Scientific Production on Entrepreneurial Skills in Young Students: Bibliometric Analysis

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Abstracts

Entrepreneurship is considered a key element for economic and social development, requiring cognitive, attitudinal, and procedural competencies for its realization. This study focuses on a documentary review aimed at answering the following questions: How is research on entrepreneurial capabilities approached in different countries? What is the volume of scientific production on this topic? In light of this, the present work is developed within the inclusion criteria: publications between 2012 and 2022, various types of documents, written in English, and included in the SCOPUS database. To conduct the analysis, a combination of tools such as VOSviewer, Biblioshiny, and Excel was used. These tools allowed for the identification of clusters, co-occurrence frequencies, and network nodes. Based on this, the behavior of authors, countries, journals, and the evolution of the topic over time were examined. The results reveal that the United States is the leading country in publishing research on entrepreneurship. There is an increase in scientific production related to this topic, with the majority of publications concentrated in a limited number of journals (53). Limited collaboration among authors and institutions is also evident. The co-authorship network is divided into 47 clusters, with weak grouping among them.

Keywords: Capacities; skills; entrepreneurs; business management.

Introduction

Within the framework of the social, political, and economic dynamics of nations, entrepreneurship has been recognized as a fundamental driver of innovation, economic development, and societal progress. This recognition stems from its role in creating employment opportunities and fostering the growth of micro and small enterprises (Mayer et al., 2020; Guachimbosa et al., 2019). To embark on a productive project in the challenging realm of entrepreneurship, individuals must possess specific competencies, traits, characteristics, and attitudes. These attributes enable not only the identification of business opportunities but also the organization and utilization of essential elements and resources, including knowledge,

technology, management skills, and capital, in the operations of the enterprise (Hidalgo, 2014; Sandoval et al., 2020). Such capabilities are pivotal in the successful establishment and sustainability of entrepreneurial ventures over time.

In this context, young individuals have become the focal point of attention for public policy makers and society at large due to their unique knowledge, skills, and aptitudes, such as motivation, creativity, low aversion to risk, proficiency in social networking, and competitiveness. These attributes make them instrumental in materializing entrepreneurial initiatives and contributing to the societal dimension of entrepreneurship (Varela and Arango, 2022). Thus, it is imperative to harness the qualities of this demographic segment for the creation of new employment opportunities, fostering innovation, and driving economic growth (Fuentes and Sánchez, 2010). Moreover, this presents an opportunity for professional, occupational, and social development. In other words, the entrepreneurial capacities (cognitive, attitudinal, and procedural) of young individuals have far-reaching implications for their quality of life, stability, and security across various domains, particularly within their own lives and within their communities. They serve as catalysts in the generation of new jobs, consequently contributing to local, regional, and even national economic expansion.

This is why the academic community has taken a keen interest in this reality, and studies encompass various topics related to entrepreneurial dynamics, as well as analyses and strategies for entrepreneurial activities that have notably contributed to enabling decision-makers to implement measures that promote the creation of businesses and the encouragement of new entrepreneurs. Consequently, a bibliometric study was conducted on scientific research published regarding entrepreneurship, particularly focusing on the cognitive, attitudinal, and procedural competencies and skills of young entrepreneurs. It is anticipated that the findings will contribute to future research and serve as a guide for identifying practices and plans that have been employed for the development and enhancement of these competencies. Scientific articles offer a broader perspective on the subject matter. Therefore, this work aims to address the following questions: How does research in different countries approach entrepreneurial capacities? What is the volume of scientific production, broken down by country of origin, year, authors, and type of publication, concerning entrepreneurial capacities?

Theoretical Framework

Understanding entrepreneurship begins with defining and grasping the term, which various institutions and individuals have refined over time, as the concept of this word has always been part of human action (Gómez et al., 2019). The Royal Spanish Academy (2018, n.d.) specifies it as "undertaking and commencing a task, a business, an endeavor, especially if it involves difficulty or danger." Thus, based on this definition, entrepreneurship is linked to motivation, taking action when an individual faces difficulties and has few solutions at hand. Today, this expression encompasses the attitude and aptitude of any person or group that decides to embark on a new project, seizing opportunities and putting their ideas into practice (Borrayo, 2019). This implies that the individual initiates or decides to bring their concepts into reality through effort, uncertainty, and risk, but also with results and satisfactions that, in some way, contribute to a

good or service that others require. At the same time, they reap benefits that serve as compensation for the provided utility (Gutiérrez et al., 2017). In other words, entrepreneurship is not solely related to business or the creation of companies; it is associated with all areas of personal and social development.

In an economic sense, the concept of entrepreneurship resembles a person who discovers and creates a new business model, driven by various motivations (Pico et al., 2017), with the intention of significantly improving the socio-economic development of a region by leveraging diverse skills (Borja et al., 2020; Suárez et al., 2017). In other words, launching an entrepreneurial venture requires relevant motivations, strengths, and knowledge about the business to contribute to society by generating new job opportunities and economic growth through the income of those benefiting from the jobs. Furthermore, entrepreneurship is not merely having an idea and putting it into action. Entrepreneurship is characterized as a complex and chaotic process (Neck and Greene, 2011) that demands passion, enthusiasm, and determination, as well as investment of resources, whether it be money, time, or effort (Borrayo, 2019). Likewise, it involves studying the why, when, and how of opportunity creation, recognition, and exploitation (Szirmai et al., 2011). This means a continuous analysis of the benefits and risks of the market and the business, aiming to gather critical information about the context for present and future decision-making that may either favor or hinder the entrepreneurial project.

On the other hand, some authors argue that entrepreneurship involves starting something new in an individual's life from a very young age. Young entrepreneurs have had to embark on this journey due to sociodemographic and labor-related factors in their context (Castiblanco, 2013). In many instances, entrepreneurship emerges as an option in response to difficulties in finding employment and even in meeting family responsibilities. Furthermore, changes in the job market and the desire to carve out one's own future are among the determinants driving young people to seek personal independence and professional self-fulfillment (Franke and Lüthe, 2003), in addition to being an opportunity for personal development. It is worth clarifying that starting a business at a young age goes beyond teaching how to set up an economic activity. Nurturing entrepreneurship in children and young people helps promote characteristics such as creativity, initiative, assertiveness, responsibility, the ability to face risks, autonomy, positive thinking, and, in general, the ability to overcome life's challenges (Neira, 2013). Because entrepreneurship also entails seeking alternatives for difficult moments, including the possibility of failure when problems cannot be overcome along the way. Thus, young entrepreneurs become key players in social and economic development by harnessing their own abilities, knowledge, and values, making them competent within their environment.

In line with the above, entrepreneurs strengthen their attitudes and capacities necessary to develop new projects that respond to the innovative needs of their surroundings. Entrepreneurial capabilities enable the execution of projects of any kind and provide timely responses to market needs. As stated by the European Commission (2016), entrepreneurship is a competence that involves attitudes, skills, and knowledge enabling the transformation of ideas into action. Consequently, entrepreneurs must be capable of developing, reinforcing, and applying these competencies with the aim of adapting promptly to market changes. Therefore, if entrepreneurship allows for the transformation of ideas into action, one must also be trained for

this competence, understood as "the total ability of the entrepreneur to perform their role successfully, encompassing personality traits, skills, and knowledge" (Man et al., 2002, p. 124). Thus, it can be established that entrepreneurial competencies are grounded in the skills individuals possess to identify opportunities and, from there, take actions to realize them in line with their set objectives. This recognition does not overlook the importance of creating the necessary conditions to achieve such goals, as well as acknowledging the attitudes, ideals, interests, capacities, and knowledge unique to each entrepreneur.

Hence, cognitive, procedural, and attitudinal capacities play an essential role in the entrepreneur's journey, not only in initiating an economic activity but, more importantly, in sustaining it over time. The first capacity focuses on the general knowledge and insights an entrepreneur must possess; the second pertains to the know-how, practical skills, and concrete actions required to achieve business goals; and the third is related to knowing how to be, implementing and utilizing knowledge and practices to align with the company's objectives (Tobón, 2006). It is suggested that attitudes, knowledge, and skills are developed and strengthened through experiences and practices of those who choose to embark on entrepreneurship (Gómez et al., 2017), aiming to contribute to decision-making, the implementation of resources, and ideas that enable the improvement and strengthening of the business in the present and future.

Methodology

The search was conducted following the methodology proposed by Kart and Kart (2021), as it was deemed suitable for addressing the research questions that prompted this study. Following the proposal of Castillo-Paredes et al. (2022), the following methodological phases were carried out to achieve the established objectives. These phases are described in detail in Table 1:

Table 1 Methodological Phases

Phases	Activities	Outcome
1	Identification of keywords.	Selection of relevant keywords.
2	Search and selection of studies.	Thorough search in academic databases applying inclusion and exclusion criteria.
3	Data extraction.	Structured format for extracting information.
4	Data analysis.	Quantitative analysis of the extracted data.
5	Interpretation of results.	Comparison of objectives against the results.
6	Reporting and presentation of results.	Report following scientific publication guidelines.

Note: Phases developed by the authors.

The material for analysis consisted of 1653 documents obtained as a result of applying the search and exclusion criteria. During the initial phase of the process, a search was conducted in the Scopus database using the combinations "entrepreneurial skills" OR "entrepreneurial capacities" OR "entrepreneurship skills" OR "entrepreneurship capacities" OR "cognitive skills in entrepreneurship" OR "attitude skills in entrepreneurship." Articles, conference papers, book chapters, and reports published in English were considered, and the search period extended from January 2012 to December 2022. Furthermore, a data collection structure was established to

extract key information from the selected studies, including the country of origin, year of publication, authors, and publication type.

The collected information was exported in CSV format for use in VOSviewer (version 1.6.19) and Biblioshiny, tools that enable network creation and bibliometric analysis. Biblioshiny is an open-source tool that facilitates various bibliometric-related activities (Van Eck and Waltman, 2010). In the VOSviewer program, a co-occurrence analysis was conducted to identify nodes within the network, with particular attention to centrality and power measures. For this analysis, link weight, linkage, and total link strength attributes were used.

Frequencies and percentages were calculated for the following elements: document type, country of origin of the research or study, publication year, and cited bibliographic resources. Microsoft Excel® was employed for data recording and analysis.

Results and Discussion

The period from January 2012 to December 2022 exhibited a steady increase in scientific article production. The years 2021 and 2022 stood out as the periods with the highest number of developed works, totaling 236 and 235 articles, respectively (see Table 2). Among them, the most relevant article in terms of the number of citations was "Influence of the entrepreneur's capacity in business performance" (Teruel-Sánchez et al., 2021). This article presents a theoretical model that analyzes the capacities of the entrepreneur and their influence on business performance, highlighting the importance of factors such as cognitive training, procedural experience, and attitudinal confidence, which have a significant impact on business success. When analyzing the citations of these documents during the same time period, it is notable that the year 2022 recorded the highest number of citations (approximately 31%).

However, this was not consistent with the average citations of the years 2021 and 2020 (18.1 for 2021 compared to 17.4 for 2020). There is a difference in the percentage weight of citations corresponding to each year. Although production in 2021 was higher in terms of frequency, the percentage weight of citations was not significantly different from that recorded in 2020. However, both the year 2020 and the year 2021 are notably distant from the year 2022 in terms of frequency and average citations. The year 2022 recorded significantly higher frequency and average citations compared to the two years mentioned earlier, which is reflected in a considerably higher percentage weight (30.8%).

Table 2 Annual Scientific Production

Year	Frequency	%	Citations	%
2012	69	4,2	10	0,1
2013	95	5,7	41	0,4
2014	85	5,1	139	1,2
2015	89	5,4	255	2,3
2016	120	7,3	386	3,4
2017	139	8,4	642	5,7
2018	163	9,9	937	8,3
2019	210	12,7	1395	12,4
2020	212	12,8	1962	17,4

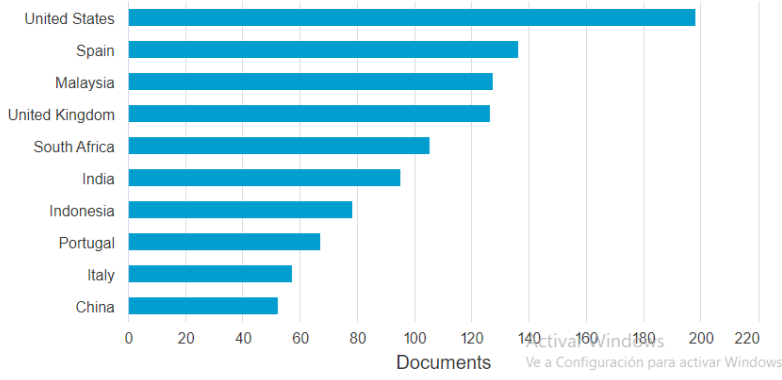
2021	236	14,3	2041	18,1
2022	235	14,2	3470	30,8

Note: Information developed by the authors based on Scopus data.

Scientific Collaboration Among Countries

In the quest to identify the countries with the most publications on the three variables under study, the United States (U.S.) stands out as the territory with the highest volume of research in this field, with approximately 198 publications (see Figure 1). The most relevant document, based on the number of citations received, is the research paper titled "Opportunity related absorptive capacity and entrepreneurial alertness" (Patel, 2019). This study asserts that absorptive capacity (cognitive), in terms of assimilating internal activities with external knowledge, is closely linked to opportunity identification.

Figure 1 Documents by country or territory.



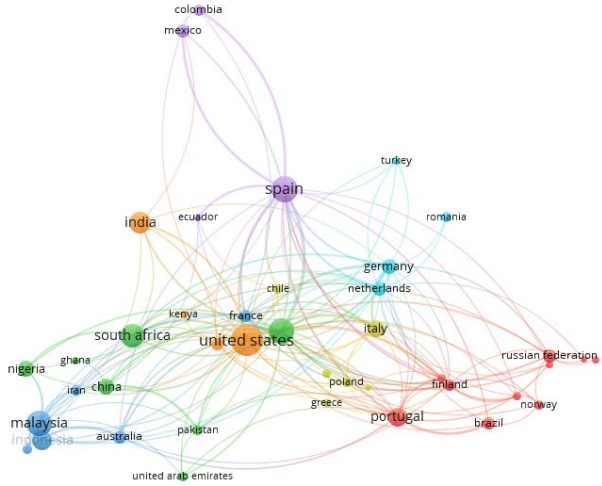
Note: Information developed by the authors based on Scopus data.

Following the United States, authors from Spain and Malaysia have published 136 and 127 documents, respectively, on the subject. In Spain, relevant and high-impact research has been conducted for the scientific community. One such example is the work titled "Human Systematic Innovation Helix: Knowledge Management, Emotional Intelligence, and Entrepreneurial Competency" (Blázquez, 2022). This study allowed for an analysis of the relationship between the innovation capacity of Spanish companies by integrating three variables: knowledge management (cognitive), emotional intelligence (procedural), and entrepreneurial competence (attitudinal).

Meanwhile, in the United Kingdom and various Latin American countries, it is also concluded that the cognitive, procedural, and attitudinal capacities of entrepreneurs must be based on the recognition of potentialities that need to be developed in different contexts, especially in micro, small, and medium-sized enterprises (MYPIME). It is expected that radical innovations and transformative sustainability can be achieved in these businesses, which will also have an impact on society (Burch et al., 2016; Campo et al., 2018).

Regarding the scientific collaboration occurring between countries, it has recently intensified considerably, resulting in significant networks of contribution between institutions and research groups (Cárdenas, 2021). Figure 2 illustrates the collaboration networks with the strongest connections between the United States, Spain, France, Germany, Italy, the Netherlands, Brazil, India, South Africa, Portugal, Chile, Colombia, and Mexico. This is due to the cooperation and collaboration in the publication of scientific articles by researchers interested in entrepreneurship in different countries and regions.

Figure 2 Distribution of studies conducted by country.



Note: Information developed in VOSviewer based on Scopus data by the authors.

Prominent Authors in Scientific Production

During the search, a total of 1653 documents were retrieved, authored by 4301 individuals. The average co-authorship index stands at 2.88 authors per document, indicating a relatively low level of association in the production related to the topic of interest. To provide further details, it is observed that 92% of the authors have published only one article, 6% have published two articles, 1% have published three, 0.30% have published four documents, and 0.10% have published five. Furthermore, less than 0.01% of authors have published more than eleven articles. It is noteworthy that the authors are affiliated with globally recognized institutions such as Tecnológico de Monterrey, the School of Management, the University of Zaragoza, and other relevant institutions. Table 3 presents information about some authors, including the number of documents published on the topics, their affiliated institution, country, and the h-index, which is a bibliometric indicator related to scientific performance over time.

Table 3. Authors with published articles on youth entrepreneurship.

Order	Authors	docs.	H Index	Institution	Country
1	Worku, Z.	12	8	Tshwane School For Business And Society	Pretoria, South Africa
2	Portuguez Castro, M.	7	9	Tecnológico de Monterrey	Monterrey, Mexico
3	Gómez Zermeño, M.G.	5	8	Tecnológico de Monterrey	Monterrey, Mexico
4	Jones, P.	5	34	School of Management	Swansea, United Kingdom
5	Marques, C.S.	5	28	University of Trás-os-Montes and Alto Douro	Vila Real, Portugal
6	Almeida, F.	4	11	Universidade do Porto	Porto, Portugal
7	Badawi, S.	4	4	Ahlia University	Manama, Bahrain
8	Bodolica, V.	4	17	School of Business Administration	Sharjah, United Arab Emirates
9	Hamdan, A.	4	18	Ahlia University	Manama, Bahrain
10	Mamabolo, A.	4	4	Gordon Institute of Business Science	Johannesburg, South Africa
11	Othman, N.	4	10	Universiti Kebangsaan Malaysia	Bangi, Malaysia
12	Pisoni, G.	4	9	Université Côte d'Azur	Nice, France
13	Ramírez-Montoya, M.S.	4	22	Tecnológico de Monterrey	Monterrey, Mexico
14	Salas-Fumás, V.	4	15	Universidad de Zaragoza	Zaragoza, Spain
15	Urban, B.	4	18	University of the Witwatersrand, Johannesburg	Johannesburg, South Africa
16	Afonso, P.	3	11	Universidade do Minho	Braga, Portugal
17	Akhmetshin, E.M.	3	31	Kazan Federal University, Kazan	Russian Federation
18	Al-Shami, S.A.	3	11	Universiti Teknikal Malaysia Melaka	Malacca, Malaysia
19	Atmojo, I.R.W.	3	4	Universitas Sebelas Maret	Surakarta, Indonesia
20	Bell, R.	3	14	University of Worcester	Worcester, United Kingdom

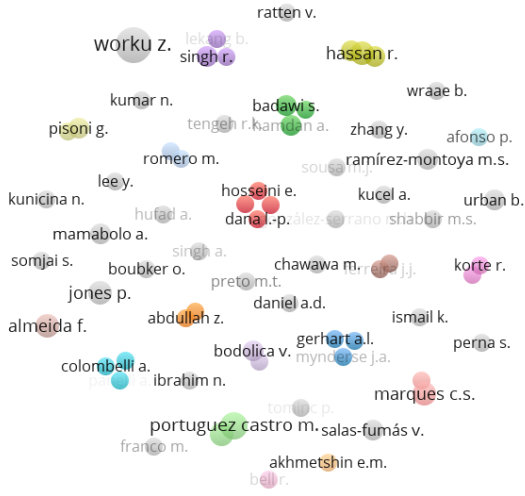
Note: Information developed by the authors based on Scopus data.

Author Collaboration Networks

Author collaborations within networks are depicted in Figure 3, where it can be observed that the most relevant researchers in the network include Worku, Portuguez, Jones, Marques, Almeida, and Hassan.

Although Figure 3 displays the co-authorship network with 47 clusters, there is no clear grouping among them. These results are further supported by Table 4, which presents the most relevant authors in the network and highlights the limited collaboration among them. In this network, authors with at least three published documents (n = 3) were selected, resulting in a total of 68 authors out of the 4301 identified. The analysis of the network utilized the measure of link strength, which represents the total strength of co-authorship connections of a researcher with others.

Figure 3. Author Collaboration Network.



Note: Information developed in VOSviewer based on Scopus data by the authors.

Table 4. Co-authorship clusters and publication topics.

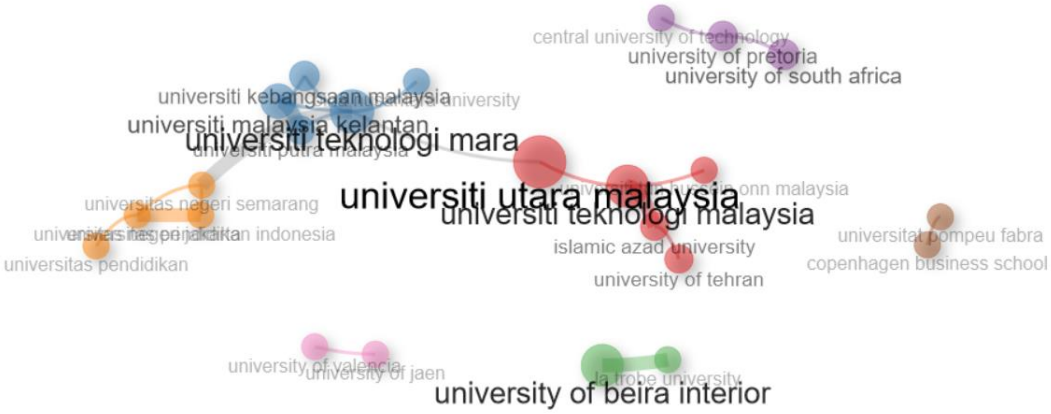
Cluster	N. of Researchers	Members	Principal Investigator	Publication Topics
Dark red	4	Dana Léo Paul; Hosseini Elahe; Salamzadeh Aidin; tajpour Aidin.	Dana Léo Paul	Migrant Workers; Self-Employment; Ethnic Business
Green	3	Badawi Sherine; Hamdan Allam Mohammed Mousa; Reyad Sameh.	Badawi Sherine	Entrepreneurial Intention; Effectuation; Entrepreneurship
Dark Blue	3	Gerhart Andrew; Liu Liping; Mynderse James.	Gerhart Andrew	Entrepreneurial Orientation; Corporate Entrepreneurship; Small And Medium-Sized Enterprises (SMEs)
Yellow	3	Hassan Hasannuddin; Hassan Rosilah; Othman, Norasmah Hj.	Hassan Rosilah	Entrepreneurial Intention; Effectuation; Entrepreneurship
Purple	3	Lekang Bushe; Nain, Manjeet Singh; Singh Rashmi V.	Singh Rashmi V.	Entrepreneurial Skills; Agricultural Research; Library Services
Aquamarine Blue	3	Serraino, Francesco Panelli, Andrea Colombelli, Alessandra	Colombelli Alessandra	Entrepreneurial University; Academic Entrepreneurship; Innovation
Orange	2	Ekpe Isidore; Abdullah Zulhamri Bi	Abdullah Zulhamri Bin	Workplace; Women Entrepreneurs; Enterprise Performance
Light Green	2	Gómez-Zermeño Marcela Portuguez Castro May	Portuguez Castro, May	Entrepreneurial Intention; Effectuation; Entrepreneurship
Fuchsia	2	Korte Russell F.: Smith Karl A.	Korte Russell F.	Socialization; Feedback Seeking; Newcomers
Pink	2	Marques, Carla Susana E.; Santos Gina Marques	Marques, Carla Susana E.	Entrepreneurial Intention; Effectuation; Entrepreneurship

Note: Information developed by the authors based on Scopus data.

Institutional Collaboration Network

Some institutions recognize the importance of collaboration among them for the advancement of scientific activity. Figure 4 illustrates the dynamics of cooperation among institutions based on author affiliations. Larger nodes correspond to institutions with higher production, and connecting lines between institutions represent co-authorship relationships among them.

Figure 4 Collaboration Networks by Institutional Affiliations.



Note: Information developed in VOSviewer based on Scopus data by the authors.

Concentration-Dispersion of Documents

Bradford's Law was used to determine the concentration and dispersion of information in scientific journals on entrepreneurial capabilities in young people, with the aim of examining the relationship between the number of journals and articles published in the field, as well as their contribution to the discipline. During the period from 2012 to 2020, a total of 894 journals that published documents in this area were identified. The distribution of published documents revealed that Zone 1 contains fifty-three journals, representing 6% of the total and concentrating 33% of the production, equivalent to 550 documents. On the other hand, Zone 2 includes 296 journals, accounting for 33% of the total, and concentrating 34% of the articles. As for Zone 3, 545 journals (61%) were identified, contributing 33% of the documents (see Table 5).

As can be observed in Table 5, approximately one-third of the documents (550) are grouped in 53 journals, while the remaining two-thirds of publications are distributed across 296 and 545 journals, respectively. In other words, the zone with the fewest number of journals concentrates 33% of the articles on the subject in question. On the other hand, both Zone 2 and Zone 3 contain the same percentage of articles but require a larger proportion of journals for publication. This occurs due to the disparities found in production, where areas of high productivity and other peripheral areas with lower creation are observed.

Table 5. Distribution of Journals and Articles by Zone - Bradford Model. 2012-2022

Zone	Number of Journals per Zone	% of Journals	N. of Articles	% of Articles per Zone	Average Articles per Journal in the Zones
1	53	6%	550	33%	10,4
2	296	33%	558	34%	1,9
3	545	61%	545	33%	1,0
Total	894	100%	1653	100%	

Note: Information developed by the authors based on Scopus data.

Regarding institutional affiliation, it is observed that the majority of the documents are concentrated in journals that exhibit low values in the SJR (Journal Ranking Score) indicator in relation to the number of published articles. It is important to note that some of the highlighted resources do not have information regarding their quartile, while the majority fall into quartile 3 (Q3), as shown in Table 6. Furthermore, it was found that the most common category among the prominent journals is Business, Management, Accounting, Marketing, Econometrics, Finance, and Business Management.

Table 6. Journals with the highest thematic production in the field.

Journal	Nº Docs	SJR 2020	Quartile	Category
Emerald emerging markets case studies	46	0,19	Q3	Management, Accounting, Business Economics, Econometrics and Finance
ASEE annual conference and exposition, conference proceedings	32	0,164	Not available	Computer Science: Computer Networks and Recognition Computer Science: Human-Computer Interaction Computer Science: Software
Proceedings of the European conference on innovation and entrepreneurship, ECIE	29	Not available	Not available	Social Sciences: Education Business, Management and Accounting
Sustainability (Switzerland)	29	0,664	Q2	Business, Management and Accounting
Education and Training	23	0,896	Q2	Business, Management and Accounting
Journal of entrepreneurship education	20	0,283	Q1	Social Sciences: Education Economics, Econometrics and Finance Accounting Business and International Management
ACM international conference proceeding series	16	0,209	Not available	Computer Science: Computer Networks and Communications
Small business economics	16	2,732	Q1	Business, Management and Accounting
Mediterranean journal of social sciences	15	0,135	Not available	Economics, Econometrics and Finance
International journal of management education	13	1,056	Q2	Business, Accounting, Strategy and Management
Contributions to management science	11	0,131	Q4	Business, Management and Accounting: Marketing
Frontiers in psychology	11	0,891	Q1	Psychology: General Psychology

Note: Information developed by the authors based on Scopus data.

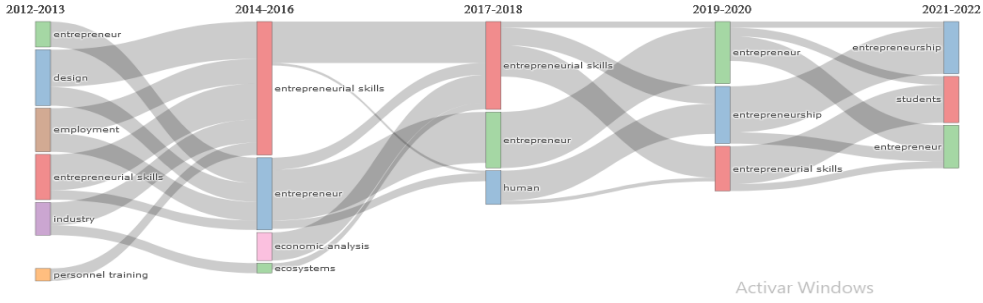
Main Descriptors

The analysis of the frequency and relationship of different keywords in the 1653 documents resulting from the search reveals that the variables of cognitive, procedural, and attitudinal capabilities are closely related to entrepreneurship and venture creation. Thus, it can be inferred that entrepreneurship becomes a reality when cognitive and attitudinal aspects come together in actions that reflect intentions through learning by doing (Santamaría and Bravo, 2017). From this, emotional intelligence is reflected upon and strengthened through the realities encountered in the context where entrepreneurship takes place, as a result of the study on the impact of entrepreneurial attitudes.

Evolution of the Topic

A study was conducted on the thematic evolution in the research field, as shown in Figure 6. The results confirm the evolution of the field and support the intellectual structure that emerges in the subject of study (Donthu et al., 2023). In the case of this particular study, entrepreneurial capabilities were investigated, and it was found that entrepreneurship has been and still remains a topic of interest in research. It was also observed that the focus on youth entrepreneurship is mainly on pre-entrepreneurship, i.e., the development of knowledge and preparation for entrepreneurship, but it does not focus on the implementation of concrete actions. However, the importance of training, coaching, and mentoring is recognized, especially considering that these are young individuals who need to acquire skills, attitudes, and mindsets that drive them to take concrete steps. Additionally, it is emphasized that these actions are not limited solely to resource management for entrepreneurial practice (OECD, 2014).

Figure 6 Thematic Evolution.



Note: Image in Biblioshiny generated from Scopus data by the authors.

Conclusions

The findings of this study are of great relevance to the specialized scientific community, as they provide valuable information that contributes to improving scientific activity. In Latin America, there is limited attention from government institutions regarding the strengthening of capacities to promote entrepreneurship among young people, thus supporting local, regional, and national economic development. Training processes enhance cognitive skills, the development of entrepreneurial potential, and motivation or attitude towards entrepreneurship (Sepúlveda et al.,

2019). Therefore, it is urgent for public policy to consider these elements in its plans in order to foster entrepreneurship among the youth of the country. Furthermore, the information presented here allows for guiding decision-making in institutional policies and enhancing research, especially in the field of interest in this document. The bibliometric indicators used have identified various production dynamics in the subject on a global level, providing key information to understand trends in scientific activity for future planning and management.

Through the analyzed literature, it was found that there are numerous international studies related to entrepreneurial capabilities in young people. The United States stands out as the leading country in research on this topic, followed by Spain and Malaysia. This production had its highest number of publications in 2021, although there was a slight reduction in the quantity of documents published in high-impact journals in 2020. The evaluation of these dynamics also indicates the presence of an established community of researchers, whose publications are in globally recognized journals, and according to Scopus data, some without a specific quartile and others located between Q1, Q2, and Q4. However, despite the rapid growth of research and the evolution of the topic, its contribution in terms of authors and institutions is limited.

In other words, the analysis of scientific activity in the analyzed topic revealed weak collaboration between universities in terms of research. It was observed that the largest collaborative network among authors is present in Asian journals. The connection between institutions participating in the production of the study's subject suggests a growing interest in the field of entrepreneurship. This dynamic may be related to the increase in programs focused on strengthening entrepreneurial capabilities and encouraging entrepreneurship. The results showed that networks and scientific collaboration in the area of interest have a low level of co-authorship in most cases. Unfortunately, these events do not contribute to the connection or strengthening of academic and research relationships between teachers and research groups. Therefore, the visibility and impact of publications can be affected. This reinforces the need to strengthen collaboration networks to promote the growth and impact of scientific production, as well as to improve citation and visibility indicators (Estrada, 2019).

Another important finding derived from the literature review is the limited research regarding the cognitive, procedural, and attitudinal capabilities variable conducted in Latin American countries. It was also evident that some young people do not possess the necessary entrepreneurial competencies to create and effectively manage a business project. In other words, they consider themselves lacking the cognitive capabilities required to independently initiate a business project. The same applies to the attitudinal aspect, as a lack of creativity is one of the major obstacles to this end. This implies the need to incorporate subjects or workshops that work on these competencies into professional education, in order to enable young people to develop the capacity for entrepreneurship in a way that contributes to the economic development of the country and the well-being of both themselves and their communities.

WORKS CITED

Al Mamun, A., Binti Che Nawi, N., Mohiuddin, M., Binti Shamsudin, F., y Fazal, S.. (2017). Entrepreneurial intention and startup preparation: A study among business students in Malaysia. Journal of Education for Business, 92(6), 296-314. https://doi.org/10.1080/08832323.2017.1365682

Blázquez, C., Bermúdez,G., y Soler, I. (2022). Human Systematic Innovation Helix: Knowledge Management, Emotional Intelligence and Entrepreneurial Competency. Sustainability 14(7). https://doi.org/10.3390/su14074296

Borja, A., Carbajal, H., y Vite, H. (2020). Modelo de emprendimiento y análisis de los factores determinantes para su sostenibilidad. Revista Espacios, 41(24), 183-196.

Borrayo, C, Valdez, A, y Delgado, B. (2019). Cultura emprendedora en jóvenes universitarios de Guadalajara, México. Revista de Ciencias Sociales, XXV(3), 72-87

Burch, S., Andrachuk, M., Carey, D., Mischkowski, N., y Loorbach, D. (2016). Governing and accelerating transformative entrepreneurship: exploring the potential for small business innovation on urban sustainability transitions. Current Opinion in Environmental Sustainability, 22, 26–32, https://doi.org/10.1016/j.cosust.2017.04.002

Campo, L., Amar, P., Olivero, E. y Boom, C. (2018), Factores personales y motivacionales asociados a las capacidades emprendedoras. Espacios, 39(14).

Castiblanco, S. (2013). La construcción de la categoría del emprendimiento femenino. Revista Facultad de Ciencias Económicas: Investigación y Reflexión, 21(2), 53-66,

Cárdenas, M. (2021). Redes de colaboración científica en el Instituto Politécnico Nacional de México. Investigación Administrativa, 50(127), 192-210.

Castillo-Paredes, A., Núñez-Valdés, K., Villegas Dianta, C., Villena Olivares, N., Núñez, M.L., Fuentes-Rubio, M. y Núñez-Valdés, G. (2022). Teacher Training in Chile: Where Are Universities Looking? A Narrative Review. International Journal of Environmental Research and Public Health, 19(19), 12802. 10.3390/ijerph191912802

Dias, Á., Patuleia, M., Silva, R., Estêvão, J. y González, M. (2021). Post-pandemic recovery strategies: revitalizing lifestyle entrepreneurship, Journal of Policy Research in Tourism. Leisure and Events, 14, 1-18, https://doi.org/10.1080/19407963.2021.1892124

Donthu, N., Kumar, S., Sureka, R., Lim, W.M. y Pereira, V. (2023). Foundations of knowledge management: intellectual structure and citation drivers of the Journal of Knowledge Management. Journal of Knowledge Management, 27(4), 953-974. https://doi.org/10.1108/JKM-02-2022-0094

Estrada, A., Acosta, J. y Catacora, M. (2019). Producción científica y redes de colaboración en la Seguridad Social de Salud de Perú, análisis bibliométrico en Scopus 2008-2017. Acta Médica Peruana, 36(2), 116-123.

European Commission. (2016), Entrepreneurship education at school in Europe. Luxembourg: Publications Office of the European Union.

Fuentes, F. y Sánchez, S. (2010). Análisis del perfil emprendedor: una perspectiva de género. Estudios de Economía Aplicada, 28(3), 1-28.

Franke, N. y Lüthje, C. (2004). Entreprenerial intentions of business students: a benchmarking study. International Journal of Innovation and Technology Management, 1(3), 269-288. https://doi.org/10.1142/S0219877004000209

Gómez, L., Llanos, M., Hernández, T., Mejía, D., Heilbron, J., Martín, J., Mendoza, J. y Senior, D. (2017). Competencias emprendedoras en Básica Primaria: Hacia una educación para el emprendimiento. Pensamiento & Gestión, 43, 150-180, https://doi.org/10.14482/pege.43.10587

Gómez, B., Baquero, J. y Álvarez, B. (2019). Emprendimiento y desarrollo humano: una mirada desde los jóvenes. Aletheia, Revista de Desarrollo Humano, Educativo y Social Contemporáneo, 11(2), 127-152.

Guachimbosa, V.H., Lavín, J.M., y Santiago, N.I. (2019). Vocación de crear empresas y actitud, intención y comportamiento emprendedor en estudiantes del Ecuador. Revista de Ciencias Sociales, XXV(1), 71-81.

Gutiérrez, J.M., Romero, J., Díaz, M.G., y Sulbarán, N. (2017). Emprendimiento como fuente de desarrollo de la empresa familiar. Algunas reflexiones sobre Venezuela. Revista de Ciencias Sociales, XXIII(4), 98-107.

Hidalgo, L.F. (2014). La cultura del emprendimiento y su formación. Revista Alternativas, 15(1), 46-50.

Kart, A., y Kart, M. (2021). Academic and social effects of inclusion on students without disabilities: A review of the literature. Education Sciences, 11(1), 16. https://doi.org/10.3390/educsci11010016

Man, T., Lau, T. y Chan, K. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. Journal of Business Venturing, 17(2), 123-142. https://doi.org/10.1016/S0883-9026(00)00058-6

Mayer, E., Blanco, F., Alonso, N. y Coll, J. (2020). Emprendimiento y crecimiento económico: El sistema mexicano de incubadoras de negocios. Revista de Ciencias Sociales, 26(1), 107-127.

Mills, G. y Gay, L. (2019). Educational Research: Competencies for Analysis and Applications (12th Ed.). Pearson.

Neck, H., y Greene, P. (2011). Entrepreneurship education: Known worlds and new frontiers. Journal of Small Business Management, 49(1), 55-70. https://doi.org/10.1111/j.1540-627X.2010.00314.x

Neira, M., Portela, M., Fernández, L. y Rodeiro, D. (2013). Actitud emprendedora: un enfoque a través de los jóvenes y el género. Una perspectiva de género. Editorial Universidade da Coruña, 69-84.

OECD. (2014). Supporting Youth in Entrepreneurship.

Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD et al. (2021). Declaración PRISMA 2020: una guía actualizada para la publicación de revisiones sistemáticas. Revista Española de Cardiología, 74(9), 790-799. 10.26633/RPSP.2022.112

Patel, P. (2019). Opportunity related absorptive capacity and entrepreneurial alertness. International Entrepreneurship and Management Journal, 15(1), 63 – 73. https://doi.org/10.1007/s11365-018-0543-2

Pico, A., Del Río, J., Simancas, R., y Rodríguez, C. (2017). ¿El emprendimiento como estrategia para el desarrollo humano y social?. Saber, ciencia y libertad, 12(1), 107 – 123,

Qader, A.A., Zhang, J., Ashraf, S.F., Omhand, K. y Nazir, M. (2022). Capabilities and Opportunities: Linking Knowledge Management Practices of Textile-Based SMEs on Sustainable Entrepreneurship and Organizational Performance in China. Sustainability, 14(4), 2219. https://doi.org/10.3390/su14042219

Real Academia Española. (2019). Diccionario de la lengua española.

Roth, E., Carmona, C., Velasco, C. y Rodríguez, A. (2011). Algunas dimensiones cognitivas del emprendimiento económico femenino: el papel de los estilos cognitivos en el reconocimiento de oportunidades. Actas del I Congreso Internacional sobre Migraciones en Andalucía, Instituto de Migraciones, 67-77, Granada, España.

Sandoval, M., Surdez, E., y Pérez, A. (2020). Nivel de la capacidad para el emprendimiento en estudiantes de ingeniería y arquitectura de una universidad pública del sureste de México. Revista Iberoamericana para la Investigación y el Desarrollo Educativo, 11(21), e038. https://doi.org/10.23913/ride.v11i21.757

Santamaría, T. y Bravo, F. (2017). Impacto de las actitudes emprendedoras en los estudiantes de la Universidad de Guayaquil carrera Comunicación Social. INNOVA Research Journal, 2(2), 45-54.

Sepúlveda, J., Valenzuela, A. y Gálvez, F. (2019). Intención emprendedora de estudiantes de la carrera de Auditoría de la Universidad Católica del Maule (Chile). Espacios, 40(12).

Soria-Barreto, K., Zuniga-Jara, S. y Ruiz-Campo, S. (2016). Educación e Intención Emprendedora en Estudiantes Universitarios: Un Caso de Estudio, Formación Universitaria, 9(1), 25-34. https://doi.org/10.4067/S0718-50062016000100004

Suárez, M., Suárez, L., y Zambrano, S. M. (2017). Emprendimiento de jóvenes rurales en Boyacá- Colombia: Un compromiso de la educación y los gobiernos locales. Revista de Ciencias Sociales, 23(4), 23-32.

Szirmai, A., Naudé, W., & Goedhuys, M. (2011). Entrepreneurship, innovation, and economic development. Oxford University.

Teruel-Sánchez, R., Briones-Peñalver, A.J., Bernal-Conesa, J.A., y de Nieves-Nieto, C. (2021). Influence of the entrepreneur's capacity in business performance. Business Strategy and the Environment, 30(5), 2453–2467. https://doi.org/10.1002/bse.2757

Tobón, S. (2006). Aspectos básicos de la formación basada en competencias. Universidad del Rosario.

Urrutia, G. y Bonfilll X. (2013). La declaración prisma: un paso adelante en la mejora de las publicaciones de la Revista Española de Salud Pública. Rev Esp Salud Publica, 87, 99-102.

Van-Eck, N. y Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics, 84(2), 523-538. https://doi.10.1007/s11192-009-0146-3

Varela, R. y Arango, C. (2022). Actividad emprendedora: Colombia un país en reactivación: 2021-2022. Editorial Universidad Icesi.