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The State of Art on the Impact of University Education on the Social Economy and Social Entrepreneurship

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ABSTRACT

This study explores the intersection between university education, the social economy, and social entrepreneurship by conducting a systematic analysis of international academic production. Using quantitative and network analysis techniques, the research identifies trends, influential authors, prominent journals, and emerging thematic clusters in the field. The results highlight the growing importance of social entrepreneurship education, particularly from the second decade of the twenty-first century onward, and underline the strategic role of universities in developing ethical, technical, and social competencies aimed at social transformation. Educational innovation, digitalization, and cross-sector collaboration emerge as key factors in enhancing training practices and aligning academic programs with the complex demands of contemporary society. The study offers a comprehensive and updated overview of the academic landscape, supporting the identification of new opportunities for collaboration and future research. Recent studies also highlight the growing incorporation of digital and artificial intelligence (AI)-based tools in university training, suggesting that emerging technologies may further enhance innovation, collaboration, and the social impact of higher education.

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Introduction

In recent decades, social entrepreneurship and the social economy have become increasingly relevant in the academic, professional, and political spheres, positioning themselves as drivers of innovation, inclusion, and sustainable development in contexts characterized by complexity and accelerated change. The interest in these organizational models, based on values such as equity, solidarity, and democratic management, has been reflected in the increase in scientific research and in the proliferation of university training initiatives aimed at promoting competences and values for social change (Mair & Martí, 2006; Defourny & Nyssens, 2010; Battilana & Lee, 2014).

The university, as a key agent in the training of professionals and committed citizens, has taken on a leading role in integrating the social economy and social entrepreneurship into its curricula. This integration responds not only to the need to adapt higher education to contemporary social and environmental challenges but also to the demand for professional profiles capable of leading transformation processes and generating a positive impact on their communities (Nabi et al., 2017). However, the consolidation of these approaches requires innovative pedagogical strategies, multisectoral collaboration, and the development of university ecosystems that favor experiential learning and knowledge transfer (Padilla-Zea et al., 2019).

Despite the growing body of literature on social entrepreneurship and its integration into higher education, several important gaps persist in the academic understanding of this field. In particular, existing studies have tended to focus on conceptual developments, pedagogical approaches, or case-based analyses, thereby providing only limited insight into the intellectual structure, thematic evolution, and patterns of knowledge production that characterize this research domain as a whole.

Furthermore, there is a lack of systematic and quantitative analyses capable of mapping the evolution and interconnections among key themes such as educational innovation and social impact. This limitation constrains a comprehensive understanding of the field's development, the dominant theoretical perspectives that shape it, and the ways in which emerging research fronts inform future academic and practical debates.

In this context, a comprehensive bibliometric approach is particularly relevant, as it enables the identification not only

of the principal contributors and publication trends, but also of the underlying conceptual structure and dynamics of the field.

This paper addresses the intersection between university education, social economy, and entrepreneurship through a bibliometric analysis of international scientific production. Bibliometrics is a scientific discipline that allows the quantitative study of academic literature through statistical and network visualization techniques, facilitating the identification of trends, key authors, influential journals, and thematic cores in a given field of research (Pritchard, 1969; Zupic & Čater, 2015). This methodological approach is particularly suitable for analyzing the evolution and impact of research in emerging and multidisciplinary areas, such as training in social economy and entrepreneurship.

The database used is the Web of Science (WoS). For the processing and visualization of the bibliometric data, VOSviewer software was used, a tool specialized in the construction and analysis of co-citation networks, bibliographic coupling, and keyword co-occurrence, which allows for the identification of collaboration patterns, emerging themes, and the intellectual structure of the field of study (Waltman & van Eck, 2019).

The aim of this study is to provide a comprehensive and analytical understanding of scientific production at the intersection of university education, social economy, and social entrepreneurship. More specifically, the study seeks to examine the intellectual structure, thematic evolution, and collaborative patterns that characterize this field of research through a bibliometric approach.

Beyond the identification of publication trends, influential authors, and leading journals, this research aims to interpret the underlying dynamics of knowledge production, identify the principal thematic clusters shaping the field, and assess how key concepts such as educational innovation, digitalization, and social impact are interconnected within the academic literature (Zupic & Čater, 2015).

To guide the analysis, the study addresses the following research questions:

RQ1: What are the principal publication trends and research patterns in the field of university education and social entrepreneurship?

RQ2: What is the intellectual structure of the field, as reflected in co-citation networks and influential authors?

RQ3: What are the main thematic clusters emerging from the literature, and how are they conceptually structured?

RQ4: How have key themes such as educational innovation, digitalization, and social impact evolved over time?

RQ5: What collaborative patterns can be identified across countries, institutions, and research communities?

This study contributes to a deeper understanding of the evolution and structure of the field, offering both theoretical insights and practical implications for the advancement of university-based social entrepreneurship education.

Theoretical Framework

Social Economy: Definition, Principles and Development

The social economy is an organizational and business model based on values such as democratic management, equity, solidarity, and orientation toward the general interest. It integrates entities such as cooperatives, mutuals, and associations, whose functioning is distinguished by the primacy of people and labor over capital, and by the reinvestment of surpluses in the organization itself or in the community (Defourny & Nyssens, 2010; Le Ber & Branzei, 2010; Battilana & Lee, 2014).

The social economy contributes significantly to the Sustainable Development Goals (SDGs), promoting decent work, reduction of inequalities, gender equality, and sustainable local development (Monzón & Chaves, 2012; Lozano et al., 2015).

Social Entrepreneurship: Concept and Relevance

Social entrepreneurship is one of the most dynamic and transformative expressions of the contemporary social economy. While its roots lie in the historical values and principles of cooperativism and the solidarity economy, social entrepreneurship introduces an innovative logic that seeks to respond to unresolved social and environmental problems by creating sustainable social value (Le Ber & Branzei, 2010; Smith et al., 2013; Battilana & Lee, 2014).

Definition and Conceptual Delimitation

Although the scientific literature offers multiple definitions of social entrepreneurship, there is a growing consensus around several key elements that allow the characterization of this phenomenon and differentiate it from other forms of entrepreneurship. One of the most prominent features is the creation of social value, understood as the central purpose of any social entrepreneurship initiative, which prioritizes the generation of positive impact on society over the maximization of economic profit (Dacin & Tracey, 2011; Hlady-Rispal & Servantie, 2018). This approach implies that the social entrepreneur identifies relevant social problems and orients their activity toward the search for sustainable solutions that improve people's quality of life and promote social justice, without neglecting economic viability, but always placing collective well-being at the center of their mission.

Another element is social innovation, which involves the ability to identify opportunities and develop novel, effective, and sustainable solutions to address complex social challenges (Mair & Martí, 2006; Catala et al., 2023).

A third aspect is the hybridization of logics, i.e., the combination of business practices—such as efficient management, financial sustainability, and scalability—with values and principles of the social economy, such as democracy, equity, and solidarity (Le Ber & Branzei, 2010; Smith et al., 2013).

The conceptual debate around social entrepreneurship intensifies precisely at the border with the traditional social economy. While the social economy is usually associated with consolidated structures and collective and democratic governance—such as cooperatives, mutual societies, and associations—social entrepreneurship introduces a more individualized, flexible, and disruptive innovation-oriented dimension (Monzón & Chaves, 2012; Battilana & Lee, 2014). This difference does not imply a radical separation, but rather a complementarity: The social economy brings values, principles, and solid organizational models, while social entrepreneurship brings dynamism, creativity, and adaptability to emerging challenges. In short, social entrepreneurship can be understood as an innovative extension of the social economy, integrating social mission and economic sustainability in a context of constant change and transformation.

Importance of Training in Social Entrepreneurship

Social entrepreneurship can be understood as the point of convergence between the tradition of the social economy and the new demands for innovation and sustainability, placing university education as a strategic lever for its development and consolidation (Catala et al., 2023). By integrating awareness-raising, skills development, applied research, and the articulation of collaborative ecosystems, the university positions itself as a transforming agent capable of training professionals committed to social transformation and the construction of a fairer, more inclusive, and sustainable economy.

Competences and Values in Social Entrepreneurship Training

Training in social entrepreneurship goes beyond the mere acquisition of technical competences related to management, leadership, and innovation to the internalization of fundamental values such as solidarity, equity, and social responsibility (Jones & Iredale, 2010). International authors such as Jones and Iredale (2010) highlight the importance of integrating ethics and social engagement into educational programs, preparing students to take an active role in social transformation. Moreover, recent literature underlines that social entrepreneurship training should promote self-criticism, resilience, and the capacity for continuous learning, which are essential transversal competences for transformative leadership (Elmuti et al., 2012; Fayolle & Gailly, 2015; Nabi et al., 2017). It has been shown that university programs that integrate these values into their curriculum have a significantly greater impact on students' motivation, self-efficacy, and entrepreneurial intention, preparing them not only to develop viable projects but also to actively engage in social transformation (Nabi et al., 2017; Saz-Gil et al., 2021). This educational approach implies that the university must assume a strategic role in promoting an entrepreneurial culture that prioritizes the common good and sustainability, thus overcoming the traditional vision focused exclusively on economic profitability.

In addition to these specific competences, the scientific literature has identified self-efficacy, resilience, and the capacity for continuous learning as essential transversal competences for social entrepreneurship (Fayolle & Gailly, 2015; Nabi et al., 2017).

Educational Innovation and Emerging Trends

Educational innovation is a central element in the transformation of university education in social entrepreneurship. The scientific literature and international experiences agree that the adoption of innovative methodologies, the use of digital technologies, and the integration of new perspectives—such as sustainability and diversity—are key to responding to contemporary social challenges and preparing students to lead processes of change (Apetrei et al., 2013).

Service-Learning

Service-learning is an innovative educational methodology that integrates academic university training with social action, allowing students to apply their knowledge to solve real problems in the community and contribute directly to social welfare. This strategy not only facilitates the transfer of theoretical learning to practical contexts but also encourages ethical reflection, social commitment, and the acquisition of practical skills that are essential for the development of a professional profile oriented toward social entrepreneurship. It strengthens the link between the university and its environment, transforming the educational institution into an active agent of change and promoting a two-way relationship in which both students and the community benefit from the exchange of knowledge and experience (Enos, 2015; Bretos et al., 2023).

The impact of service-learning on university education is multidimensional. On the one hand, students develop key skills for social entrepreneurship, such as leadership, teamwork, effective communication, and sensitivity to social and cultural diversity (Mueller et al., 2015). These competences are acquired through direct experience in real contexts, where students must identify problems, design creative solutions, manage resources, and collaborate with different social actors. On the other hand, host communities benefit from knowledge transfer, social innovation, and the active involvement of students in solving local challenges, which contributes to sustainability and social cohesion (Enos, 2015; Mueller et al., 2015; Bretos et al., 2023).

Gamification and Social Innovation Laboratories

Gamification represents an innovative pedagogical strategy that transfers dynamics and mechanics typical of games to educational contexts, with the aim of increasing motivation, stimulating creativity, and enhancing the active partici-

pation of students in the learning process (Deterding et al., 2011). This methodology is based on the use of elements such as challenges, rewards, competitions, and playful narratives that facilitate student involvement and the acquisition of key competences for social entrepreneurship, such as problem-solving, decision-making, and teamwork. Scientific literature underlines that gamification not only contributes to making learning more engaging but also fosters the development of an entrepreneurial mindset by placing students in simulated situations where they must face real challenges and manage uncertainty in a creative and collaborative way (Padilla-Zea et al., 2019).

In contrast, social innovation labs are experimental spaces where students can devise, prototype, and test innovative solutions to complex social challenges, working in collaboration with external actors such as social enterprises, nongovernmental organizations (NGOs), and public administrations (Bretos et al., 2023). These laboratories favor the transfer of knowledge between the university and the environment, allowing students to apply their theoretical learning in real contexts and develop essential practical skills for social entrepreneurship, such as project management, effective communication, and negotiation with different social agents. The experience accumulated in these environments shows that experimentation and co-creation are fundamental for the development of sustainable solutions adapted to the needs of the community (Padilla-Zea et al., 2019; Bretos et al., 2023).

One of the main advantages of gamification and social innovation labs is that they encourage disruptive thinking, experimentation, and tolerance for error, which are essential for social entrepreneurship. These methodologies allow students to explore bold ideas, learn from failures, and develop resilience in the face of adversity, which is essential for leading transformative initiatives in complex and changing contexts (Padilla-Zea et al., 2019). Moreover, collaboration with external actors in social innovation labs enriches the learning experience, as students must adapt to different perspectives, manage conflicts, and seek consensus, thus developing leadership, empathy, and networking skills (Bretos et al., 2023).

Green Entrepreneurship and Sustainability

Green entrepreneurship represents one of the most relevant and transformative trends in the field of contemporary social entrepreneurship, as it explicitly integrates environmental objectives into projects and business models that seek to generate a positive impact on society. This type of entrepreneurship is characterized by the promotion of the circular economy, energy efficiency, and ecological responsibility, prioritizing the sustainable use of natural resources and the reduction of the environmental footprint of economic activities. Scientific literature underlines that green entrepreneurship not only contributes to environmental conservation but also opens up new business and employment opportunities in emerging sectors linked to sustainability and technological innovation (Shepherd & Patzelt, 2011; Schaltegger & Wagner, 2011).

The curricular integration of green entrepreneurship in university education is becoming increasingly common, as many higher education institutions have incorporated specific modules on sustainability, climate change, waste management, and energy transition into their social entrepreneurship programs (Lozano et al., 2015; Fichter & Tiemann, 2018). This evolution responds to the need to train professionals capable of leading the transition toward more sustainable economic models and of facing global environmental challenges from an innovative and responsible perspective. The inclusion of this content in the curriculum allows students to develop key competences for the management of green projects, innovation in production processes, and collaboration with social and business actors committed to sustainability (Fichter & Tiemann, 2018).

Digitalization and collaborative learning ecosystems

The transformation of university education in the field of social entrepreneurship is increasingly shaped by broader trends such as digitalization, sustainability, and multi-sectoral collaboration. Although these dimensions are not always positioned at the core of the field, they play a complementary role in the configuration of more flexible, adaptive, and interconnected learning environments.

Digitalization, in particular, has facilitated the adoption of blended learning models, virtual platforms, and collaborative tools that enhance access to knowledge and enable new forms of interaction among students, educators, and external stakeholders (Garrison & Kanuka, 2004; Nambisan et al., 2018). These technologies contribute to the development of key digital competencies and support more personalized and interactive learning processes. Nevertheless, challenges such as the digital divide and the need for continuous teacher training remain significant concerns (Padilla-Zea et al., 2019; Van Dijk, 2020).

At the same time, sustainability has emerged as a relevant dimension within social entrepreneurship education, particularly through the incorporation of environmental concerns and responsible resource management into training programmes. This perspective reinforces the alignment between social innovation and sustainable development, thereby expanding the scope of impact-oriented education (Lozano et al., 2015; Fichter & Tiemann, 2018).

Furthermore, interdisciplinarity and cross-sector collaboration among public, private, and third-sector actors are increasingly recognized as essential components for addressing complex societal challenges. Such approaches facilitate the integration of diverse perspectives and resources, fostering innovation while enhancing the effectiveness and scalability of social entrepreneurship initiatives (Bretos et al., 2023; Catala et al., 2023).

Methodology

This paper adopts a bibliometric methodology to analyze the scientific production on the intersection between training, university education, the social economy, the third sector, cooperatives, and entrepreneurship, in the fields of public administration, education, educational research, business, economics, management, and interdisciplinary social sciences. Bibliometrics allows a quantitative approach to scientific literature through the use of statistical techniques and visualization tools, facilitating the identification of trends, key authors, influential journals, and thematic clusters (Pritchard, 1969; Zupic & Čater, 2015).

Bibliometric Approach

Bibliometrics is a scientific discipline that studies the production and dissemination of knowledge through the quantitative analysis of academic publications (Pritchard, 1969). This approach makes it possible to identify the intellectual structure of a field of research, detect emerging trends, and visualize collaborative networks between authors, institutions, and subjects (Zupic & Čater, 2015).

Data Sources and Search Strategy

The main database used for data collection is Web of Science (WoS), internationally recognized for the quality and breadth of its coverage of scientific publications (Ball & Tunger, 2006; Scaringella & Radziwon, 2018). WoS provides access to journals indexed in the Journal Citation Reports (JCR), which guarantees the relevance and impact of the publications included in the analysis (Donthu et al., 2021; Ribeiro-Navarrete, et al. 2023).

The search strategy implemented in this study is based on the use of Boolean operators—AND, OR, and NOT—a practice widely recognized in the bibliometric literature for its ability to combine terms and concepts efficiently, thus enabling the refining of the results and ensuring the retrieval of the most relevant documents according to the thematic area of interest (Donthu et al., 2021). The structure of the search is organized in clearly defined thematic blocks that guide the selection of key terms and facilitate the delimitation of the field of study.

First, the central concepts associated with training, education, and university are integrated, as they constitute the conceptual core from which we intend to explore the scientific production on entrepreneurship in the field of the social economy and the third sector. These concepts allow us to identify works that address the relationship between higher education, vocational training, and social innovation processes, thus ensuring that the initial sample of documents is aligned with the objectives of the study.

Second, the specific context is incorporated through terms linked to the social economy, the third sector, nonprofit organizations, and cooperatives. This selection of terms makes it possible to capture research that analyses the role of these entities in promoting socioeconomic development and innovation, as well as their impact on the creation of social and economic value. The inclusion of these terms ensures that the search is not limited only to conventional business dynamics but also encompasses initiatives that prioritize collective well-being and sustainability.

Third, the thematic focus on entrepreneurship is added as the main focus of the analysis. The selection of terms related to entrepreneurship makes it possible to identify studies that analyze the role of entrepreneurs and entrepreneurial initiatives in the aforementioned contexts, as well as their contribution to innovation, job creation, and economic and social development.

Finally, to ensure the relevance of the documents retrieved, filters are applied on the basis of the thematic categories of Web of Science that best fit the scope of study. These categories include public administration, education, educational research, business, economics, management, and interdisciplinary social sciences. The selection of these categories makes it possible to limit the sample to research that, owing to its disciplinary approach, provides a rigorous and specialized perspective on the intersection between training, social economy, the third sector, and entrepreneurship, thus guaranteeing the quality and relevance of the results obtained. This search strategy, based on the combination of Boolean operators and thematic structuring, constitutes a fundamental tool for the construction of a solid and representative database of the state of the art in the field of study addressed (Donthu et al., 2021; Ribeiro-Navarrete et al., 2023).

The search string used in Web of Science is as follows:

("training" OR "educatio*" OR "university") AND ("social economy" OR "third sector" OR "non-profit" OR "cooperatives") AND "entrepreneur*" AND (Public Administration OR Education Educational Research OR Business OR Economics OR Management OR Social Sciences Interdisciplinary) (Web of Science Categories)

To ensure the robustness of the study, a set of inclusion and exclusion criteria was established. The inclusion criteria comprised: (1) documents addressing the intersection between university education, the social economy, and entrepreneurship; (2) publications indexed in the Web of Science within the selected subject categories; and (3) scientific articles, review papers, and book chapters.

The exclusion criteria included: (1) documents not directly related to the scope of the study; (2) records containing incomplete or inconsistent bibliographic information; and (3) duplicate entries identified during the data-cleaning process.

This strategy makes it possible to identify documents dealing with training, university education, and entrepreneurship in the context of the social economy, the third sector, nonprofit organizations, and cooperatives, within the selected thematic categories.

Table 1. Search strategy in Web of Science

Component	Terms used	Explanation
Main concept	"formation" OR "educatio*" OR "university"	Includes documents dealing with training, education in general, and universities
Context	"social economy" OR "third sector" OR "non-profit" OR "cooperatives"	Includes documents on social economy, the third sector, nonprofit organizations, and cooperatives
Focus	"entrepreneur*" OR "entrepreneur*" OR "non-profit*" OR "cooperatives"	Includes papers dealing with entrepreneurship (business, social, etc.)
WoS categories	Public Administration OR Education Educational Research OR Business OR Economics OR Management OR Social Sciences Interdisciplinary	Filters the results into the categories most relevant to the study

Selection and Cleaning of the Sample

After the initial extraction of documents, a cleaning process was carried out to remove duplicates and ensure the consistency and quality of the dataset. This process included manual review of titles, abstracts, and keywords, as well as verification of thematic category membership and language (Zupic & Čater, 2015).

Scientific articles, reviews, and book chapters were included, with no restriction on year of publication or type of document. The final sample is composed of documents that meet the inclusion criteria and have been processed in Microsoft Excel for preliminary analysis. Subsequently, the data have been exported to VOSviewer, software specialized in bibliometric analysis and network visualization (Van Eck & Waltman, 2010; Waltman & van Eck, 2019).

Bibliometric Analysis Techniques

Co-citation Analysis

Co-citation analysis identifies the most influential references and authors in the field of study, as well as the relationships between them (Small, 1973; Boyack & Klavans, 2010). This technique is based on the assumption that, if two works are frequently cited together, there is a thematic relationship between them. The co-citation analysis of authors and references helps visualize the intellectual structure of the field and detect the fundamental research cores (Ribeiro-Navarrete et al., 2023).

Bibliographic Linking

Bibliographic linking groups documents that share common references, indicating thematic similarities and allowing the identification of emerging trends and research fronts (Kessler, 1963; Zupic & Čater, 2015). This technique is particularly useful for analyzing recent developments in the field and detecting the most influential publications (Ribeiro-Navarrete et al., 2023).

Co-occurrence of Keywords

Keyword co-occurrence analysis explores the frequency and relationship between the terms used by authors to describe their work (Callon et al., 1983; Kraus et al., 2020). This technique makes it possible to identify the main themes and the most active areas of research, as well as the appearance of new trends and emerging concepts (Ribeiro-Navarrete et al., 2023).

Data Processing and Visualization

After cleaning and organizing the data in Excel, VOSviewer software was used to construct and visualize the co-citation, bibliographic linkage, and keyword co-occurrence networks (Van Eck & Waltman, 2010; Waltman & van Eck, 2019). VOSviewer allows for the representation of the elements (authors, journals, keywords) as nodes and the relationships between them as links, whose thickness and color indicate the intensity and nature of the connection (Perianes-Rodriguez et al., 2016).

In the generated maps, the size of the nodes reflects the relative importance of each element (e.g., number of citations or frequency of use), while the distance between nodes indicates the likelihood that they appear together. The clusters are identified by colors and allow different thematic or intellectual groups to be distinguished.

Results

The bibliometric analysis carried out is based on the extraction and processing of 311 results indexed in the Web of Science database, selected on the basis of the search strategy detailed in the methodology. This sample covers publications from 1982 to 2025, which allows for a longitudinal and global view of the relationship between training, social economy, the third sector, cooperatives, and entrepreneurship. The records analyzed include scientific articles, proceedings, and book chapters in English, Spanish, Russian, Slovak, and Chinese, ensuring an international and multidisciplinary coverage (Zupic & Čater, 2015; Donthu et al., 2021).

The data exploitation has been complemented with the VOSviewer software, which has allowed the construction of network maps and the identification of thematic and collaborative clusters, following the methodological recommendations of van Eck and Waltman (2010). The main results are presented below, structured around the axes of temporal

production, thematic areas, countries, keywords, co-citation, journals, institutions, and authors.

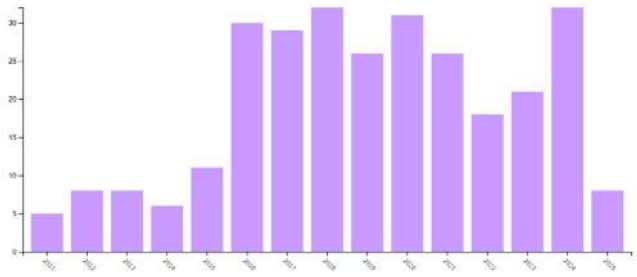
Evolution over Time of Scientific Production

A temporal analysis of scientific production shows a clear upward trend in publications addressing university education and social entrepreneurship, particularly since the second decade of the 21st century. This growth reflects a rising academic interest in the role of higher education as a driver for social innovation and sustainable development.

Beyond this quantitative expansion, the observed trend suggests an ongoing process of consolidation within the field, characterized by a transition from an initial exploratory phase towards a more structured and specialized research domain. The acceleration in publication output in recent years may be associated with the growing relevance of global challenges—such as social inequality, sustainability, and digital transformation—which have positioned social entrepreneurship as a key area of inquiry within higher education.

This evolution indicates not only an increase in research output, but also the progressive institutionalization of the field, as evidenced by the diversification of research topics, the emergence of specialized journals, and the expansion of international research networks.

Fig. 1. Annual evolution of publications ***(2011–2025)***



Source: Own elaboration using Web of Science (2025).

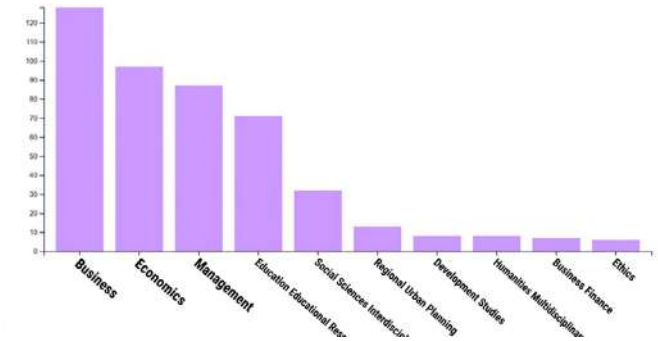
Distribution by Thematic Category

The sample shows a clear multidisciplinarity, with a predominance of the categories business (39.7%), economics (30.2%), management (26.8%), and education and educational research (22.5%). Interdisciplinary social sciences and public administration also stand out, confirming the transversality of the field.

Beyond the descriptive distribution of categories, these findings highlight the convergence of diverse disciplinary perspectives in addressing complex social challenges. The intersection between education and business-related fields suggests that social entrepreneurship is conceptualized not only as an economic or organizational phenomenon, but also as a pedagogical and transformative process within higher education.

This multidisciplinarity indicates that the field is characterized by the integration of theoretical and methodological approaches derived from multiple domains, thereby reinforcing its interdisciplinary nature. Such convergence also explains the diversity of research topics and the emergence of thematic clusters that combine elements of innovation, social impact, and educational transformation.

Fig. 2. Distribution by WoS categories



Source: Own elaboration using Web of Science (2025).

Table 2. Distribution by WoS categories

WoS category	Number of documents	Percentage of total
Business	129	39.7%
Economics	98	30.2%
Management	87	26.8%
Education and educational research	73	22.5%
Interdisciplinary social sciences	32	9.8%
Public administration	14	4.3%

This diversity reinforces the idea that social entrepreneurship and the social economy are complex phenomena that require integrated approaches from management, economics, education, and public policy (Defourny & Nyssens, 2010; Mair & Martí, 2006).

Country Analysis and International Collaboration

The geographical distribution of scientific production reveals the existence of several interconnected clusters of countries, thereby highlighting the global character of research on university education and social entrepreneurship. The visualization identifies both leading countries with a high volume of publications and emerging contributors that are

progressively integrating into the international research network.

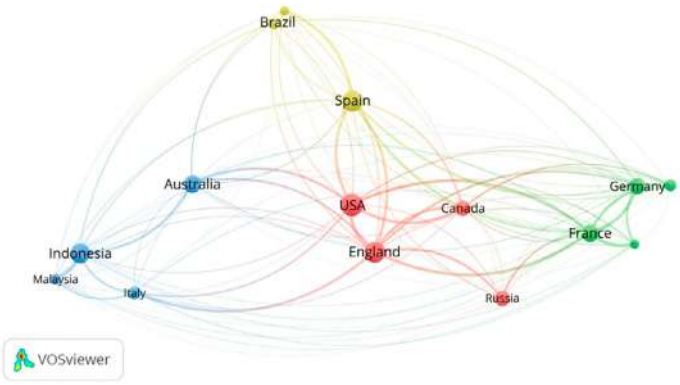
The United States leads in terms of publication output (42 documents, representing 12.9% of the total), followed by Spain (30; 9.2%), England (28; 8.6%), China (26; 8%), and Canada (15; 4.6%).

Beyond this descriptive distribution, the findings suggest a concentration of scientific production in specific regions, particularly in countries characterized by strong academic infrastructures and well-established research systems. At the same time, the presence of multiple clusters indicates the existence of collaborative networks that facilitate knowledge exchange and the dissemination of research across diverse geographical contexts.

The structure of these networks reflects both the global expansion of the field and the persistence of asymmetries in knowledge production. While certain countries function as central nodes that shape the research agenda, others occupy more peripheral positions, contributing to the diversification of perspectives and contextual approaches.

These patterns underscore the importance of international collaboration, while also highlighting the need to strengthen interregional connections in order to promote a more inclusive and globally representative research landscape.

Fig. 3. International collaboration network between countries



Source: Own elaboration using VOSviewer (2025).

Table 3. International collaboration network between countries (VOSviewer)

Country	Documents	Dating	Average appointments
USA	42	582	15.3
Spain	30	243	8.4
England	28	469	16.8
Canada	15	373	24.9
France	12	220	18.3
Brazil	6	121	20.2
Indonesia	14	20	1.4
Germany	10	175	17.5
Italy	10	34	3.4
Australia	9	81	9.0

The visualization shows four major geographical clusters: the English-speaking cluster (the USA, England, Canada, Australia), the continental European cluster (France, Germany, and Italy), the Spanish-Luso-Brazilian cluster (Spain, Brazil, and Portugal), and an Asian cluster (Indonesia, Malaysia, and China). The density of links between countries reflects the existence of intense international collaborations, especially between the USA, England, Spain, and France, which reinforces the global dimension of the field (Gaviria-Marin et al., 2018).

Keyword Analysis and Thematic Trends

The keyword co-occurrence analysis reveals the existence of three major thematic clusters, reflecting the conceptual structure and principal research priorities within the field of university education and social entrepreneurship.

The first cluster is primarily associated with management, innovation, and entrepreneurial dynamics. It encompasses keywords related to business models, innovation processes, and organizational performance, highlighting the role of social entrepreneurship as a mechanism for generating sustainable and scalable solutions. This cluster reflects the influence of management and business research traditions, in which efficiency, innovation, and value creation constitute central analytical dimensions.

The second cluster is closely linked to university education and training processes. It includes terms associated with higher education, learning methodologies, competencies, and educational innovation. This cluster underscores the role of universities as key actors in fostering social entrepreneurship, in line with the literature on training, experiential lear-

ning, and the development of entrepreneurial intention and social competencies.

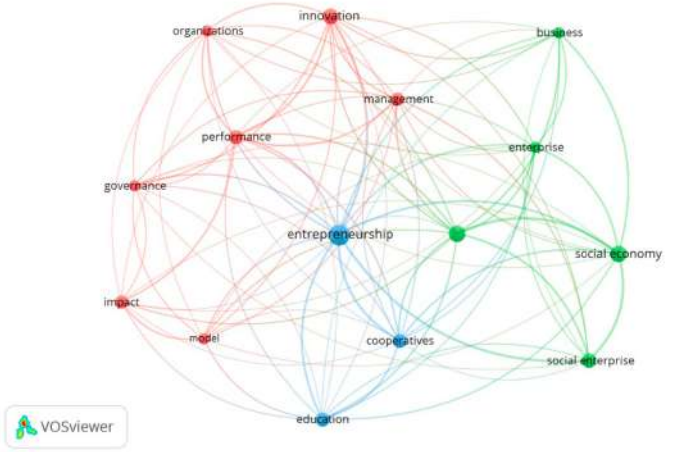
The third cluster focuses on social impact, governance, and the broader societal dimension of entrepreneurship. It incorporates concepts related to social value, sustainability, and institutional frameworks, thereby reflecting the normative and impact-oriented nature of the field. This perspective emphasizes the importance of addressing societal challenges and generating positive outcomes that extend beyond purely economic performance.

This configuration confirms both the hybrid and interdisciplinary character of the field and its evolution towards increasingly integrated approaches that combine innovation, education, and social transformation.

Table 4. Keyword co-occurrence

Keyword	Occurrences	Average citations
Entrepreneurship	63	14.2
Social economy	32	2.3
Cooperatives	23	4.5
Education	23	4.0
Management	20	27.4
Innovation	29	17.7
Performance	23	6.4
Social enterprise	25	13.4
Business	14	7.4

Fig. 4. Keyword co-occurrence map



Source: *Own elaboration using VOSviewer (2025)*

As for the thematic clusters, the keyword co-occurrence analysis reveals three major robust clusters. The first, focused on management and innovation in the social economy, groups together terms such as "innovation," "management," "performance," "governance," and "organizations," indicating a concern for the processes of transformation and improvement of organizations in the sector. The second cluster is articulated around organizational models and university education, connecting key words such as "entrepreneurship," "education," and "cooperatives" and reflecting the importance of training and knowledge transfer in the consolidation of new practices. The third cluster, focused on social impact and governance, integrates terms such as "social economy," "social enterprise," "business," and "enterprise," highlighting the interest in measuring and enhancing the social value generated by these initiatives. This thematic structure reflects the complexity and richness of the field, as well as the emergence of new lines of research on hybrid models, social innovation, and the role of the university in social transformation (Mair & Martí, 2006; Dacin et al., 2011).

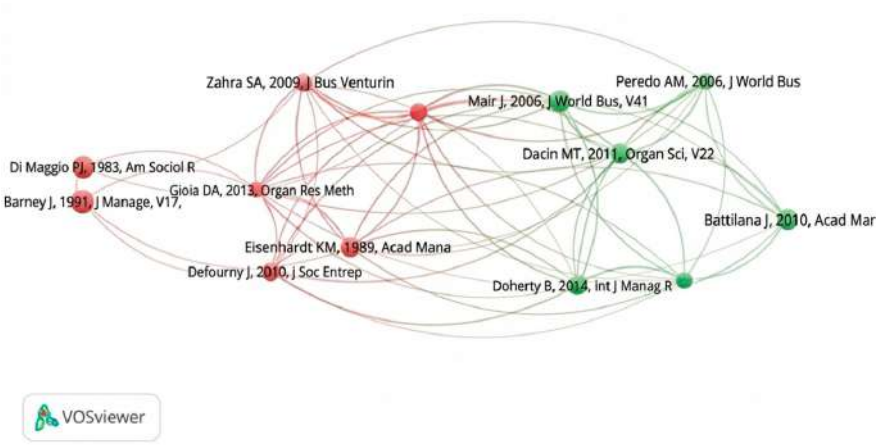
This interaction suggests that the field is structured around a dynamic relationship between knowledge generation (education), value creation (innovation), and societal impact (governance), thereby reinforcing the conception of social entrepreneurship as a hybrid and integrative domain.

Beyond their individual characteristics, these clusters are not isolated but rather deeply interconnected. The management and innovation dimension provides the tools and processes necessary for the development of entrepreneurial initiatives, whereas the educational cluster highlights the role of universities in fostering the competencies required to implement such innovations. Simultaneously, the social impact and governance cluster situates these activities within a broader societal framework, ensuring that entrepreneurial practices remain aligned with social value creation and sustainability.

Co-citation Analysis of References and Authors

The co-citation analysis identifies the most influential works and authors. References by Zahra et al. (2009), Mair and Martí (2006), Dacin et al. (2011), Battilana et al. (2010), Peredo and Chrisman (2006), and Defourny and Nyssens (2010), which have laid the theoretical foundations on social entrepreneurship, organizational hybridization, and social economy, stand out.

Fig. 5. Reference co-citation map based on VOSViewer software



Source: *Own elaboration using VOSviewer (2025).*

The two main clusters are:

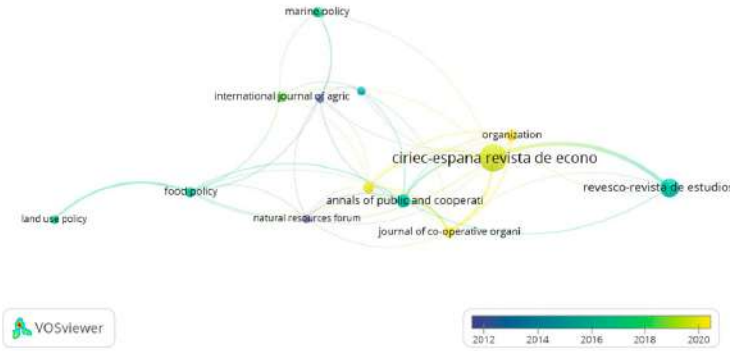
- One focused on organizational theory and innovation in the third sector (Zahra, Mair, Dacin, and Battilana).
- Another focused on social impact, governance, and hybrid models (Defourny, Peredo, and Doherty).

Overall, the co-citation analysis reveals a mature and consolidated intellectual structure, where organizational, management, social innovation, and public policy approaches converge. The centrality of certain authors and references is another of the pillars that sustain the intellectual development of the field. The works of Mair and Martí (2006), Dacin et al. (2011), Zahra et al. (2009), Defourny and Nyssens (2010), and Battilana et al. (2010; 2014) stand as fundamental references, widely cited and used as a starting point for further research. The analysis of co-citation of references reveals the existence of two main currents: one oriented toward innovation and the management of hybrid organizations and the other focused on the social impact, governance, and institutionalization of the social economy. The linking strength and number of citations of these papers confirm their central role in the conceptual and methodological construction of the area, in line with Small (1973) and Zupic and Čater (2015).

Analysis of Journals and Bibliographical Sources

The bibliographic linkage and citation analysis shows that the most relevant journals are *CIRIEC—España Revista de Economía Pública, Social y Cooperativa*, REVESCO—*Revista de Estudios Cooperativos*, the *Journal of Social Entrepreneurship*, and *Entrepreneurship and Sustainability Issues*.

Fig. 6. Bibliographic linkage map of journals



Source*: Own elaboration using VOSviewer (2025).*

Table 5. Bibliographic linkage map of journals

Journal	Papers	Citations
CIRIEC—España Revista de Economía Pública, Social y Cooperativa	6	10
REVESCO—Revista de Estudios Cooperativos	7	14
Journal of Social Entrepreneurship	6	23
Entrepreneurship and Sustainability Issues	6	27

The temporal analysis shows that the most recent production is concentrated in specialized journals, which is evidence of a greater thematic specialization and consolidation of the field (Defourny & Nyssens, 2010).

Discussion

Interpretation of the Results

The results of the bibliometric analysis reveal a steady and accelerated growth in scientific production related to social entrepreneurship in higher education. From 2010 onward, a significant increase is observed, indicating the academic recognition of this topic as an emerging area of study and institutional practice.

These findings confirm the progressive consolidation of the field, both in terms of research output and in its conceptual and thematic structuring.

In thematic terms, the keyword co-occurrence analysis highlights a strong focus on active pedagogical approaches such as project-based learning (PBL), blended learning, service-learning, and social innovation labs. These strategies are connected to key competencies such as empathy, creativity, collaboration, and ethical responsibility—skills aligned with the current educational priorities of sustainability, inclusion, and social transformation.

The clustering of topics shows a progressive consolidation of research lines focused on educational innovation, interdisciplinarity, digitalization, and green entrepreneurship. These trends reinforce the relevance of designing learning programs oriented toward the common good and capable of addressing complex challenges through contextualized and collaborative solutions.

Author Analysis and Co-citation Networks

The co-citation analysis identifies the most influential authors in the field of social entrepreneurship education. Notably, authors such as Mair and Martí, Battilana and Lee, Fayolle and Gailly, and Nabi et al. are consistently cited as foundational references. Their works contribute to a hybrid theoretical approach that integrates entrepreneurial competence, social innovation, and ethical leadership.

Structurally, several clusters of authors reflect active collaborative networks. One cluster focuses on critical pedagogy and educational innovation; another emphasizes the evaluation of entrepreneurial intention and competency frameworks; and a third examines the institutionalization of social entrepreneurship within the university ecosystem. These author networks not only map the field's dominant perspectives but also reveal potential synergies across academic communities.

Institutional Analysis and Academic Collaboration

The institutional analysis shows a notable concentration of scientific output among universities in Western Europe and Latin America. Institutions from Spain, the UK, Mexico, Brazil, and Colombia are among the most active in publishing research on social entrepreneurship education.

This concentration reflects both a strong academic commitment to the social economy in these regions and the presence of favorable public policy frameworks, interuniversity networks, and funding opportunities that encourage applied research and social knowledge transfer. Co-authorship and joint publication patterns also demonstrate international academic collaboration, reinforcing the role of cross-border partnerships in advancing educational innovation.

However, this geographic concentration also highlights the underrepresentation of institutions from sub-Saharan Africa, Central Asia, or Eastern Europe, pointing to a future opportunity to expand epistemic inclusion and regional diversity in global research and cooperation efforts.

Theoretical and Practical Implications

From a theoretical perspective, the results confirm that university-based social entrepreneurship is a field with a solid conceptual foundation, but one that still undergoing expansion and diversification. Its multidisciplinary nature requires integrative and flexible frameworks that combine theories from educational innovation, social economy, and transformative learning. The consolidation of shared references enables a stronger alignment between academic discourse and educational practice.

In practical terms, the study confirms the effectiveness of active and participatory teaching methods in developing entrepreneurial competencies oriented toward social change. These pedagogical practices must be supported by institutional strategies that ensure curricular integration, long-term sustainability, and alignment with broader university social responsibility policies.

Furthermore, the increasing importance of digital competencies, interdisciplinary collaboration, and university–community engagement introduces new challenges for curriculum design and impact assessment. Institutionalizing these approaches requires academic leadership, faculty development, and a strategic vision that incorporates social entrepreneurship as a core dimension of the university's social mission.

Recent bibliometric evidence suggests that digitalization, one of the main emerging trends in social entrepreneurship education, is evolving toward the strategic integration of artificial intelligence (AI) tools. Generative AI (Dwivedi & Al-Banna, 2025) offers opportunities for personalized learning, enhanced collaboration, and sustainability-oriented innovation. Future studies could explore how these technologies contribute to developing competencies for social entrepreneurship and the social economy within higher education ecosystems.

Limitations and Future Research Directions

While this study provides a comprehensive overview of academic production in the field, it is limited by its reliance on a single database (Web of Science) and the use of bibliometric methods, which do not account for qualitative content or programmatic outcomes.

Future research could address these limitations by:

- Exploring case studies and mixed-method approaches to assess the real impact of training programs on students and communities.
- Developing standardized tools and indicators to evaluate competencies and social impact outcomes.
- Comparing regional and institutional models to identify success factors and transferable practices.

- Investigating the role of digital transformation and emerging technologies in shaping social entrepreneurship training.

- Examining the long-term trajectories of graduates and their involvement in social innovation ecosystems.

These directions would contribute to a deeper understanding of how higher education can strengthen its social mission through meaningful, inclusive, and forward-looking training models.

Conclusions

Social entrepreneurship education has emerged as a strategic dimension within higher education, contributing to the development of ethical, innovative, and socially committed professionals. This study, through bibliometric analysis, has confirmed the academic consolidation of the field and the growing interest in pedagogical strategies that integrate active learning, interdisciplinary collaboration, and real-world engagement.

Universities are increasingly recognized not only as institutions that transmit knowledge but also as agents of social transformation capable of responding to local and global challenges. The training strategies identified—ranging from project-based learning to digital tools and sustainability initiatives—demonstrate the potential of education to foster civic responsibility, leadership, and social impact.

Nonetheless, challenges persist, including limited curricular integration, lack of standardized impact assessment methods, and institutional fragmentation. Addressing these issues will require a coordinated effort from academic leadership, faculty, and policy-makers to scale up best practices and embed social entrepreneurship more systematically in educational frameworks.

The findings of this research support the notion that social entrepreneurship education is not an isolated or temporary trend but rather a fundamental pillar for building a more inclusive, sustainable, and value-driven university model. Strengthening this educational approach is key to training the next generation of professionals committed to building a better society.

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