

# Entrepreneurship Education in the 21st Century: A PRISMA-Based Review of Curriculum Trends and Educational Impact

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## Abstract

The significance of individuals acquiring skills and capabilities that enable them to adapt and uphold their current standard of living and well-being has come to the forefront. Entrepreneurship has been strongly emphasized by the European Commission as a pivotal skill for the future. This underscores the focus of educational systems, both at the school and university levels, on teaching entrepreneurship. A comprehensive review of literature, utilizing PRISMA methodology, examined 27 publications to unveil the interest of countries and educational institutions in entrepreneurship education. The findings of this review suggested Analyze curricula, discover the factors associated with them, and study their impact on students' thinking, Carrying out curricular analysis studies to discover their connection to the concepts of entrepreneurship and Researching the impact of entrepreneurship education on students' and others' self-esteem, This article illuminates the future agenda and upcoming educational trends for entrepreneurship education, as well as how to incorporate it into educational curricula.

**Keywords:** Teaching, Entrepreneurship, Schools, COI, SLR, PRISMA Framework

## Introduction

It has become essential for educational systems to develop curriculum that aligns with the goals of sustainable development and anticipates future job changes. Reports from the World Economic Forum indicate that the future of work will undergo significant transformations, with 83 million existing jobs expected to vanish. As a result, global systems need to emphasize lifelong learning and focus on capacity building to assist students in adapting to future changes. The United Nations has emphasized the importance of training and preparing both teachers and learners, as highlighted on the International Youth Day, observed on July 15th every year.

It is worth noting that 21st-century skills encompass a diverse range of competencies, including critical and creative thinking. These skills rely on the use of non-traditional teaching

methods such as active learning, challenge-based learning, and experiential learning, as well as technology integration (González-Pérez & Ramírez-Montoya, 2022).

Hence, the significance of entrepreneurship education and its integration with other disciplines and subjects becomes apparent. This study aims to conduct a systematic literature review (SLR) that provides valuable insights for future researchers regarding entrepreneurship education, its teaching methodologies, integration into curricula, and its impact on students and teachers. Accordingly, this SLR aims to clarify how entrepreneurship is taught in schools.

*Therefore, the following question will be investigated:*

1. What theories were used in past research?
2. What variables were examined in the past research?
3. What kind of samples were used in the past research?
4. What research methods were utilized the past research?
5. Where geographically were this past research conducted?
6. What is the future agenda recommended based on the past research?

**Materials and Methods**

This SLR aims to clarify how entrepreneurship is taught in schools. Using PRISMA framework (McKenzie et al., 2021) stands for “preferred reporting items for systematic reviews and meta-analysis”.

*Exclusion and Inclusion Criteria*

Table 1

*exclusion and inclusion criteria*

exclusion criteria	inclusion criteria
Research papers that are not related to	Research papers related to entrepreneurship education
Research papers that is not in these subject areas art, Political Science, comp	Research papers published in social science
Any other languages	Research papers published English language.

*Data Sources and Search Approaches*

This search for articles was conducted in February 2023. This review investigates all research papers however, only papers that have been published in 2023 have excludes from this search since 2023 has not ended yet. This search used an exact keywords for instance this phrase was used ( teaching AND entrepreneurship AND schools ) in order to find articles and research papers that has any correlation with the main variables of this review “ in order to find articles and research papers that has any correlation with the main variables of this review “ ( teaching AND entrepreneurship AND schools ) ”. This search was conducted using Scopus data base, Scopus data base was used in this search because it is one of the most famous and common databases used in the academia field. This search has utilized few other criteria for instance, the phrase LIMIT-TO "social science". Moreover, the phrase (LIMIT-TO (LANGUAGE, "English")) ) was used to highlight the language of the articles chosen. To get more specific data certain keywords were selected for instance (LIMIT-TO (EXACTKEYWORD, "Teaching"

Following the Scopus search, 171 articles which were included in this review. Some of the articles were not able to be retrieved nor downloaded N=37, therefore, 63 articles were included in this review. The researcher then applied the manual evaluation in addition to inclusion and exclusion criteria mentioned in table 1. The final articles included in this review were 27 articles, therefore 27articles will be analysed in this review to clarify the Teaching entrepreneurship in schools.

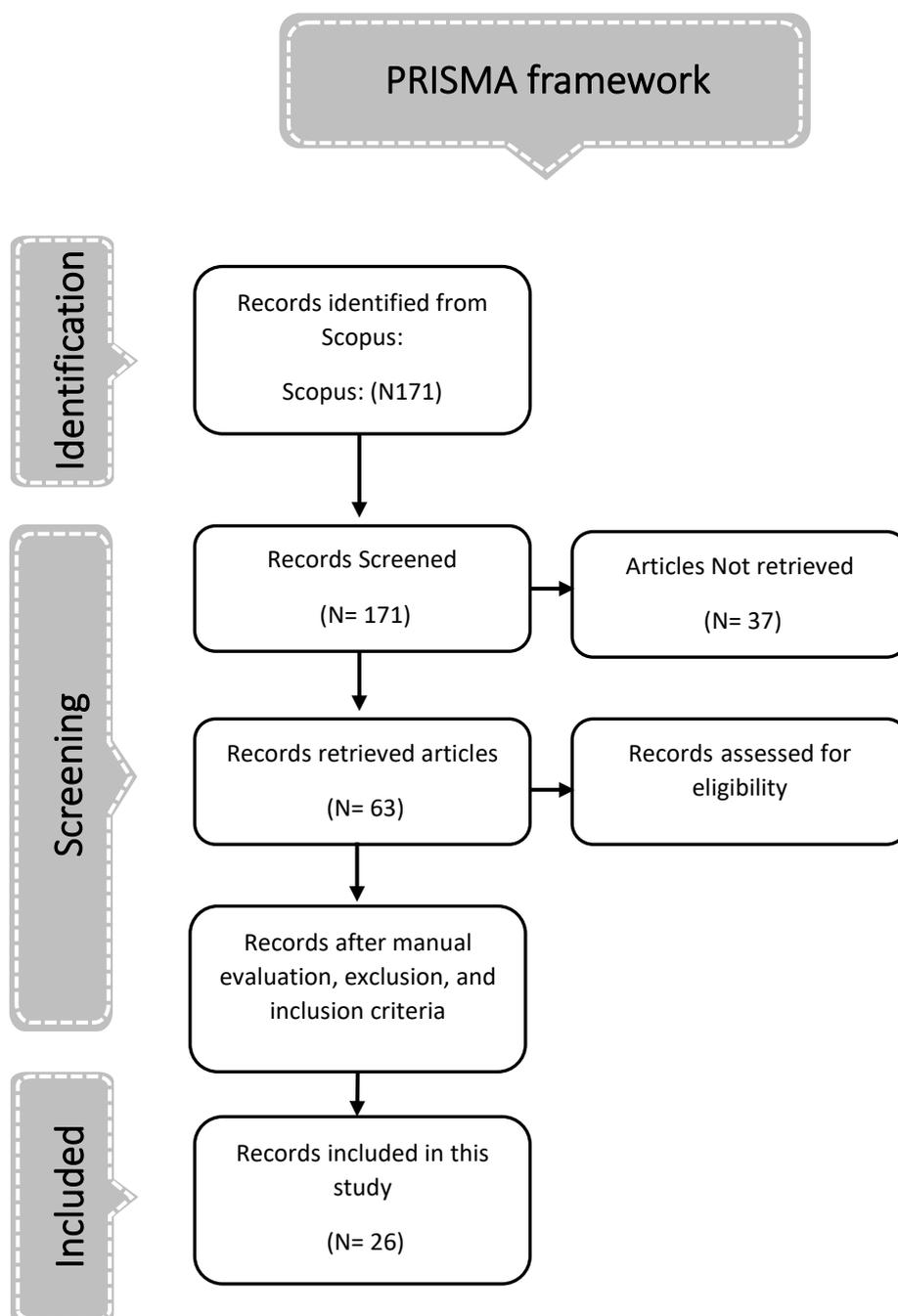


Figure 1: PRISMA Framework

### Result

To achieve the intended research objectives, a critical and analytical analysis was conducted on the selected and examined 31 papers, which were included according to the PRISMA

protocol. The annex presents the articles that were researched and included in this systematic review, to identify the trends and directions of identity in an educational environment.

*The theories from which the studies were based*

Based on the analyzed publications, several theories were utilized, serving as a guiding framework for researchers, teachers, and individuals interested in entrepreneurship. Among the theories used were the ability approach theory, curriculum theory, behavior theory and planned behavior theory, theories of nonprofit organizations and on situated expectancy.

**Table 2**

*Theories of nonprofit organizations and on situated expectancy.*

Paper	theory	Explanation
18A	The ability approach theory	The MTCA (Multidimensional Trait Consistency Analysis) theory is rooted in differential psychology, a field described by Cronbach (1957) as the psychology of individual differences. The objective of differential psychology is to ascertain nature
19C	curriculum theory	This theory focuses on examining and constructing curricula, as well as how they are transferred to teachers and subsequently taught to students
19D	Constructivist theory	This statement asserts that each student reconstructs meaning based on their prior experiences and knowledge
19AA	behavior theory	It highlights the importance of intention as a precursor to behavior, while acknowledging that individuals may not always have full control over all the factors influencing their actual behavior. As a result, the new theory suggests that the occurrence of actual behavior is dependent on the individual's level of control over their actions and the strength of their intentions to carry out that behavior.
20B	The neuroscience theory	According to the neuroscience theory of motivation and learning, the neurotransmitter dopamine in the brain is crucial in predicting rewards.
20C	human capital theory	It encompasses the collective knowledge, talents, skills, abilities, and expertise held by individuals within a population. These resources represent the overall capacity of the people, serving as an asset towards achieving national, state, or specific goal.
20F	entrepreneurship theory	focus on Provide individual and group practice to enhance creative understanding, behavior and critical thinking, to develop students' abilities and encourage them to open their projects in the future.
20J	planned behavior theory	The Theory of Planned Behavior (TPB) is a psychological framework that establishes a connection between beliefs and behavior. According to this theory, an individual's behavioral intentions are shaped by three key factors: attitude, subjective norms, and perceived behavioral control. It posits that behavioral intention serves as the primary driver of human social behavior.
21C	Theories of nonprofit organizations	The work of nonprofit organizations that focus on social entrepreneurship is centered around it

Table 3

*Cognitive theories used in the context of entrepreneurship education*

Explanation	theory	Paper
The MTCA (Multidimensional Trait Consistency Analysis) theory is rooted in differential psychology, a field described by Cronbach (1957) as the psychology of individual differences. The objective of differential psychology is to ascertain nature This theory focuses on examining and constructing curricula, as well as how they are transferred to teachers and subsequently taught to students.	The ability approach theory	18A
	curriculum theory	19C
		19D
This statement asserts that each student reconstructs meaning based on their prior experiences and knowledge	Constructivist theory	
It highlights the importance of intention as a precursor to behavior, while acknowledging that individuals may not always have full control over all the factors influencing their actual behavior. As a result, the new theory suggests that the occurrence of actual behavior is dependent on the individual's level of control over their actions and the strength of their intentions to carry out that behavior.	behavior theory	19AA
According to the neuroscience theory of motivation and learning, the neurotransmitter dopamine in the brain is crucial in predicting rewards.	The neuroscience theory	20B
It encompasses the collective knowledge, talents, skills, abilities, and expertise held by individuals within a population. These resources represent the overall capacity of the people, serving as an asset towards achieving national, state, or specific goal.	human capital theory	20C
focus on Provide individual and group practice to enhance creative understanding, behavior and critical thinking, to develop students' abilities and encourage them to open their projects in the future.	entrepreneurship theory	20F
The Theory of Planned Behavior (TPB) is a psychological framework that establishes a connection between beliefs and behavior. According to this theory, an individual's behavioral intentions are shaped by three key factors: attitude, subjective norms, and perceived behavioral control. It posits that behavioral intention serves as the primary driver of human social behavior.	planned behavior theory	20J
The work of nonprofit organizations that focus on social entrepreneurship is centered around it.	Theories of nonprofit organizations	21C

The previous table summarizes the theories used in scientific papers, and we observe the diversity and multiplicity of these utilized theory's ability approach theory, curriculum theory, Constructivist theory, behavior theory, neuroscience theory, human capital theory, entrepreneurship theory, planned behavior and theories of nonprofit organizations.

*Variables were Examined in the Past Research*

Table 4

*illustrates the variables used in previous studies, summarizing the diversity and variety of these utilized variables*

Paper	Variables
18A	Large Curriculum System & Innovation & Professional Core Competence
18AA	Entrepreneurial competencies; mathematical competencies
19-A	An Entrepreneurship Engineering&
19- C	Entrepreneurship Education & educational subjects
19-D	Entrepreneurship Problem-based learning and Project
19-AA	Business simulation games& entrepreneurial intent
20-B	Creativity & innovation& Entrepreneurship education
20-c	personal soft skills& program(TESL)
20-D	Entrepreneurship& Teachers' Leadership Skills
20-F	Entrepreneurship education Develop leadership competency Business
20-H	leading businesses & education& Data mining
20-J	Attitude, Interest, Teachers, and Peers on Entrepreneurial Career Intention
21-A	Social entrepreneurship education, social entrepreneurship
21-B	entrepreneurship education, entrepreneurship; educators
21-C	social innovation & Social entrepreneurship
21-D	faculty intrapreneurship; entrepreneurial orientation
21-E	Self-perception & leading businesses
21-G	entrepreneurship education& independence & Teacher
21-H	peer power& Entrepreneurship education
21-K	entrepreneurial efficiency & Unintentional entrepreneurship
21-L	Science education, Socio-scientific argumentation, entrepreneurship
21	Entrepreneurship, literacy
22A	entrepreneurship in education; entrepreneurial competences
22B	primary school, entrepreneurial education
22D	teacher training; entrepreneurial skills, 21st century competencies
22C	experiential learning, entrepreneurship, Teaching English

We notice from the previous table that entrepreneurship education is linked to multiple variables for the following reasons, including:

**Diversity:** It encompasses a diverse range of aspects and skills necessary for entrepreneurial success.

**Social and Economic Impact:** It has a significant impact on the economy and society by promoting innovation and creating job opportunities.

Continuous Change and Innovation: Education must keep pace with technological advancements and socio-economic changes.

Personal and Cultural Influence: It is connected to an individual's personality, personal traits, and cultural background.

Entrepreneurship education aims to equip aspiring entrepreneurs with the knowledge, skills, and motivation needed to succeed in the business world and transform innovative ideas into practical realities.

In his book, Jones & Wadhvani (2006) confirms that entrepreneurship is linked to religious values, national culture, wealth and poverty patterns, and a sense of belonging and ethnic identity in countries. The quality of legal and political institutions also has an impact. Therefore, it is not surprising to see the multiple variables in the previous academic works.

*Kind of samples were used in the past research*

Table 4

*Illustrates the samples used in the past studies*

Papers	Samples
18-AA	30 teachers & Nine researchers from mathematics education and entrepreneurship
19-A	14 school- in Greater Cincinnati
19- C	13 teachers from 8 secondary Schools
19-D	Teachers, students, and principals from 2 primary and middle schools
19-AA	285 Undergraduates, graduates, and postgraduate students
20-B	10 case studies from different universities
20-c	36 Year 4 TESL students from a in public university
20-D	secondary school Teacher's
20-F	12 Public and private school students (300) from four locations & School principals and teachers
20-H	First and second year students in the Creative Entrepreneurship Study Program
20-J	328 high school students religious
21-A	402 students from nine leadership courses business
21-B	10 teachers
21-C	web sites
21-D	341 Faculty members who work in institutions of higher education Private and public colleges of business and engineering.
21-E	University deans and directors of faculties and schools of education
21-G	University deans and directors of faculties and schools of education
21-G	35 persons from 23 schools (School leaders and teachers)
21-H	students from over 15 countries and studying in the Faculties of Business and Law, Engineering, Environment and Computing
21-K	19 university teachers who are not entrepreneurs working on campus
21-L	40 Middle school students
21	Entrepreneurship, literacy
22A	entrepreneurship in education; entrepreneurial competences
22D	591) was collected from class teacher and subject matter teacher students studying an introductory course in educational psychology
22C	701 VHS students and graduates

We notice the diversity of samples used in the studies. Some studies had students as their sample, while others had teachers, and some included students studying Business Administration and Mathematics. Furthermore, one of these studies had websites as its sample. The variation in samples is due to differences in the research objectives and the gaps they aim to address, as (Ben-Zvi, et al, 2015) emphasizes, it is necessary for the sample to be representative of the study population and diverse.

*Research methods were utilized the past research*

Table 5

*Illustrates the methods used in the previous research*

Papers	methods
18-A	Descriptive method
18-AA	educational design(action research
19- C	Analytical descriptive study
19-D	Qualitative Approach (Case Study)
19-AA	Descriptive method
20-c	Mixed curriculum
20-D	Mixed Method
20-F	Mixed Method
20-H	Quantitative method
20-J	Quantitative method
21-A	Quantitative method
21-B	Qualitative approach
21-C	Descriptive method / analytical study
21-D	Quantitative method
21-E	Quantitative method
21-G	Qualitative approach
21-H	Qualitative approach
21-K	Qualitative approach
21-L	Quantitative method Semi-experimental design
21	Mixed method
22A	Quantitative method
22B	Mixed method
22D	Quantitative method
22C	Quantitative method

Through the table, we observe the diversity of research methodologies used, ranging from quantitative to qualitative approaches. Additionally, there are studies that employed a mixed or hybrid methodology, J. Creswell(2009) emphasizes in his book that before choosing between quantitative, qualitative, or mixed methods, the researcher should first determine the timing strategy for data collection (concurrent or sequential) and specify the priority and weight given to each method. Additionally, the researcher should identify the theoretical lens or frameworks that will guide the study. This means having a specific theoretical perspective in mind before selecting the research approach. The theoretical lens can be from the social sciences or a specific framework relevant to the research area. Having a theoretical perspective helps guide the research, shape research questions, guide data collection and analysis, and enhance the understanding of the study's findings. These preparatory stages, including determining the timing, priority, and theoretical lens, contribute to defining the

direction of the study and ensure the achievement of its objectives more effectively. They also help in making the research process more organized, logical, and grounded on strong foundations.

### **Conclusion**

Governments worldwide are striving to enhance the preparedness of their institutions and citizens for the future. Their aim is to achieve sustainable growth in all sectors and to be well-prepared for any future crises that may impede the achievement of their objectives. One such recent crisis was the COVID-19 pandemic, which the World Bank has described as the most severe crisis the world has faced since World War II. It has resulted in increased poverty rates, setbacks in poverty alleviation efforts, hindered developmental plans, and widened the gap in people's lives, thereby intensifying the competition to be future-ready.

### **References**

- Albankaldawli. (2023). *COVID-19 to plunge global economy into worst recession since World War II*. Albankaldawli. <https://www.albankaldawli.org>
- European Commission. (2023). *Youth entrepreneurship education and skills*. <https://commission.europa.eu>
- Ben-Zvi, D., Bakker, A., & Makar, K. (2015). Learning to reason from samples. *Educational Studies in Mathematics*, 88(3), 291–303. <https://doi.org/10.1007/s10649-015-9593-3>
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). SAGE Publications.
- González-Pérez, L. I., & Ramírez-Montoya, M. S. (2022). Components of Education 4.0 in 21st century skills frameworks: Systematic review. *Sustainability*, 14(3), 1493. <https://doi.org/10.3390/su14031493>
- Jones, G., & Wadhvani, D. C. (2006). Entrepreneurship and business history: Renewing the research agenda. *ResearchGate*. <https://www.researchgate.net>
- Miles, A. (2007). *Research methods and strategies workshop: A taxonomy of research gaps: Identifying and defining the seven research gap*. ResearchGate. <https://www.researchgate.net>