cameron & Lim, 2015), gender (Ackermann & Siegfried, 2019), economic behavior (Narmaditya & Sahid, 2025), and demographic gaps (Cakmak et al., 2015). Studies such as the Programme for International Student Assessment (PISA) have compared literacy levels globally, revealing striking regional differences (OECD, 2023). However, most still focus on isolated aspects rather than a holistic framework (Lusardi & Mitchell, 2014). While experimental interventions, such as school-based financial education, show promising effectiveness, their long-term impacts remain unstudied (Kaiser & Menkhof, 2017). This fragmentation highlights the need for a systematic review to synthesize disparate findings and identify consistent trends.

Although extensive research has been conducted, significant gaps remain, particularly in understanding the interactions between cultural context and economic literacy (Hofstede, 2011). Most research originates from high-income countries, leaving low and middle-income countries underrepresented despite facing significant challenges in economic literacy. Furthermore, the rise of behavioural economics calls for renewed attention to the psychological factors influencing economic literacy (Narmaditya & Sahid, 2025). Threadgold et al. (2025) have also examined the role of digital technology in shaping economic perceptions or the effectiveness of gamified learning tools. Addressing these gaps requires an interdisciplinary approach that integrates economics, education, and cognitive science.

This research contributes to the field by synthesizing fragmented previous research into a coherent framework, identifying patterns and contradictions across studies. The main objectives of this research are divided into four research questions: First, what is the current state of research on economic literacy and related fields? Second, what are the diverse conceptualizations and theoretical perspectives that underpin economic literacy research? Third, what are the consequences, mediators, moderators, and outcomes of economic literacy? Fourth, what implications for future research are suggested by our findings?

METHODS

To identify articles relevant to this research, we employed the methodology recommended by Siddaway et al. (2019), a widely used approach in systematic reviews. This method comprises five main steps: scoping, planning, searching, screening, and assessing eligibility, culminating in the presentation of the review results. Additionally, this research also refers to best practices in conducting systematic literature reviews (Snyder, 2019). The literature search was conducted using the Scopus database, a leading resource. The keywords used included “economic literacy”, “literacy of economic”, and other variations, with the search encompassing titles, abstracts, and keywords. The initial search phase yielded 88 articles. No time restrictions were applied, allowing articles published between 1990 and May 2025 to be included. After combining the search results, we eliminated 12 articles that were not written in the English language.

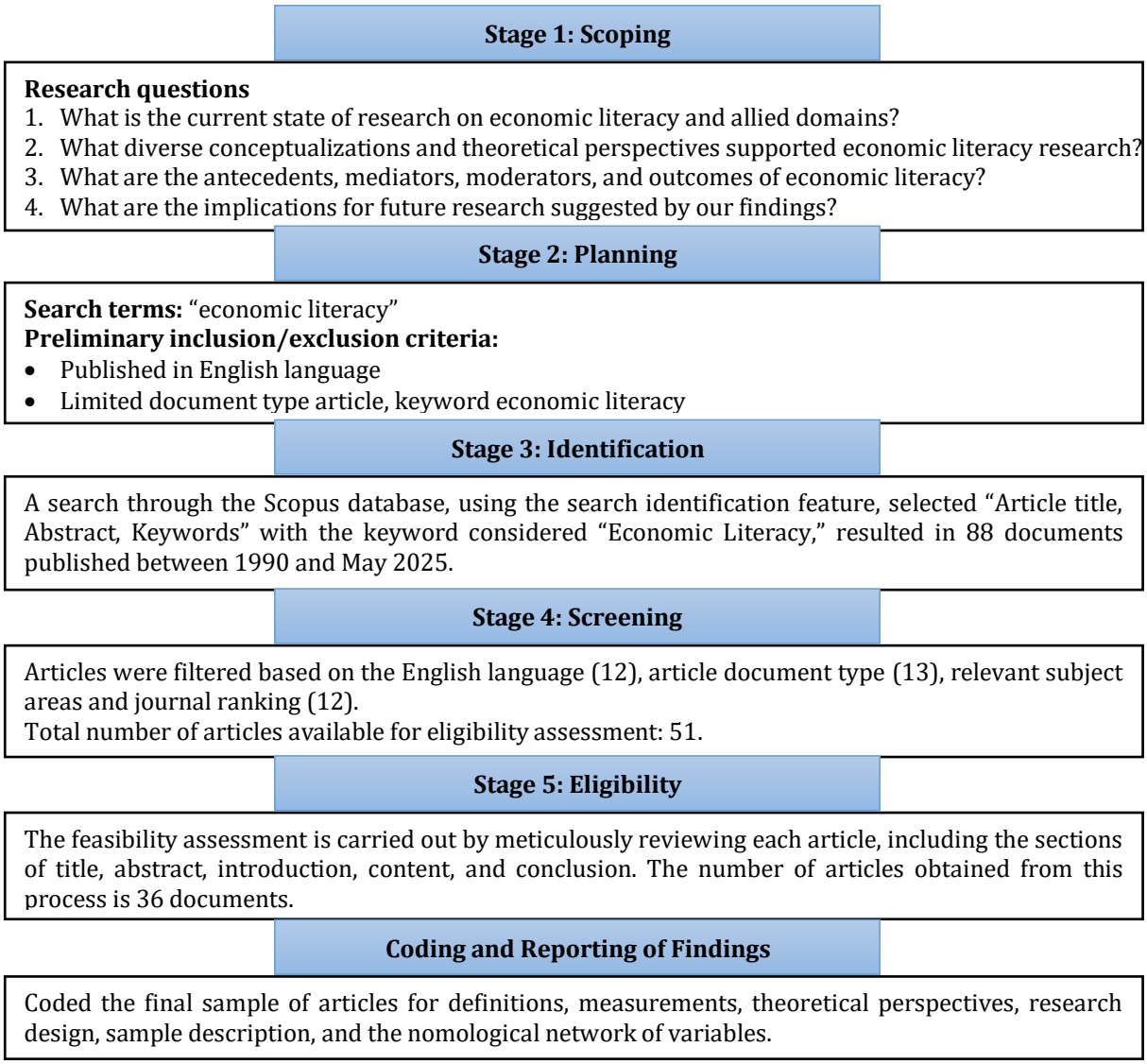

Figure 1. The Process of Writing a Systematic Literature Review

Additionally, 13 books and proceedings were excluded due to insufficient peer-review guarantees. To ensure relevance and quality, we filtered out 12 articles from journals that had been discontinued. Subsequently, we screened the remaining 51 articles by evaluating their titles, abstracts, introductions, and conclusions to determine their suitability for the research scope. From this process, 36 empirical articles that met the criteria were selected.

Table 1. Journal Ranking for Each Article

No	Author	Quartile Journal
1	(Lo Prete, 2018; Welsandt et al., 2024; Grol et al., 2017; Suratno et al., 2021; Fassbender et al., 2022; Oberrauch et al., 2023; Dekker & Kuchař, 2024; Narmaditya et al., 2024)	Q1
2	(Murniawaty et al., 2024; Engelbrecht, 2008; Craig & Raisanen, 2013; Oberrauch & Kaiser, 2020; Wobker et al., 2014; Dutkowsky et al., 2006; Gill & Gratton-Lavoie, 2011; Wood & Doyle, 2002; Gilleskie & Salemi, 2012; Kaiser et al., 2020; Carter, 2013; Wibowo et al., 2023; Reinhardt et al., 2021; Grimes et al., 2021; Lukiani et al., 2024)	Q2
3	(Ackermann & Siegfried, 2019; Martín-Sánchez et al., 2021; Wunder et al., 2009; Welsandt & Abs, 2023; Cameron & Lim, 2015; Kustiandi et al., 2024b; Kc, 2023; Kardanova et al., 2024)	Q3
4	(Cakmak et al., 2015; Fourie & Krugell, 2015; Martins & Veiga, 2020; Narmaditya &	Q4

Sahid, 2025; Kustiandi et al., 2024a)

RESULTS AND DISCUSSION

A. Results

The dominant theoretical approach in economic literacy research

The dominant theoretical framework of economic literacy focuses on the ability to understand and apply basic economic concepts and principles in everyday life (Reinhardt et al., 2021). Economic literacy is broadly defined as the competence to interpret economic events, evaluate alternatives, and make informed decisions based on economic reasoning. This framework distinguishes economic literacy from financial literacy by emphasizing a broader scope that encompasses an understanding of basic economic concepts, such as supply and demand, inflation, competition, and economic relationships at both micro and macro levels (Oberrauch et al., 2023; Fourie & Krugell, 2015). It involves linguistic and argumentative knowledge, as well as an understanding of economic principles, rather than just numerical or financial skills (Welsandt & Abs, 2023).

In addition, economic literacy is viewed as an important skill that empowers individuals to participate effectively in economic contexts, both personally and socially. Economic literacy is closely related to economic rationality, where individuals apply their understanding to solve economic problems, make informed decisions, and participate productively in the economy (Cakmak et al., 2015). This framework also emphasizes the social benefits of economic literacy, as economically informed citizens can more effectively assess significant economic events and contribute to overall economic efficiency and stability. The framework integrates educational standards and pedagogical approaches aimed at enhancing economic understanding from primary education to higher education (Engelbrecht, 2008; Kustiandi et al., 2024a).

Economic literacy measurement

Economic literacy measurement has undergone significant evolution over the past few decades, reflecting changes in the demands placed on economic citizens and advancements in assessment methodologies. Traditionally, economic literacy has been measured using objective tests that assess knowledge of fundamental economic concepts such as supply and demand, inflation, monetary policy, and government spending (Welsandt & Abs, 2023). (Welsandt & Abs, 2023). For example, a survey (Grimes et al., 2021) utilized a quiz developed by organizations such as Gallup, consisting of multiple-choice questions to measure respondents' understanding of basic economic principles. However, these traditional instruments have been criticized for being too focused on factual knowledge and failing to capture broader economic thinking or the ability to apply concepts in real-world contexts (Welsandt & Abs, 2023). This criticism has led to the development of more comprehensive tests that include various question formats, such as concept maps, case studies, and open-ended questions, as seen in classroom-based assessments that measure students' understanding of economic markets through pre- and post-tests with various types of questions (Kaiser et al., 2020; Grol et al., 2017).

A newer approach to measuring economic literacy emphasizes not only cognitive knowledge but also functional competencies, enabling individuals to act efficiently and independently in economic life situations. This broader conceptualization aligns with a functional understanding of literacy, where economic literacy encompasses linguistic and argumentative skills, mathematical and analytical abilities, and the capacity to engage with authentic economic issues in everyday contexts (Welsandt & Abs, 2023). Technological advancements have facilitated the use of computer-based testing environments that incorporate innovative answer formats, such as drag-and-drop items and multimedia content, allowing for the collection of process data and richer insights into how individuals solve economic problems (Kaiser et al., 2020; Welsandt et al., 2024). A systematic review of measurement instruments emphasizes the importance of balancing subject-specific knowledge with learning psychology perspectives, ensuring that tests are authentic and technically sophisticated to reflect better economic decision-making in the real world (Welsandt & Abs, 2023). Overall, economic literacy measurement is shifting towards technology-supported, multidimensional assessments that capture a broader range of competencies beyond mere factual recall.

Table 2. Types of Instruments Used to Measure Economic Literacy

Instrument	Main Context	Studies using this instrument
Test of Economic Literacy	Looking at the level of economic literacy through cognitive	(Ackermann & Siegfried, 2019; Cameron & Lim, 2015; Dutkowsky et al., 2006; Fassbender et al., 2022; Gill & Gratton-Lavoie, 2011; Kaiser et al., 2020; Grimes et al., 2021; Wood & Doyle, 2002: Fourie & Krugell, 2015; Oberrauch & Kaiser, 2020; Craig & Raisanen, 2013; Grol et al., 2017; Reinhardt et al., 2021)
Survey questionnaire	Looking at the level of economic literacy through surveys	(Kc, 2023; Kustiandi et al., 2024a; Kustiandi et al., 2024b; Martins & Veiga, 2020; Murniawaty et al., 2024; Narmaditya & Sahid, 2025; Suratno et al., 2021; Wibowo et al., 2023; Wood & Doyle, 2002)

Samples used in economic literacy research

Empirical research on economic literacy has included various populations distributed across different levels of education, demographics, and geographic locations. Our review findings indicate that the majority of studies (17 studies) used student samples to test their theoretical propositions related to economic literacy. Gill & Gratton-Lavoie (2011) reveal that using their student population provides a relevant group to assess economic knowledge beyond high school, capturing retention and application of economic concepts after secondary education. This enables researchers to investigate how economic literacy evolves after high school and its impact on economic behaviour and decision-making (Narmaditya et al., 2024). Additionally, the student sample provides a practical and accessible population for large-scale data collection using modern survey methods, such as online questionnaires, which can yield strong and generalizable insights into economic literacy and related behaviours (Murniawaty et al., 2024).

Table 3. Samples Used in Economic Literacy Research

Sample Description	Number of Studies	Research Location	Number of Studies
Elementary School Students	1	Swiss	1
Junior High School Students	3	Turkey	1
Senior High School Students	5	New Zealand	1
College Students	17	USA	9
Master's Students	1	England	1
General Public	3	South Africa	2
Employment	2	Germany	7
Head-of-household's	1	Netherland	1
Other	3	Rumania	1
		Indonesia	7
		Portugal	1
		Multiple Location	3
Total	36		36

Discussion

The current state of research on economic literacy and allied domains

The current state of research on economic literacy reveals a diverse understanding of the concept, encompassing knowledge of economic principles, reasoning skills, and the ability to apply economic insights in various contexts. Economic literacy is broadly defined as the ability to identify economic problems, analyze incentives, and consider costs and benefits, ranging from market mechanisms to personal financial decisions (Grol et al., 2017). Economic literacy is one of the key determinants of a person's consumption behaviour (Murniawaty et al., 2024). This broad scope is reflected in educational standards worldwide, which emphasize the importance of teaching basic economic concepts, such as scarcity and market behaviour, to high school students. This is aimed at preparing them for responsible economic citizenship (Grol et al., 2017). The importance of economic literacy is

underlined by its role in enabling individuals to navigate the complex economic environment and make informed decisions.

Research has also highlighted the important role of economic literacy in shaping economic behaviour and decision-making (Dekker & Kuchař, 2024; Grimes et al., 2021; Cakmak et al., 2015). Studies show that economic literacy encompasses not only factual knowledge but also subjective beliefs and confidence in one's ability to respond to economic questions, which in turn influence behaviour (Suratno et al., 2021). This literacy is essential for all citizens, as it equips them to make informed choices about sources of income and consumption alternatives, thus encouraging active participation in the global economy (Potrich & Vieira, 2018). Additionally, economic literacy is linked to entrepreneurial intention, with evidence suggesting that higher economic literacy enhances entrepreneurial alertness and self-efficacy, which in turn mediate the intention to start a business (Wibowo et al., 2023). This relationship highlights the practical implications of economic literacy, extending beyond the academic setting to encompass economic participation and entrepreneurship.

At the higher education level, economic literacy is recognized as a reliable predictor of academic success in economics and an essential skill for understanding and applying fundamental economic concepts, such as supply and demand, inflation, and competition, in everyday life (Reinhardt et al., 2021). The construct of economic literacy also has social benefits, as economically informed citizens are better prepared to assess critical economic events, which can contribute to national economic gains (Reinhardt et al., 2021). However, economic literacy gaps persist, influenced by factors such as prior education, gender, and mother tongue, which affect student performance in micro and macroeconomic knowledge assessments (Martins & Veiga, 2020). These findings suggest that the development of economic literacy requires targeted educational strategies to meet the needs and diverse backgrounds of learners.

The relationship between economic literacy and policy understanding is another important area of research. Studies show that individuals with limited economic knowledge face difficulties in managing financial resources and understanding economic policies, which can adversely affect their quality of life (Engelbrecht, 2008). Economic literacy encompasses not only theoretical knowledge but also practical skills in interpreting and applying economic principles in real-life situations, making it a fundamental issue for both developing and developed countries (Ismail et al., 2019). Despite its importance, economic literacy rates remain low in many populations, underscoring the need for effective educational interventions and curriculum integration to enhance economic understanding and policy comprehension (Dekker & Kuchař, 2024).

International assessments and comparative studies offer valuable insights into the state of global economic literacy. For example, data from the PISA survey revealed that many 15-year-old students worldwide struggle with complex financial issues, suggesting widespread challenges in economic education (Grol et al., 2017). Cross-country analysis suggests that higher education enrolment rates and better PISA test results are positively correlated with national economic literacy rates. At the same time, generous social security systems may reduce incentives for economic awareness (Martins & Veiga, 2020). The findings underscore the importance of contextual factors in shaping economic literacy, suggesting that education policies and reforms should take these dynamics into account to enhance global economic knowledge and literacy.

In summary, current research on economic literacy and related domains presents a comprehensive overview of its definition, significance, determinants, and outcomes. Economic literacy is crucial for informed decision-making, entrepreneurial endeavours, academic achievement, and community well-being. However, challenges remain in achieving widespread economic literacy due to educational disparities and varying socioeconomic contexts. Advanced research and targeted educational policies are needed to address these gaps and promote economic literacy as a vital skill for navigating the complexities of the modern economy.

Conceptualizations and theoretical perspectives supported economic literacy research

Research on economic literacy is supported by diverse conceptualizations that reflect its diverse nature, encompassing the knowledge, skills, and attitudes necessary for effective economic participation. This broad conceptualization encompasses overlapping yet distinct domains, including economic literacy, economic numeracy, financial literacy, and consumer education, each emphasizing

different content and cognitive skills. For example, economic literacy primarily involves linguistic and argumentative knowledge of basic economic concepts, while economic literacy focuses on mathematical and analytical skills applied to economic problems (Welsandt & Abs, 2023). These differences highlight the theoretical perspective that economic literacy is not a monolithic construct but rather a composite of interrelated competencies that together facilitate economic reasoning and decision-making. This layered understanding supports the development of measurement instruments and educational interventions tailored to specific aspects of economic knowledge and skills (Welsandt & Abs, 2023).

Theoretical perspectives supporting economic literacy research also emphasize the cognitive and applied dimensions of economic understanding (Carter, 2013; Kaiser et al., 2020). Economic literacy is often conceptualized as the ability to identify economic problems, analyze incentives, weigh costs and benefits, and apply economic reasoning in a variety of contexts, ranging from market mechanisms to personal finance (Grol et al., 2017). This approach integrates knowledge acquisition with reasoning skills and the transfer of concepts to real-life situations, reflecting a constructivist view of learning in which understanding is built through active engagement with economic phenomena. In addition, economic literacy is distinguished from financial literacy, which is more focused on money management, savings, and investment, while economic literacy encompasses broader economic principles and their application in everyday life (Welsandt & Abs, 2023; Fourie & Krugell, 2015; Grol et al., 2017). This theoretical framework underlines the importance of economic literacy as a tool for informed citizenship and responsible economic behaviour, supporting the capacity of individuals to navigate complex economic environments and public policies.

Another important theoretical perspective in economic literacy research is its role as a predictor of academic and social outcomes. Economic literacy is recognized as a reliable indicator of student success in higher education economics and as an essential skill for understanding fundamental economic concepts such as supply and demand, inflation, and competition (Reinhardt et al., 2021). Beyond individual academic achievement, economic literacy has social implications, as economically informed citizens are better equipped to evaluate critical economic events and contribute to national economic gains (Reinhardt et al., 2021). This perspective is in line with human capital theory, which states that knowledge and skills increase individual productivity and societal well-being. It also supports the argument for integrating economic literacy into educational curricula to encourage personal and collective economic well-being (Lo Prete, 2018). The social dimension of economic literacy thus extends its theoretical scope from individual competence to encompassing its impact on economic development and governance.

Furthermore, economic literacy research incorporates socio-cognitive and behavioural perspectives that link literacy to economic behaviour and decision-making. Economic literacy is not only about factual knowledge but also involves subjective beliefs, beliefs, and rationality in economic decisions (Kustiandi et al., 2024b; Suratno et al., 2021). Studies show that economic literacy influences entrepreneurial intentions by increasing alertness and self-efficacy, which mediate the decision to start a business (Suratno et al., 2021). This behavioural lens highlights the dynamic interactions between knowledge, attitudes, and social contexts, including family Economic Education and peer influence, that shape economic behaviour (Kustiandi et al., 2024b; Suratno et al., 2021). This integration of perspectives reflects a holistic understanding of economic literacy as a cognitive skill and behavioural driver, emphasizing the need for educational strategies that address knowledge, motivation, and social factors simultaneously.

In short, economic literacy research is underpinned by a wide array of conceptualizations and theoretical perspectives that collectively frame it as a complex multidimensional construct. These perspectives range from functional and cognitive definitions that emphasize knowledge and skills to Applied and behavioural frameworks that highlight reasoning, decision-making, and social influence. The theoretical approach also extends to the community level, recognizing the role of economic literacy in academic success, economic participation, and national development. This rich theoretical foundation informs the design of measurement tools, educational programs, and policy initiatives aimed at improving economic literacy in a variety of populations and different contexts.

Antecedents, mediators, moderators, and outcomes of economic literacy

The antecedents of economic literacy are multifaceted, involving individual and environmental factors that contribute to the development of economic knowledge and skills. Family Economic Education plays an important role as a precursor, where students who receive strong economic guidance at home tend to demonstrate higher levels of economic literacy, which further affects their financial decision-making abilities (Kustiandi et al., 2024a). In addition, the competence of lecturers has a significant impact on the economic literacy of students by forming cognitive skills and understanding of economic and financial concepts during formal education (Narmaditya et al., 2024). Peer groups and social interactions also contribute to the formation of economic literacy by providing a social context in which economic behaviors and attitudes are modelled and reinforced (Suratno et al., 2021). This antecedent highlights the importance of formal and informal educational environments in promoting economic literacy.

Economic literacy serves as a mediator in the relationship between various educational inputs and economic behavior (Suratno et al., 2021). For example, economic literacy mediates the effect of lecturer competence on students' economic behavior, suggesting that well-equipped educators enhance students' economic knowledge, which in turn leads to more rational and informed economic decisions (Narmaditya et al., 2024). Similarly, family Economic Education influences economic behavior through the development of economic literacy, suggesting that literacy serves as a critical pathway through which early economic socialization translates into practical financial management and economic rationality (Kustiandi et al., 2024a). This mediating role underscores economic literacy as an important mechanism that transforms educational and social influences into tangible economic outcomes, bridging knowledge acquisition and behavioral application (Suratno et al., 2021; Kustiandi et al., 2024a).

Economic literacy moderators include individual cognitive and psychological factors that influence how economic knowledge is processed and applied. Self-control and self-awareness are important moderators, as they affect an individual's ability to regulate consumption behavior and make rational economic decisions regardless of emotional impulses (Kustiandi et al., 2024a). Furthermore, subjective belief and belief in one's economic knowledge shape how economic literacy translates into behavior, with higher self-efficacy increasing the likelihood of practical application of economic concepts in real-life situations (Suratno et al., 2021). Social Cognitive Theory (SCT) also suggests that environmental factors, such as educator competence and peer influence, interact with individual cognition to moderate the development and impact of economic literacy (Narmaditya et al., 2024). These moderators highlight the complex interplay between personal traits and social context in shaping economic literacy outcomes.

The results of economic literacy extend beyond individual knowledge to include economic behavior, academic success, and social benefits. Economically literate individuals tend to make better financial decisions, avoid debt, and improve their overall well-being, demonstrating the practical value of economic literacy in everyday life (Narmaditya et al., 2024). In an academic context, economic literacy predicts student success in higher education economics by providing a basic understanding of key concepts such as supply and demand, inflation, and competition (Reinhardt et al., 2021). On a broader scale, economically informed citizens contribute to national economic gains by being better prepared to evaluate critical economic events and participate in economic governance (Reinhardt et al., 2021). In addition, economic literacy influences entrepreneurial intentions by increasing alertness and self-efficacy, which are critical to business start-up decisions (Suratno et al., 2021). These results collectively emphasize the importance of economic literacy as a driver of personal and societal economic well-being.

In short, economic literacy is formed by antecedents such as family education, lecturer competence and peer influence while serving as a mediator that links these inputs to economic behavior. Its development and effectiveness are moderated by cognitive factors such as self-control and subjective beliefs, which influence how knowledge is applied. The outcomes of economic literacy are vast, impacting individual financial behavior, Academic Achievement, Entrepreneurial Activity, and community economic participation. This comprehensive framework underscores the dynamic and interconnected nature of economic literacy in the educational, psychological, and social domains.

Implications for future research suggested by our findings

The findings from the collectively reviewed studies point to several important implications for future research in the field of economic literacy. First, there is a clear need to expand the scope of variables studied about economic literacy, particularly by including individual personality traits and broader psychological constructs that can predict entrepreneurial intentions and economic behavior more comprehensively (Narmaditya & Sahid, 2025; Suratno et al., 2021; Kustiandi et al., 2024b). Current studies often focus on limited variables, such as family Economic Education or faculty competence, but future research should adopt a more holistic model, potentially integrating frameworks such as planned behavior theory in full better to understand the motivational and cognitive processes underlying economic literacy. And related results (Suratno et al., 2021). In addition, using mixed methods and stratified random sampling can improve the generalization and representativeness of findings, overcoming limitations noted in existing study designs (Suratno et al., 2021). This approach will allow researchers to capture quantitative trends and qualitative nuances in the development of economic literacy in various populations.

Another significant implication concerns the methodological rigor and design of future studies. Some authors emphasize the importance of improving internal validity through better experimental control (Welsandt et al., 2024), such as applying the matching principle to establish equivalent groups in classroom interventions and incorporating delayed posttest to measure knowledge retention over time rather than relying solely on direct posttest (Grol et al., 2017). In addition, future research should delve deeper into the classroom processes that facilitate the acquisition of economic literacy, including a detailed analysis of student interactions, communication patterns, and the nature of classroom speech, as suggested by frameworks such as ICAP and dialogical teaching models (Grol et al., 2017). Such process-oriented research will complement results-based studies and help identify best practices for teaching economic concepts effectively.

Future research should also address the persistent problem of gender differences in economic literacy and learning outcomes. Although some studies have explored how learning opportunities can reduce the gender gap, the mechanisms behind this effect remain unclear and require further investigation (Ackermann & Siegfried, 2019). Researchers are encouraged to examine how course design, item formats in assessments, and pedagogical strategies can be optimized to balance gender gaps in economic knowledge and competencies (Oberrauch & Kaiser, 2020; Ackermann & Siegfried, 2019). This line of inquiry is critical to promoting equality in economic education and ensuring that all students, regardless of gender, have equal opportunities to develop economic literacy. In addition, extending the range of measures of economic literacy beyond minimal knowledge tests to include reasoning, transfer, and application skills may provide a more nuanced understanding of gender-related differences in economic cognition (Grol et al., 2017; Wobker et al., 2014).

The integration of digital literacy with economic literacy is emerging as another promising avenue for future research. Given the increasing digitalization of the economic environment, studies should explore how digital competencies interact with economic knowledge to influence economic behavior, particularly in the context of entrepreneurship (Narmaditya et al., 2024). Enhancing faculty competence in digital literacy and economics can simultaneously prove critical to preparing students to navigate the complex, technology-driven economic landscape (Narmaditya et al., 2024). In addition, a longitudinal study conducted by Kaiser et al. (2020) and Fassbender et al. (2022) assessed the long-term impact of economic learning on learners' economic understanding and behavior. It is necessary to establish the robustness and generalization of current findings (Gilleskie & Salemi, 2012). Such research can inform curriculum development and policy decisions aimed at improving the outcomes of Economic Education in the educational environment.

Future research needs to consider expanding the conceptualization of economic literacy to include its role in strategic environmental scanning and decision-making in a business context. While tools such as the anatomy of a scanning rubric show potential for integrating economic data analysis into business education, empirical validation with larger samples and control groups is needed to ensure its effectiveness in improving economic literacy (Carter, 2013). The researchers also investigated how economic literacy interacts with other critical competencies, such as ethical reasoning, sociocultural awareness, and sustainability considerations, to prepare students for the various challenges of the

modern economy (Martín-Sánchez et al., 2021; Lukiani et al., 2024). This interdisciplinary approach will enrich the understanding of the practical relevance of economic literacy and support the development of a comprehensive educational framework that answers the needs of the economy and society.

In short, future research on economic literacy should adopt a broader theoretical model, increase methodological rigor, address the gender gap, integrate digital competencies, and broaden the scope of economic literacy to include strategic and ethical dimensions. This directive will help overcome current limitations and deepen our understanding of how economic literacy develops and functions across a range of contexts, ultimately informing more effective educational practices and policies.

CONCLUSION

Economic literacy is a multidimensional construct that includes conceptual knowledge, cognitive skills, as well as affective and social factors that influence individual economic decision-making. The current state of research shows that economic literacy has not been evenly distributed globally and is influenced by various antecedents such as family education, educator competence, and peer influence. Economic literacy also serves as a mediator that bridges educational input with economic behavior and is moderated by psychological factors such as self-efficacy and self-control. Economic literacy positively impacts economic behavior, academic success, entrepreneurial intentions, as well as responsible economic participation. The research also reveals a variety of theoretical perspectives, ranging from constructivism to the theory of human capital and the theory of planned behavior, on which the development of measurement instruments and learning design is based.

Future research is advised to adopt a broader theoretical model, integrating digital literacy, as well as using blended designs and longitudinal studies to evaluate the long-term impact of Economic Education. Based on the findings, it is suggested that educators design a contextual economic literacy curriculum based on real experiences and develop students' critical thinking skills. To policymakers, it is important to expand the access and quality of Economic Education at all levels of education in order to create economically literate and resilient citizens to global challenges. Researchers are also encouraged to explore new dimensions of economic literacy that include ethics, sustainability, and strategic skills in dealing with the dynamics of the digital economy.

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