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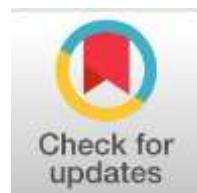
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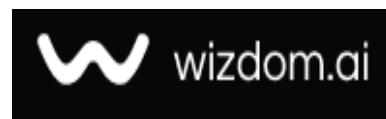
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Innovative Economics Learning for 21st Century Skills

Inovasi Pembelajaran Ekonomi dan Keterampilan Abad 21

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Abstract

General Background: Rapid technological and economic transformation in the Industrial Revolution 4.0 era requires economics education to move beyond theoretical knowledge toward the development of 21st century skills, including critical thinking, communication, collaboration, creativity, digital literacy, and entrepreneurship. **Specific Background:** Recent studies show a shift from teacher-centered instruction to student-centered, experiential, and technology-based learning in economics classrooms, incorporating project-based learning, digital simulations, artificial intelligence tools, internships, and collaborative problem solving. **Knowledge Gap:** However, most prior research focuses on single methods or specific institutional contexts, with limited systematic synthesis integrating diverse innovative approaches, implementation challenges, and institutional readiness. **Aims:** This study conducts a Systematic Literature Review using the PRISMA framework to synthesize peer-reviewed articles published between 2021 and 2025 on innovation in economics learning methods and their relation to 21st century skills development. **Results:** Fourteen selected studies reveal five major categories of innovation: technology-based learning, experiential and project-based learning, collaborative and participatory approaches, entrepreneurship-oriented learning, and self-regulated learning, consistently associated with the development of critical thinking, communication, collaboration, creativity, digital literacy, and entrepreneurial competencies. **Novelty:** This review provides an integrated conceptual mapping of innovative economics learning methods and their pedagogical mechanisms within a unified analytical framework. **Implications:** The findings highlight the need for alignment among instructional design, institutional support, digital infrastructure, and educator readiness to advance integrated, contextually relevant economics education for contemporary professional demands.

Highlights

- Identification of five categories of pedagogical innovation across fourteen peer-reviewed studies.
- Consistent linkage between active learning approaches and development of 4C competencies.
- Emphasis on institutional readiness and digital infrastructure as enabling conditions.

Keywords

Economics Education; Learning Innovation; 21st Century Skills; Digital Literacy; Systematic Literature Review

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I. introduction

Rapid social, economic, and technological changes associated with the Industrial Revolution 4.0 have fundamentally altered the direction of contemporary education, including economics education. Advances in digital technology, automatic, and data-driven decision-making require learning processes that extend beyond the transmission of theoretical knowledge toward the development of transferable competencies. In this context, critical thinking, communication, collaboration, and creativity (4C) have become essential skills for students to navigate complex economic environments and evolving labor market demands. As a result, there has been a noticeable trend in economics education toward a more student-centered model that incorporates technology, collaboration, problem-solving, and real-world learning experiences rather than the conventional teacher-centered model.

New research shows that students' economic knowledge, social skills, and practical abilities may be greatly improved by using new teaching methods including Project-Based Learning, flipped classrooms, and technology-enhanced learning. By getting students involved in the learning process, these methods promote higher-order thinking, learnt autonomy, and deeper engagement. While there is little work on the topic, the most of it is concerned with the efficacy of individual learning models in very particular academic or classroom settings, providing limited insight into how different innovative strategies collectively contribute to 21st century skill development in economics education.

Despite the growing interest in learning innovation, a clear research gap remains in the lack of a systematic synthesis that integrates various innovative learning methods in economics education. Many studies do not provide a comprehensive overview of the types of methods applied, their pedagogical impacts, implementation challenges, or implications for curriculum development. Without such synthesis, educators and institutions may face difficulties in identifying learning innovations that are both effective and contextually appropriate.

In order to fill this void, this study conducts a SLR for synthesizing recent study on innovative learning methods in economics education. By systematically reviewing and analyzing relevant studies, this review aims to map current trends, examine pedagogical mechanisms, and identify strategic directions for creating economics curricula that meet the needs of modern job candidates.

II. Metode

To maintain openness and scientific rigor, this research relied on a SLR strategy that followed the Preferred Reporting Items for (PRISMA) framework. In order to provide a reliable synthesis and reduce selection bias, relevant papers were identified, screened, and included according to the PRISMA framework. To ensure that the review was in accordance with the study goals, the framework served as both a reporting guideline and a systematic analytical tool.

The ScienceDirect database was used for the literature search, with a focus on publications published in peer-reviewed journals between 2021 and 2025. Publication date, economic, business, management, financial, and accounting-related topics, emphasis on creative pedagogical approaches, and proficiency in 21st-century skills were all used as inclusion criteria to guarantee quality and relevance. We didn't include anything that wasn't published in an academic journal, conference proceedings, or had full text that couldn't be accessed. To find commonalities, differences in pedagogy, and conceptual links with innovation in economics education, the chosen papers were subjected to a theme analysis. Minimizing selection bias, clarifying screening methodologies, and enabling researchers to replicate literature search and screening processes are the core aims of PRISMA. Incorporating PRISMA into SLR data analysis helps to guarantee that the reviewed articles are relevant and consistent with the study's objectives.

According to Donthu et al. (2021), PRISMA may be used to provide a framework for systematic and uniform selection. The research topics posed previously were addressed by analyzing 126 peer-reviewed indexed publications published by Elsevier. These publications were chosen based on four characteristics, namely: 1) Journals published in the previous five years (2021-2025), 2) Elsevier peer-reviewed articles listed in Science Direct metadata, 3). Review and research papers published in scholarly journals, 4). With three preset subthemes—Innovation in Economic Learning Methods, economic learning methods, and 21st-century skills—the debate field was confined to business, management, accounting, economics, econometrics, and finance (Cobben et al., 2022; (Jorzik et al., 2024)).

The researchers made sure this study was as scientifically sound as possible by not using any of the following sources: encyclopedias, books, conference abstracts, journal articles, case studies, correspondence, editorials, micro reviews, news, etc. Additionally, in order to uncover themes connected to our study patterns and trends, we performed a thematic analysis on the remaining articles. The results were three sub-themes, which provided the data needed to answer the research questions (Samala et al., 2023).

| No | Theme |
|----|--|
| 1. | Innovation in Economics Teaching Methods |

| | |
|----|----------------------------|
| 2. | Economics Teaching Methods |
| 3. | 21st Century Skills |

Table 1: Three of Subtheme [1]

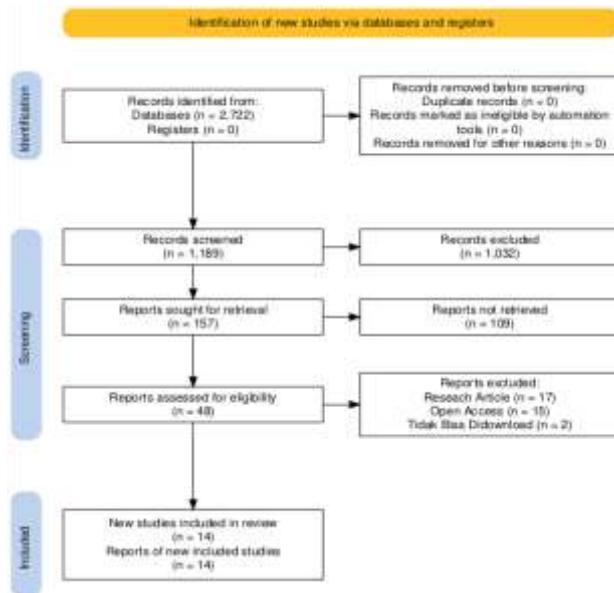


Figure 1. PRISMA flow diagram filtering publications from ScienceDirect metadata [2]

This SLR used the Prisma framework, which provides a framework for each step of screening and identification, to guide the research selection process. There were 2,772 publications found after an initial search in the ScienceDirect database. At the stage for duplication or automated exclusion, no records were eliminated, and no more data were pulled from other sources. The first filtering process reduced the number of entries to 1,189 by concentrating on those having a publication date between 2021 and 2025. After that, we narrow the field of study to only economics, econometrics, and finance in our second round of screening. At this stage, the number of relevant articles in the dataset was decreased to 157. Because they did not pertain to the defined topic of work, the other 1,032 publications were not considered further. Figure 1 is a PRISMA flow diagram that revealed whole selection.

Reports were the third screening procedure. Articles were chosen for this process according to their titles in two groups: "International Journal OF Management of Education" and "Higher Education, Skills, and Work-Based Learning." Out of the 109 publications that were considered, 48 were ultimately removed, reflecting the disparity between the reports that were sought and those that were evaluated. Seventeen reports were deemed not to be research publications, fifteen did not fulfill the criteria for open access, and two could not be downloaded because the publisher did not have a subscription, therefore excluding them from the eligibility evaluation. This research discusses 14 papers from a total of 14 new studies that satisfied all inclusion and were in at SLR..

Strengthen The Methodological Rigor

To strengthen the methodological rigor, this systematic literature review not only applied PRISMA as a reporting guideline but also used it as an analytical framework to ensure consistency between research objectives, article selection, and data synthesis. Each stage of the PRISMA process was designed to progressively narrow the literature toward studies that explicitly address innovative economics learning methods and their contribution to 21st-century skills development.

The chosen studies were all conceptually and methodologically compatible because of the well-defined inclusion and exclusion criteria. In order to synthesize data meaningfully across diverse educational environments and prevent fragmented interpretations, this step was crucial. The research made sure the evidence was reliable and relevant to academia by restricting itself to peer-reviewed journal papers.

In order to ensure that the chosen studies were consistent in both methodology and theme, we used explicit inclusion and exclusion criteria. In addition to reducing data noise, the meticulous filtering ensured that results could be interpreted collectively, rather than in isolation. Restricting the review to peer-reviewed journal articles further strengthened the credibility of evidence, helping ensure that the synthesis rested on research that was both reliable and academically relevant.

III. Result and Discussion

A. Research Questions 1: What innovative methods are specifically designed to develop 21st-century skills in economics students

Outcome of SLR assumed development 21st century ability in economics education is increasingly supported through innovative and multidimensional pedagogical approaches. The analyzed studies demonstrate a clear shift from passive, lecture based instruction toward a learning Environment that actively engages students in problem solving, collaboration, and reflective learning. These instructional innovations are designed not merely as alternative teaching techniques but as integrated learning strategies that align academic content with real world economics challenges.

To facilitate systematic analysis, the innovative learning methods identified in this review can be classified into five main categories : (1) technology-based and digital learning, (2) experimental and project-based learning, (3) collaborative and participatory learning, (4) entrepreneurship-oriented learning, and (5) self-regulated learning. This classification highlights how different instructional approaches contribute to the development of specific competencies while simultaneously supporting a broader framework of 21st century skills in economics education

| Article Title | Author | Innovative Methods Developed |
|--|-----------------------------------|--|
| “Adoption of ChatGPT for students’ learning effectiveness” | (Bhuiyan et al., 2025) | Technological skills and digital literacy, critical thinking also problem solving, creativity as well as innovation. |
| “Aligning entrepreneurial universities’ HEInnovate dimensions with entrepreneurs’ needs: A graduate entrepreneur-centered perspective” | (Patrício & Ferreira, 2023) | Entrepreneurship teaching and learning, preparing and supporting entrepreneurs, digital transformation and capabilities |
| “Analysis of sport management subjects in university Sports Sciences degrees in Spain” | (Vidal-Vilaplana et al., 2023) | Entrepreneurship, sustainability, gender perspective, ICT (information and communication technology), and sports tourism. |
| “Development and validation of the adolescent’s entrepreneurial attributes inventory: A mixed-methods approach” | (Ho et al., 2024) | Innovation, recognizing opportunities, risk-taking tendencies, proactivity, visionary thinking, ethical thinking, communication and collaboration. |
| “Empowering future accountants: The role of self-regulated learning in lifelong success” | (Malan et al., 2025a) | Implementing an integrated SRL program in the accounting curriculum. |
| “How undergraduate students collaborate to address societal Grand Challenges: Evidence from a group assessment module on business and the Sustainable Development Goals” | (Horan et al., 2025a) | Collaborative Learning Based on Global Challenges, Participatory and Integrative Approach in Group Assignments, Use of Participatory Tools and Frameworks in Learning, Project-Based Learning with a Focus on SDGs |
| “Learning by ruling: Use of video games to simulate public economics management” | (Sierra & Rodríguez-Conde, 2023a) | Flexible and Technology-Based Online Learning |
| “Sustainable accounting education through internship. Students’ perception on the internship | (Bunea et al., | (Experiential Learning) |

| | | | |
|--|--------------------------------|---|--|
| partners' role in competences development" | 2025) | | |
| "The change agent teaching model: Educating entrepreneurial leaders to help solve grand societal challenges" | (van Rijnsoever et al., 2023) | (Community-Engaged Learning) | |
| "The effect of online class attendance on academic performance in finance education" | (Martínez-Serna et al., 2024) | Synchronous Learning with Online Direct Interaction | |
| "The effects of personal and educational variables on the entrepreneurial culture of university students" | (Mareque et al., 2025) | Integration of Entrepreneurship Skills Courses | |
| "Tournament rituals and experiential competence development in higher education: A case of a unique conference series" | (Koloszár et al., 2024) | Student Research Conference (SRC) | |
| "Visual thinking and cooperative learning in higher education: HOW does its implementation affect marketing and management disciplines after COVID-19? " | (Maldonado López et al., 2023) | Cooperative Learning with Visual Thinking (VTS) Use of Technology and Visual Media in Learning | |

Table 2. Summary of Innovative Methods and 21st Century Skills Developed [3]

The reviewed studies demonstrate that innovative learning methods enhance not only students' conceptual understanding of economics but also their critical thinking, communication, collaboration, creativity, and digital competencies. These findings reflect a shift from teacher – centered learning models that are more responsive to contemporary economic challenges.

All of these methods are not only aimed at improving theoretical understanding. Still, they are also deliberately designed to capture students along 21st-century ability needed complex, dynamic, and sustainable economic and business environment. The pedagogical transformation from a passive to an active, reflective model is essential to preparing economics students to become agents of change, ready to face the challenges of the 21st century. (Bunea et al., 2025) (Horan et al., 2025). By the analysis of the 14 articles above, several relevant approaches and recommendations that support the development of 21st-century skills can be identified, namely critical thinking, decision making, and sustainability awareness.

Through a pedagogical perspective, innovative methods enhance 21st-century skills through distinct learning mechanisms. Technology-based approaches promote critical thinking and creativity by engaging students in simulation, visualization, and reflective learning processes. Experiential and project-based methods place learners in authentic problem contexts, thereby strengthening problem-solving, decision-making, and sustainability awareness. Meanwhile, collaborative and participatory learning environments foster communication and teamwork skills through social interaction, negotiation, and shared responsibility in completing complex tasks.

The use of AI in classroom instruction environment prepares students for demands of an increasingly automated nowadays economy. Innovation in higher education continues to evolve challenges of 21st century, with focus on developing complex ability, entrepreneurship, digital literacy, also problem-solving. Various innovative methods have been developed, which can be grouped into several main approaches.

First, technology integration and digitization are the backbone of many new methods. (Bhuiyan et al., 2025) researched the use of ChatGPT to improve learning effectiveness, which honed technological skills, critical thinking, and creativity. Similarly, (Sierra & Rodríguez-Conde, 2023b) used video games for public economic management simulations, offering flexible, immersive online learning. A similar approach is seen in the study by (Maldonado López et al., 2023), which combines Visual Thinking with cooperative learning, using visual media to improve understanding in the fields of marketing and management.

Second, approaches based on direct experience and real projects are increasingly prioritized. (Bunea et al., 2025) revealed the urgency of internships for developing sustainable accounting competencies. Meanwhile, (van Rijnsoever et al., 2023) introduce the Change Agent Teaching Model, which directly involves students in solving social challenges with the community. (Koloszár et al., 2024) create authentic competitive experiences through a series of student research conferences, which serve as tournaments to hone practical competencies. Third, collaborative and participatory learning focuses on complex global issues. (Horan et al., 2025b) designed a group assessment module where students collaborate to address Grand Challenges and

Sustainable Development Goals (SDGs). This method emphasizes a participatory and integrative approach, preparing students to work in multidisciplinary teams. Fourth, strengthening entrepreneurship education is a central theme explored from various angles. (Patrício & Ferreira, 2023) seek to align university curricula with the entrepreneurial needs of graduates, emphasizing digital transformation.

(Ho et al., 2024) developed instruments to measure entrepreneurial attributes such as innovation, proactivity, and visionary thinking. (Mareque et al., 2025) examine how the integration of entrepreneurial skills courses influences student entrepreneurial culture. (Vidal-Vilaplana et al., 2023) also find that entrepreneurship is a key subject in sports management, along with ICT and sustainability. Fifth, the development of independent and metacognitive skills also received attention. (Malan et al., 2025a) emphasized the importance of Self-Regulated Learning (SRL) integrated into the curriculum to empower accounting students to become lifelong learners. Finally, the effectiveness of online learning models continues to be evaluated. (Martínez-Serna et al., 2024) examined how participating in synchronous classes affected students' grades, drawing attention to the benefits of face-to-face communication in a digital setting.

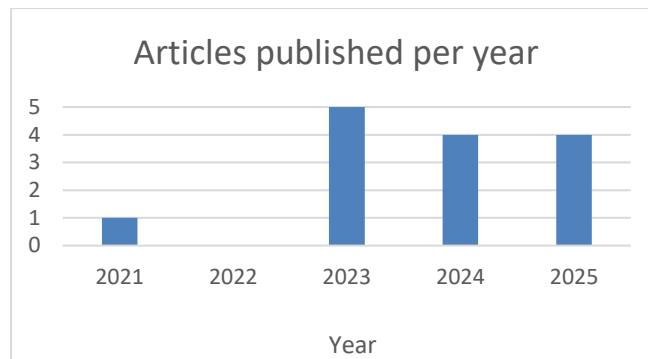


Figure 2. Number Articles Published Per Year [4]

Recent patterns in higher education innovation suggest a gradual shift toward learning models that feel more personal, collaborative, and grounded in real context. Rather than treating technology as the main focus, many approaches position it as a practical enabler that supports active learning and helps students develop competencies relevant to future professional demand. This orientation becomes clearer when looking at publications trend over the 2021 to 2025 period. In 2021, only one relevant article was published, reflecting a relatively low level of research attention at that time. The following years makes a noticeable pause, with no publications recorded, interest increased sharply in 2023, when five articles were published, representing the highest output within the observer period. Although the number declined slightly in 2024 and 2025, publications activity per year. Taken together, this pattern suggests growing and sustained scholarly interest in innovative learning approaches, even if the pace of publications has not followed a linear trajectory.

B. RQ 2 What is the relationship between the application of innovative learning methods and the improvement of critical thinking, communication, collaboration, also creativity

Innovative study approaches, particularly project-based and experiential learning, have been shown to shape how students develop essential skills beyond academic knowledge. Research suggests that these methods create space for students to practice critical thinking, communicate ideas more clearly, work collaboratively, and approach tasks with greater creativity (Ho et al., 2024). At the same time, they support the growth of entrepreneurial qualities such as innovation in problem solving, teamwork through sustained collaboration, and a sense of initiative rooted in proactive and forward-looking thinking (Malan et al., 2025a). When educational programs consistently apply these approaches, the results point to a meaningful connection between innovative teaching strategies and the broader, more holistic development of 21st century competencies.

The findings indicate a direct pedagogical relationship between innovative learning methods and enhancement critical thinking, communication, collaboration, also creativity. Project-based and experiential learning approaches require students to analyze real economics problems, evaluate alternative solutions, and justify their decision, thereby strengthening analytical and creative thinking skills. Collaborative learning activities further support the development of communication and teamwork skills by facilitating structured interaction and share responsibility. Through these learning processes, students are better prepared to engage in professional environments that require effective collaboration and problem solving.

| Author and Publication Year | Applied 21st Century Skill |
|-----------------------------|----------------------------------|
| (Bhuiyan et al., 2025) | Critical thinking and creativity |
| (Patrício & Ferreira, 2023) | Creativity also collaboration |

| | |
|-----------------------------------|--|
| (Vidal-Vilaplana et al., 2023) | Communication |
| (Ho et al., 2024) | Communication, collaboration, and |
| (Malan et al., 2025b) | Critical thinking |
| (Calma et al., 2024) | Critical thinking also collaboration |
| (Horan et al., 2025a) | Collaboration, communication |
| (Sierra & Rodríguez-Conde, 2023a) | Critical thinking and creativity |
| (Bunea et al., 2025) | Critical thinking, collaboration, also communication |
| (van Rijnsoever et al., 2023) | Communication also collaboration |
| (Martínez-Serna et al., 2024) | Collaboration and communication |
| (Mareque et al., 2025) | Creativity, critical thinking, communication, also collaboration |
| (Koloszár et al., 2024) | Critical thinking, communication, also collaboration |
| (Maldonado López et al., 2023) | Creativity, collaboration, also communication |

Table 3: Application of 21st Century Skills in Education [5]

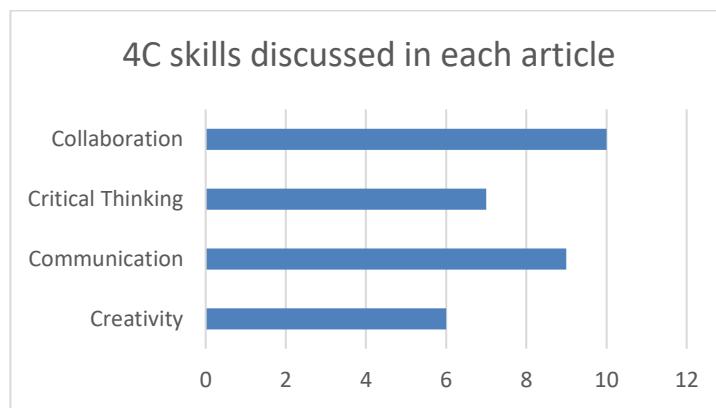


Figure 3. Number of 4C Skills Discussed in Each Article: In this study [6]

The frequent emphasis on collaboration and communication across the reviewed studies points to a bigger change in how learning outcomes are understood in higher education. Rather than treating skills as separate targets to be trained one by one, many approaches now assume that competencies develop together through shared activity and dialogue. This shift feels particularly relevant in economic education, where real problems rarely fit into a single disciplinary box. Graduates are increasingly expected to think critically while engaging with others, explain ideas clearly, and work productively across different perspectives and fields.

Several studies have shown that the two most common and widely used talents are the ability to collaborate and the ability to communicate effectively. The complementary nature of these two abilities has been noted by several scholars, including (van Rijnsoever et al., 2023); (Martínez-Serna et al., 2024); and (Horan et al., 2025b). This suggests that the capacity to communicate well and work in groups are seen as a set of skills that are essential to modern schooling. Meanwhile, critical thinking skills also hold a very significant position in the literature. Study(Bhuiyan et al., 2025) also (Malan et al., 2025a) emphasize its application, often in relation to other skills. These findings reinforce the position of critical thinking as an indispensable cognitive foundation for facing the complexities of 21st-century problems. Creativity, although not mentioned as

frequently as the other three skills, still demonstrates an important role. This skill often appears in configuration with critical thinking, as in the research by (Sierra & Rodríguez-Conde, 2023b), or as part of a broader combination, as studied by (Mareque et al., 2025). This pattern indicates that creativity is often viewed as an output or ability closely related to the analytical capacity of critical thinking. Further interpretation of Figure 3, which visualizes the number of each 4C skill discussed, confirms the trend seen in the table.

The figure most likely shows that collaboration and communication are the two skills with the highest frequency of occurrence, followed respectively by critical thinking and then creativity. This visualization clarifies that the majority of research does not focus on a single skill in isolation, but on the integration of two or more 4C skills. Combinations of three skills, such as those studied by (Bunea et al., 2025); (Koloszár et al., 2024), combining critical thinking, collaboration, also communication, and even complete combination all four by (Mareque et al., 2025) reflect a holistic understanding of the interconnected and mutually reinforcing nature of 21st-century skills.

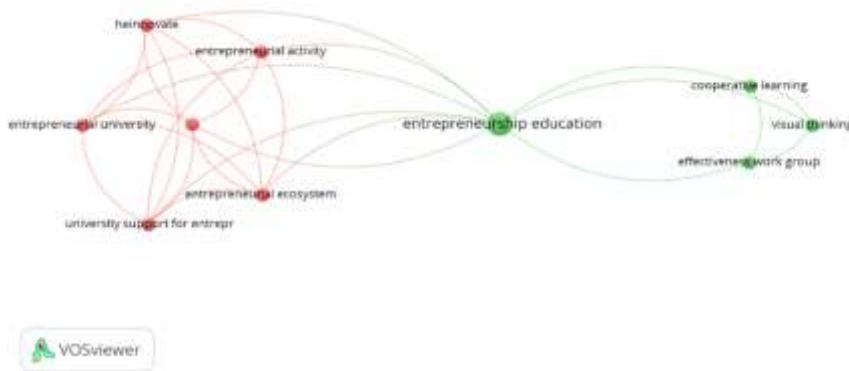


Figure 4. Network Visualization Analysis Using VOS viewer, Research on Higher Education Learning Methods Based on Keyword Co-occurrence [7]

Based on the network visualization from VOS viewer in the figure above, several clusters (groups) of interrelated research topics can be identified in the field of entrepreneurship, particularly context higher education also innovation. Color each node and cluster represents conceptually proximate thematic groups. The red cluster focuses on aspects of entrepreneurship education and its learning methods, such as cooperative learning and visual thinking. The strong connection between these three elements indicates that collaborative also visual study methods which considered fundamental components to effectiveness entrepreneurship education.

The green cluster highlights the environment and systemic support for the growth of entrepreneurship. Its main nodes are the entrepreneurial ecosystem and university support for entrepreneurship. This cluster underlines the importance of the university's role as part of a broader ecosystem in facilitating entrepreneurial activities. The blue cluster consists of fundamental elements that represent outcomes or supporting conditions, such as effective work groups and entrepreneurial activity. This linkage indicates that the effectiveness of work groups directly contributes to the emergence of tangible entrepreneurial activity.

Overall, this network map represents a conceptual framework linking educational approaches (Red Cluster), institutional and system support (Green Cluster), and outcomes and practical implementation (Blue Cluster). The word "neinnovate" located in the center might be an abbreviation or a specific research focus (New Innovation) that acts as a bridge or unifying theme for the three clusters, suggesting that innovation is the central output resulting from the interaction of all these elements. Thus, this diagram illustrates that success in creating innovation and entrepreneurial activities in a university environment depends on the synergistic integration of educational methods, institutional support, and the effectiveness of cooperation.

C. RQ3: How is innovative economics learning integrated with digital literacy and entrepreneurship skills?

The reviewed studies show that innovative economics learning increasingly integrates digital literacy and entrepreneurship as complementary competencies. Digital technologies are used to support data analysis, simulations, and interactive learning, while entrepreneurship-oriented learning encourage initiative, innovations, and value creation. Digital literacy serves as a foundational competence that enables students to apply economics knowledge effectively in technology-driven contexts. When combined with entrepreneurship education, these approaches contribute to the development of adaptive and innovative graduates capable of responding to digital economic challenges.

The integration of innovative learning in the field of economics with digital literacy and entrepreneurship has become a crucial need in the current digital era. The capacity to think critically, solve problems creatively, and effectively manage digital information is all part of digital literacy, which goes beyond just knowing how to utilize electronic gadgets. Enhancing digital capabilities and internalizing entrepreneurial ideals may be achieved via the use of novel ways to economics education, such as cooperative learning as well as visual thinking. (Maldonado López et al., 2023) affirm that visual thinking helps students develop creativity and innovation, which positively correlates with entrepreneurial intention. Furthermore, the integration of digital literacy can also be supported by the use of generative AI like ChatGPT, which has been proven to enhance productivity, learning motivation, and students' reflective skills. Thus, digital technology is positioned not only as a tool but also as a learning

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medium that encourages knowledge-based economic innovation.

Learning to be an entrepreneur in economics requires fluency with digital tools. Participation in SDG-related grand challenge-based initiatives by students enhances their digital literacy, which is important to global entrepreneurial practices, and their collaboration abilities (Horan et al., 2025b). The HEInnovate like “dimensions—Entrepreneurial Teaching and Learning, Preparing and Supporting Entrepreneurs, and Digital Transformation and Capability” stress significance of incorporating digital literacy into the student entrepreneurship ecosystem, which is in line with function to entrepreneurial universities.

Additional successful integration strategies include digital simulation approaches and project-based learning (PjBL). According to (Sierra & Rodríguez-Conde, 2023b), students are more engaged and get a better grasp of the multi-level complexity of economic management when educational games are used in public economics classes. This integration highlights the significance of digital cooperation and communication, in addition to technological concerns. Student research tournaments and other academically-based activities may help develop transferable abilities that entrepreneurs need, such as the ability to communicate effectively, negotiate a fair price, and provide compelling presentations (Koloszár et al., 2024).

A collaborative, tech-based, solution-oriented learning environment should be the goal of integrating creative economics, digital literacy, and entrepreneurship into educational practices. Students may acquire the analytical skills and entrepreneurial spirit necessary to meet the challenges of the modern world via the use of visual thinking techniques, digital simulations, also PBL.

D. RQ4: What factors influence the success of innovative methods in equipping economics learners with 21st-century skills?

The effectiveness of innovative learning methods is influenced by several interrelated factors, including student characteristic, instructional design, institutional support, and technological readiness. Student motivation and Prior learning experiences affect engagement levels, while well-designed experiential activities enhance practical skill development. Institutional support, including adequate infrastructure, policy alignment, and professional development for educators, plays a critical role in facilitating successful implementation. In contrast, limited resources and insufficient technological readiness may constrain the effectiveness of innovative learning approaches.

The success of innovative learning methods made by mixed personal, educational, also environmental elements. From a personal aspect, motivation, age, gender, and learning experience influence students' attitudes towards entrepreneurial culture. (Mareque et al., 2025) affirm that internship experiences and entrepreneurship training are important factors in strengthening an entrepreneurial culture among students. Besides personal factors, formal and non-formal educational variables also have a significant influence. (Bunea et al., 2025) show that internship programs contribute significantly to shaping students' technical and vocational skills, including problem-solving, collaboration, and adaptability. This aligns with experiential learning and project-based learning that place students in real-world work experiences.

Environmental and institutional factors are also very determining. Colleges and universities may do a better job of helping their students become leaders, think critically, and communicate effectively across disciplines if they foster an entrepreneurial atmosphere and collaborative ecosystem via programs like academic contests, industrial mentorship, and company incubators. Research by (Koloszár et al., 2024) on student research tournaments affirms that a collaborative academic ecosystem is a catalyst in the development of 21st-century skills. Furthermore, technological competency (tech competency) is a key factor influencing the effectiveness of innovative methods.

Research on the adoption of ChatGPT shows that digital literacy, transparency in AI use, and students' openness to innovation influence the success rate of technology-based learning. (Martínez-Serna et al., 2024) also add that the active presence of students in synchronous online classes has been proven to increase academic achievement and graduation rates. Thus, the success of innovative methods in equipping 21st-century skills is determined by the synergy of personal factors, practical experiences, institutional support, and digital literacy. These factors complement each other, forming a relevant and holistic learning framework to address global challenges.

The synthesis of outcomes suggests effectiveness innovative studying methods depends to synergy among these factors. The absence or weakness of one dimension such as insufficient institutional support or low digital readiness can significantly reduce the impact of otherwise well-designed pedagogical innovations.

E. RQ5: What is the direction for developing economics learning methods relevant to the demand of 21st-century skills?

The future directions for economic learning outlined in this study emerge directly from recurring pattern identified across the SLR findings for RQ 1 through RQ4. When these findings are read together, a clear picture begins to form. Technology integration, experiential learning, collaboration, and entrepreneurship consistently appear as central 21st century skills. Rather than standing as isolated strategies, these elements tend to reinforce one another within contemporary learning designs

Economics education is increasingly moving toward learning experiences that are adaptive, collaborative, and closely connected to technological and global realities. One approach that captures that shift is the change agent teaching model, which blends sustainable entrepreneurship with social leadership development. (van Rijnsoever et al., 2023) show that this model positions students not simply as learners of economic theory, but as potential agents of social change, capable of responding to complex global challenges. Alongside this, method development is also trending toward the use of digital tools that rely on simulation

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and gamification, allowing students to engage with economic concepts in more interactive and applied ways.

Evidence from (Sierra & Rodríguez-Conde, 2023b) illustrated how serious games in public economics courses help students grasp the practical complexities of economic management while simultaneously strengthening digital literacy. This direction as enhance emphasis to digital transformation within higher education, by under frameworks like HEInnovate. At the same time, future economics learning is increasingly shaped by challenge-based approaches. (Horan et al., 2025b) demonstrate that student participation in projects addressing Working together, sharing information across fields, and using economic theory to complex, real-world issues are all promoted by the Sustainable Development Goals.

Another important direction concerns the relationship between economics education and the world of work. (Bunea et al., 2025) highlight the value of partnership between university and industry through internship, incubation program, and collaborative project. These experiences appear to strengthen students' adaptability, problem-solving abilities, and entrepreneurial mindset, making learning more closely aligned with professional realities.

Taken together, the development of economics learning methods that respond to 21st century demands cannot be summarized into their broad orientation. First, there is a focus on cultivating sustainable leadership and social entrepreneurship. Second, there is increase use of innovative digital technologies, including artificial intelligence gamification, simulation, and open digital resources, to reinforce digital literacy. Third, learning designs are moving toward transdisciplinary collaboration and real world engagement through challenge based learning and partnerships with industry. Combined, these orientations point toward an educational vision that prepares economics graduates not only for academic success, but also for roles as innovators, problem solvers, and socially responsible entrepreneurs in a increasingly digital era.

| No | Development Direction | 21st Century Skills | Author and Year |
|----|---|--|--|
| 1 | Technology and Digital Literacy Integration | Critical thinking, Creativity: | (Bhuiyan et al., 2025) |
| 2 | Collaborative Learning & Global Challenges, | Collaboration, Communication | (Horan et al., 2025b) |
| 3 | Experiential-Based Learning (Experiential Learning) | Critical Thinking, Collaboration | (Bunea et al., 2025) |
| 4 | Entrepreneurship & Social Leadership Learning | Creativity, | (Patrício & Ferreira, 2023); (Ho et al., 2024) |
| 5 | Visual Thinking & Cooperative Learning | Communication, Collaboration, Creativity | (Maldonado López et al., 2023) |
| 6 | Simulation Gamification Learning | Critical thinking and Creativity | (Sierra & Rodríguez-Conde, 2023b); (Koloszár et al., 2024) |

Table 4. Development Directions 21st-Century Skills to Several Higher Education Institutions [8]

IV. Conclusion

This systematic literature review confirms that innovative learning methods are essential for Developing 21st century skills in economics education. The findings highlight a clear shift toward student-centered, experiential, and technology-enhanced learning approaches that support critical thinking, communication, collaboration, creativity, digital literacy, and entrepreneurial competence. Theoretically, this study contributes by synthesizing innovative pedagogical approaches and clarifying the mechanisms through which these methods support skill development.

Practically, the successful implementations of innovative learning depend on alignment among pedagogical design, educator readiness, institutional commitment, and technological infrastructure. Future development of economics education should prioritize the integration of digital technologies, sustainability-oriented learning models, and collaboration with industry and community partners. These strategies are essential for preparing economics graduates who are adaptive, innovative, and capable of addressing complex economic challenges.

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