

Review article


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University Management and Student Entrepreneurship: A Review of Recent Literature in the Scopus Database

Gestión universitaria y emprendimiento estudiantil: un análisis de la literatura reciente en la base de datos Scopus

Gestão Universitária e Empreendedorismo Estudantil: Uma Revisão da Literatura Recente na Base de Dados Scopus

Abstract

Introduction: university management and student entrepreneurship are increasingly relevant topics in higher education, as institutions must go beyond mere academic instruction to forge visionary leaders and transformative agents of reality. **Objective:** the main objective of this study is to analyze the current state of university management and its influence on student entrepreneurship. **Methodology:** a two-stage methodological approach was employed. In the first stage, a bibliometric analysis of relevant literature in the Scopus database was conducted during the period 2019-2024, to identify the main trends and patterns in research. In the second stage, an integrative synthesis of the most relevant articles was carried out, and their contributions to the field were critically evaluated. **Results:** the results highlight the growing importance of the entrepreneurial university concept and the need to transform university management to effectively support student entrepreneurship. **Conclusion:** this study provides a comprehensive and critical view of current practices and offers recommendations for the implementation of educational policies and organizational changes that enhance the entrepreneurial capacity of higher education institutions

Keywords: higher education, educational policies, entrepreneurship

Resumen

Introducción: la gestión universitaria y el emprendimiento estudiantil son temas cada vez más relevantes en la educación superior, ya que las instituciones deben ir más allá de la mera instrucción académica para forjar líderes visionarios y agentes transformadores de la realidad. **Objetivo:** Analizar el estado actual de la gestión universitaria y su influencia en el emprendimiento estudiantil.

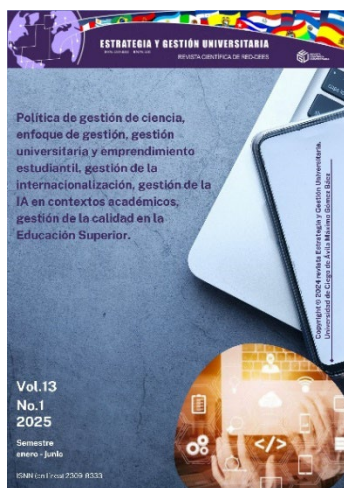
Metodología: se empleó un enfoque metodológico de revisión teórica dividido en dos etapas. En la primera etapa, se realizó un análisis bibliométrico de la literatura relevante en la base de datos Scopus durante el período 2019-2024, para identificar las principales tendencias y patrones en la investigación. En la segunda etapa, se llevó a cabo una síntesis integrativa de los artículos más relevantes y se evaluó críticamente sus contribuciones al campo. **Resultados:** los resultados destacan la creciente importancia del concepto de universidad emprendedora y la necesidad de transformar la gestión universitaria para fomentar un entorno que apoye efectivamente el emprendimiento entre los estudiantes. **Conclusión:** este estudio proporciona una visión comprensiva y crítica de las prácticas actuales y ofrece recomendaciones para la implementación de políticas educativas y cambios organizacionales que potencien la capacidad emprendedora de las instituciones de educación superior.

Palabras clave: educación superior, políticas educativas, emprendimiento

Resumo

Introdução: a gestão universitária e o empreendedorismo estudantil são temas cada vez mais relevantes na educação superior, pois as instituições devem ir além da mera instrução acadêmica para forjar líderes visionários e agentes transformadores da realidade. **Objetivo:** o objetivo principal deste estudo é analisar o estado atual da gestão universitária e sua influência no empreendedorismo estudantil. **Metodologia:** foi empregada uma abordagem metodológica dividida em duas etapas. Na primeira etapa, foi realizado uma análise bibliométrica da literatura relevante na base de dados Scopus durante o período 2019-2024, para identificar as principais tendências e padrões na pesquisa. Na segunda etapa, foi realizada uma síntese integrativa dos artigos mais relevantes e suas contribuições ao campo foram avaliadas criticamente. **Resultados:** os resultados destacam a crescente importância do conceito de universidade empreendedora e a necessidade de transformar a gestão universitária para fomentar um ambiente que apoie efetivamente o empreendedorismo entre os estudantes. **Conclusão:** este estudo proporciona uma visão compreensiva e crítica das práticas atuais e oferece recomendações para a implementação de políticas educacionais e mudanças organizacionais que potencializem a capacidade empreendedora das instituições de educação superior.

Palavras-chave: ensino superior, políticas educacionais, empreendedorismo



Introduction

The increasing complexity of the global environment has driven universities to reevaluate their management models and their role in fostering student entrepreneurship. Due to this new scenario, higher education institutions can no longer limit themselves on being mere transmitters of knowledge; instead, they are required to become catalysts of innovation and economic development (Cardeno-Portela et al., 2023; Monzón Pinglo et al., 2023; Pérez Gamboa & Sánchez Castillo, 2024).

Changes of the paradigm in the university sphere responds to an increasingly pressing demand from society and businesses seeking to attract workers capable of undertaking projects with transformative impacts on their communities and sectors of activity. The notion of the entrepreneurial university gains unprecedented relevance as it challenges conventional teaching and learning structures and proposes an educational model that goes beyond mere academic instruction to forge visionary leaders and transformative agents of reality in this context (Gurney & Grossi, 2021; Ruiz et al., 2020).

This new educational vision posits that universities must not only teach specialized knowledge to their students but also have the responsibility to prepare them to assume leadership roles in the business and social spheres (Eslava-Zapata et al., 2023). However, implementing this innovative approach requires a profound transformation in university management, which must be capable of coherently integrate cutting-edge strategies in innovation, solid support networks, and dynamic educational policies that foster and sustain this new entrepreneurial mindset (Eslava-Zapata et al., 2024).

Research background in this context highlights the urgent need to explore the main trends in university management and its role in student entrepreneurship (Schimperna et al., 2021). For this reason, this article seeks to provide a detailed analysis of university management and its influence on student entrepreneurship, with an emphasis on educational policies and the organizational changes necessary to foster an effective entrepreneurial environment. This analysis is crucial since the ability of universities to adapt to current environmental demands and support their students in creating new ventures will significantly impact their competitiveness and relevance in the future.

Methodology

To fulfill the research objectives, a two-stage methodological approach was clearly defined: a bibliometric analysis and an integrative synthesis of the most relevant articles on university management and student entrepreneurship during the 2019-2024 period. This combined methodology provided a comprehensive and in-depth perspective on trends and developments in university management and student entrepreneurship, forming a solid foundation for future research and policy formulation in this field (Sánchez Castillo et al., 2024).

Stage 1: Bibliometric Analysis

The bibliometric analysis consisted of identifying trends and patterns in research on university management and student entrepreneurship during the 2019-2024 period. This statistical analysis allows understanding the evolution of publications, as well as the relevance and impact of works in this field. The methodology for this stage was developed in the following steps:

Database Selection: The Scopus database was used due to its broad scope and relevance in scientific literature. Scopus was selected because it is one of the largest databases of peer-reviewed literature abstracts and citations.

Searching Criteria: The searching was limited to the period between 2019 and 2024. Keywords such as "university management," "student entrepreneurship," "entrepreneurial university," and "higher education" were used, combined with Boolean operators to ensure result relevance.

Data Extraction: Retrieved articles were filtered by relevance, citations, and belonging to high-impact indexed journals. Data was collected on the number of annual publications, most productive authors, journals with the highest number of publications, and citations received.

Data Analysis and Visualization: Bibliometric data was analyzed using VOSviewer and Bibliometrix, tools that allow visualization of co-citation networks, author collaboration, and keyword analysis. This helped identify the main research lines and emerging trends in the field.

Stage 2: Integrative Synthesis

Following the bibliometric analysis, an integrative synthesis was conducted to consolidate and evaluate in-depth the findings of the most relevant articles. This stage focused on extracting qualitative information to complement the quantitative results of the bibliometric analysis.

Articles selection: Based on the bibliometric analysis, the 250 most-cited articles and those presenting significant contributions to the field were selected. Selection criteria included methodological quality, theoretical relevance, and contribution to the development of policies and practices in university management and student entrepreneurship.

Critical Analysis: A critical analysis of each selected article was conducted, identifying methodological approaches, main findings, limitations noted by the authors, and implications for practice in universities. This analysis synthesized best practices and management models that favor student entrepreneurship.

Results Integration: The critical analysis results were integrated to provide a holistic view of the current state of knowledge in the field. The integrative synthesis focused on identifying convergences and divergences in the literature, as well as areas requiring further research.

Ethical considerations and limitations

Throughout the process, integrity and transparency in the articles selection and analysis were ensured. Additionally, inherent limitations of the bibliometric approach, such as dependence on the quality of database records and the potential

exclusion of relevant studies not indexed in Scopus, are acknowledged (King et al., 2020; Wang et al., 2019).

Results and discussion

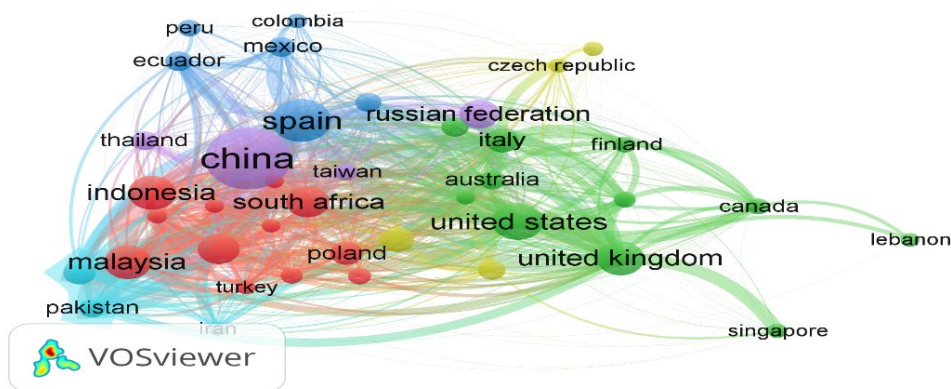
The bibliometric analysis reveals a dynamic landscape concerning academic research on university management and student entrepreneurship. The year-by-year analysis shows significant fluctuations in scientific production. In 2019, 86 publications were recorded, marking the beginning of growing interest in the topic. This interest peaked in 2022 with 121 publications, reflecting a steady increase in attention to university management and student entrepreneurship.

In 2021, a first peak with 113 publications indicates a crucial moment when the topic began gaining greater relevance in the academic community. However, in subsequent years, a slight declination in academic production is evident, with 101 publications in 2023 and 82 in 2024. Despite this downward trend in recent years, the topic remains central to study and debate in various academic contexts.

When analyzing the most prominent countries in these research, nations such as the United Kingdom, China, Spain, Indonesia, United States, and Russia stand out (see Figure 1). These countries have collaborated and contributed significantly to the literature on university management and student entrepreneurship by offering diverse perspectives and approaches to the academic discussion (see Figure 2).

Figure 1

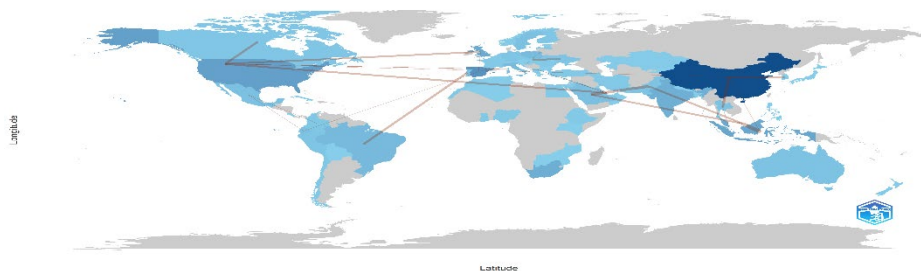
Countries most involved in research in this field



Source: VOSviewer.

Figure 2

Country collaboration map

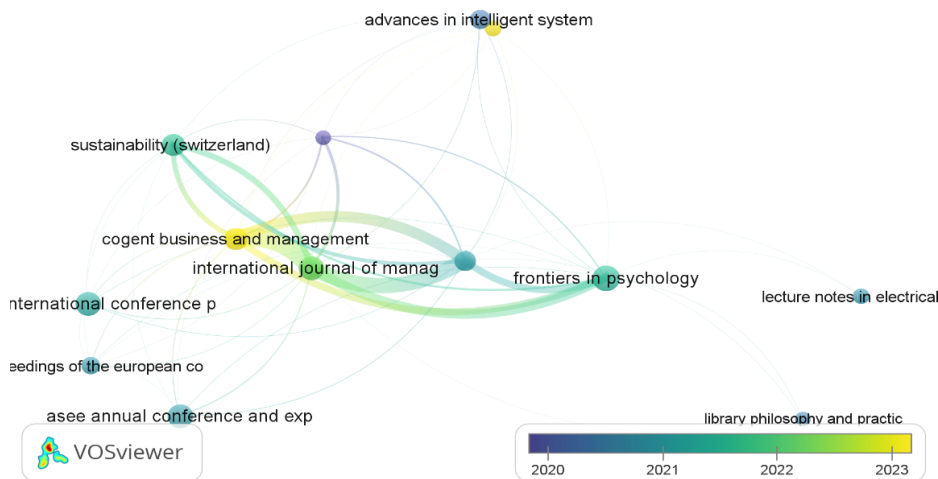


Source: Bibliometrix.

Regarding the most prolific journals in this field, publications such as *Frontiers in Psychology*, *Cogent Business and Management*, *Sustainability*, *International Journal of Management Education*, and *ACM International Conference Proceeding Series* stand out. These journals have served as important platforms for disseminating relevant research in university management and student entrepreneurship (see Figure 3).

Figure 3

Interrelation between journals addressing the topic



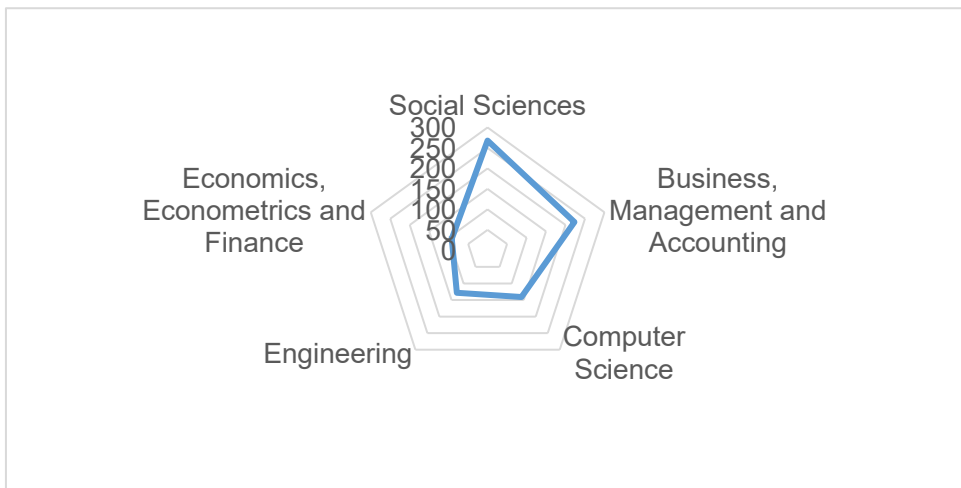
Source: VOSviewer.

The predominant areas in which this phenomenon has been studied are social sciences and business management (see Figure 4). These disciplines have provided a solid theoretical framework for addressing issues related to the entrepreneurial university, factors of entrepreneurial intention, and entrepreneurship education. The main keywords marking research in this field include students, entrepreneurship, sustainability, higher education, knowledge management, and educational engineering (see Figures 5 and 6).

Based on the analysis of the keywords, it is observed that academic research shows a growing interest in the entrepreneurial university that fosters the integration of an entrepreneurial culture within the university environment. This analysis identifies trends in motivational factors influencing entrepreneurial intention and highlights the importance of education for entrepreneurship.

Figure 4

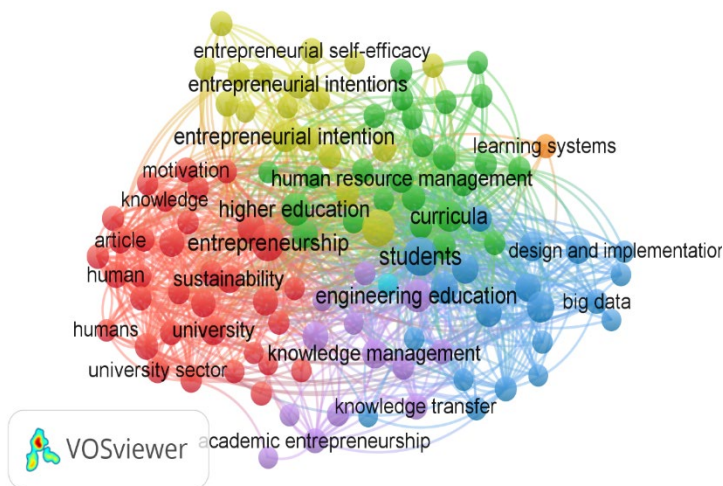
Principal research areas



Source: by the author.

Figure 5

Principal terms in the study of university governance and student entrepreneurship



Source: VOSviewer.

This analysis is pivotal in advancing the field of university management and student entrepreneurship, identifying new research avenues (see Figure 7). It enriches the academic discourse and informs the development of more effective policies. By understanding the key trends in this area, we can foster an entrepreneurial university and cultivate an entrepreneurial mindset among students to address contemporary and future labor market challenges (Etzkowicz et al., 2021).

Figure 6

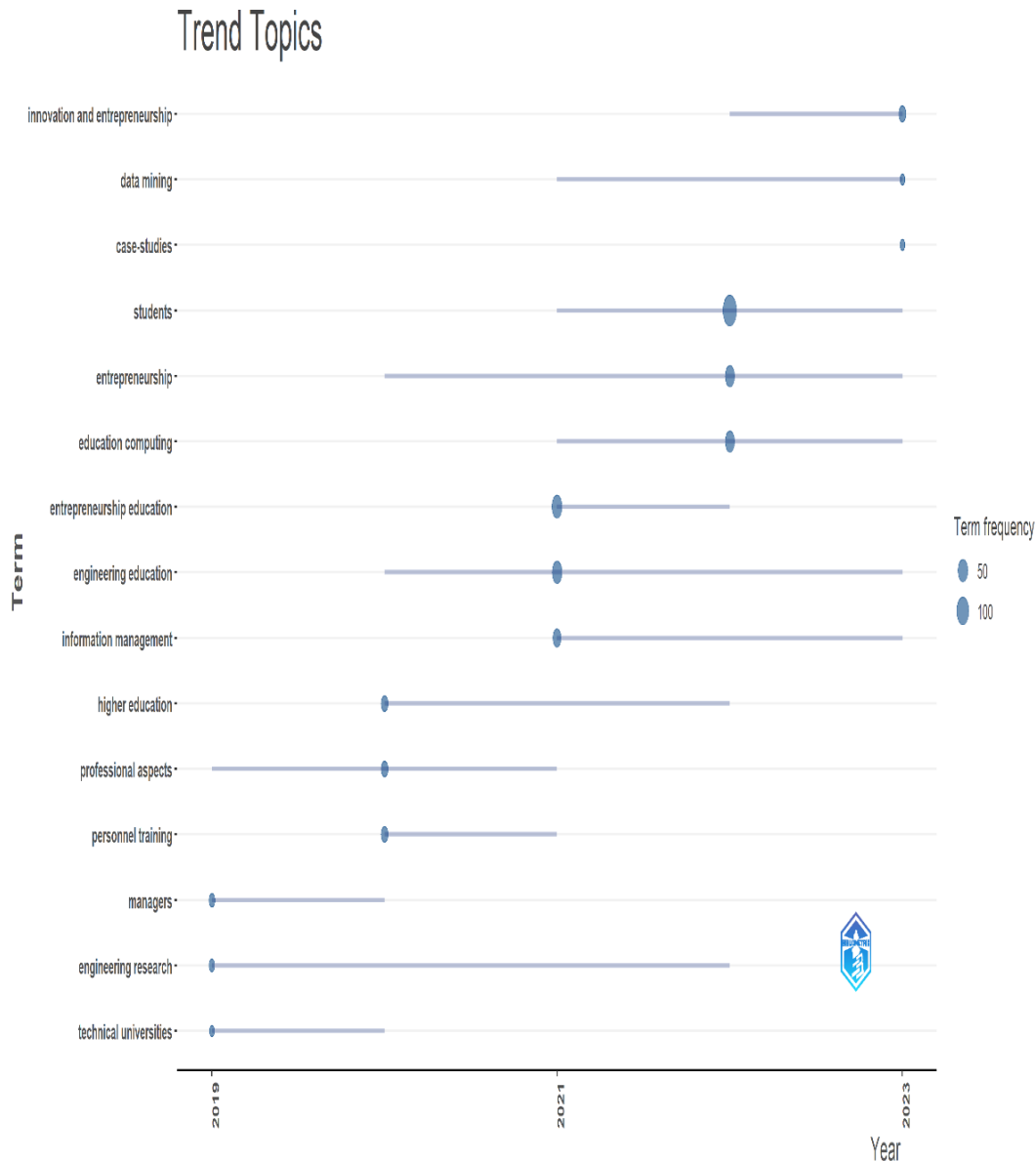
Branching map of keywords used



Source: Bibliometrix.

Figure 7

New research topics in university management and student entrepreneurship



Source: Bibliometrix.

Entrepreneurial university: Innovations for Entrepreneurship Education

This section underscores the transformative shift towards entrepreneurial

universities, which involves more than just adding entrepreneurship courses. It entails the creation of supportive ecosystems that nurture innovation and empower students to become entrepreneurs (Ripoll-Rivaldo, 2023; Morozova & Ivanov, 2019).

The consulted literature confirms that universities adopt innovative interdisciplinary approaches that combine theory with practice and the use of didactic tools such as business simulations, mentoring, and open innovation projects to prepare students for entrepreneurship challenges in the 21st century. This allows students to develop essential skills such as problem-solving, leadership, decision-making, and risk management, which are fundamental for success in the business world (Boldureanu et al., 2020; Hahn et al., 2019).

In addition to, entrepreneurial universities create dynamic and collaborative learning environments that foster interaction between students, entrepreneurs, and business people, and enable the exchange of ideas and experiences. This allows students to develop an entrepreneurial mindset and innovative vision that enables them to address future challenges with confidence and creativity (Pérez Gamboa & Sánchez Castillo, 2024).

Factors that Influence and Condition Entrepreneurial Intention

Another point of analysis emerging from the bibliometric review is that entrepreneurial intention in university students has been the subject of several comprehensive studies that have identified a variety of contextual, motivational, and personal factors. These elements significantly influence students' decisions to start their own businesses (Li et al., 2022).

Specifically among these contextual factors are the economic environment, access to resources, and the availability of business opportunities. A favorable economic environment, with a growing economy and demand for innovation, can foster entrepreneurial intention among students. Furthermore, access to resources such as financing, incubators, and accelerators can also positively influence students' decisions to become entrepreneurs (Bazan et al., 2020; Gómez Miranda, 2022).

On the other hand, motivational factors include the need for achievement, autonomy, and personal fulfillment. The need for achievement and the ambition to reach goals can drive students to seek entrepreneurial opportunities. Autonomy and freedom to make decisions can also motivate students to become entrepreneurs, as it allows them to have control over their own path and destiny. Personal fulfillment and the search for a professional identity can also influence students' entrepreneurial intention (Hassan et al., 2021; López Rodríguez del Rey et al., 2024).

Additionally, personal characteristics such as risk tolerance, self-confidence, and creativity also play a fundamental role in entrepreneurial intention. Risk tolerance and willingness to take on challenges can allow students to overcome obstacles and move forward with their entrepreneurial ideas. Self-confidence and belief in their own abilities and capabilities are also essential for students to feel comfortable in entrepreneurship. Creativity and the ability to innovate are also fundamental to developing innovative and competitive solutions (Noroña González et al., 2023; Sun et al., 2020).

The most prominent authors in this field emphasize that it is important to highlight that the interaction between these factors is complex and can vary according to context and culture. This analysis matrix becomes clear when conceiving that entrepreneurial universities can positively influence students' entrepreneurial intention by providing them with an environment conducive on developing entrepreneurial skills and competencies. Educational institutions can understand these factors better by designing effective programs and strategies to foster entrepreneurial intention and support students on their path to business success (Lu et al., 2021; Lv et al., 2021).

The Importance of Entrepreneurship Education

The bibliometric analysis reveals that entrepreneurship education has experienced significant growth in the last two decades, with a notable increase in the number of publications and citations since 2019. This trend reflects the growing interest in entrepreneurial education as a way to prepare students for the challenge of entrepreneurship and innovation in the 21st century (López-González, 2023).

The consulted studies show that entrepreneurship education programs can positively influence students' entrepreneurial mindset, fostering creativity, innovation, and risk-taking (Handayati et al., 2020; Wardana et al., 2020). However, other authors highlight that entrepreneurship education programs can also provide students with the necessary skills and competencies to develop and launch their own businesses, which can have a positive impact on the economy and society in general (Brüne & Lutz, 2019; Carpenter & Wilson, 2021).

In addition, the studies also emphasize the need for deeper research on how these programs affect long-term entrepreneurial behavior. It is important to understand how entrepreneurship education programs can influence students' entrepreneurial intention, as well as their ability to overcome the challenges and obstacles that entrepreneurs face. Furthermore, it is fundamental to investigate how entrepreneurship education programs can be designed and improved to have a more significant impact on entrepreneurial behavior and business success (Ahmed et al., 2020; Zhang et al., 2022).

Among the aspects that should be investigated in depth are the effectiveness of different teaching approaches and methods, the importance of practical experience and project-based learning, and the relationship between entrepreneurship education and the development of specific skills and competencies, such as problem-solving, decision-making, and risk management (Ricardo Jiménez, 2022).

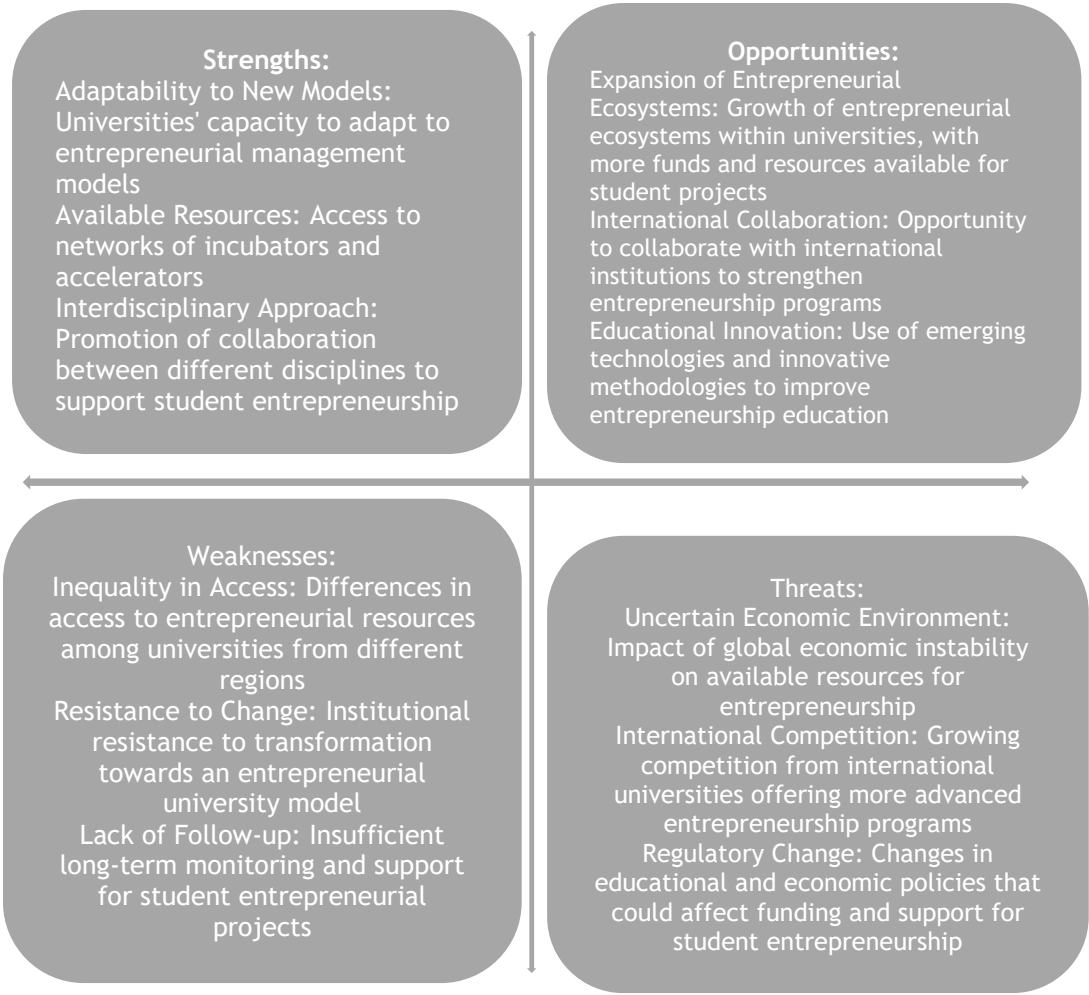
The SWOT matrix presented in Figure 8 focuses on the previously proposed units of analysis and is aimed at university management specialists as a fundamental tool for researchers and professionals seeking to understand and improve entrepreneurship education. This matrix allows for the identification and analysis of the weaknesses, threats, strengths, and opportunities found in the university environment that influence entrepreneurship education.

These aspects are crucial for designing and implementing effective programs and strategies that foster entrepreneurial intention and business success. By analyzing this matrix, researchers and professionals can identify areas for

improvement and growth opportunities, and develop strategies to overcome weaknesses and threats, and take advantage of strengths and opportunities. In this way, the SWOT matrix becomes a valuable tool to improve entrepreneurship education and fostering the development of entrepreneurial skills and competencies in students, which can have a positive impact on the economy and society in general.

Figure 8

SWOT Matrix for University Management Specialists



Source: by the author.

As observed, the development of educational policies that promote student entrepreneurship and the necessary organizational change in universities requires a comprehensive and strategic approach. However, several authors emphasize that this approach must not overlook the transformation of organizational structure and university culture to promote an environment that supports innovation and the creation of new businesses by students (Cunningham & Menter, 2022; Lv et al.,

2022).

In this sense, the incorporation of entrepreneurship programs into the curriculum, support for interdisciplinary education, and the creation of support networks are key strategies to promote student entrepreneurship. These educational policies have shown tangible evidence in increasing student participation in entrepreneurial activities and improving their entrepreneurial skills and competencies, which in turn can have a positive impact on the economy and society (Cui, 2021; Núñez-Canal et al., 2023).

However, other authors highlight that for these educational policies to be effective, universities need to undergo a profound organizational change. This implies adopting a culture that values innovation and calculated risk, which in turn enables the transformation of universities towards entrepreneurial university models (Hende et al., 2022; Palumbo & Manna, 2019).

This way, universities can create business incubators, coworking spaces, and innovation laboratories within campus, providing students with the necessary resources and environment to develop and test their ideas. Furthermore, this cultural transformation can foster collaboration between departments and faculties, enabling greater interdisciplinarity and a broader offering of courses and programs that integrate entrepreneurship (Pellegrini & Johnson-Sheehan, 2020).

Another point of analysis focuses on considering continuous faculty training as a fundamental link for implementing effective educational policies. In this regard, teacher training programs should include workshops and updated courses in entrepreneurship, enabling teachers to be trained in the latest trends and technologies in entrepreneurship. Additionally, they will also be able to acquire innovative pedagogical methodologies that foster critical thinking and creativity in students (Díaz-Guerra et al., 2023; Igwe et al., 2022).

Thus, teachers can provide students with the necessary guidance and support to develop their entrepreneurial skills and competencies. Furthermore, continuous faculty training can foster innovation and experimentation in teaching, which can lead to the creation of new teaching and learning models that are more effective for students (Iglesias-Sánchez et al., 2019; Mico & Cungu, 2023).

On the other hand, several authors suggest that implementing strategies such as "Learning by Doing," access to financing and resources, and links with the business sector can increase opportunities for success for student entrepreneurs (Colombelli et al., 2022). These strategies can provide students with the practical experience and necessary resources to launch and develop their projects. Furthermore, connection with the business sector can provide students with networking and mentoring opportunities, which can be fundamental to the success of their projects. In this sense, the implementation of these strategies can foster the creation of startups and innovative companies that can have a positive impact on the economy and society (Klofsten et al., 2020; Velásquez Castro & Paredes-Águila, 2024).

Ultimately, it is the authors' consideration that the effective implementation of educational policies, organizational change, and strategies to develop student entrepreneurship can have a significant impact on fostering student

entrepreneurship. However, for these initiatives to be effective, universities and governments need to work together to create an environment that promotes innovation and entrepreneurship (Díaz-Guerra, 2022). This can be achieved through the creation of policies and programs that support student entrepreneurship, continuous faculty training, and connection with the business sector.

Therefore, success in promoting student entrepreneurship requires an integrative perspective that combines educational policies with organizational change that supports and values innovation. Universities that manage to integrate these strategies will be better positioned to foster an entrepreneurial culture among their students and will contribute more sustainably to economic and social development through the creation of new companies and opportunities (Padilla-Angulo, 2019; Porkodi et al., 2023).

Conclusions

The transformation towards the entrepreneurial university model is crucial to meet the demands of today's global environment, which implies organizational restructuring and a focus on innovation and the creation of ecosystems that promote student entrepreneurship. To achieve this, it is necessary to develop and implement educational policies that integrate entrepreneurship into the academic curriculum, promote interdisciplinarity, practical training, and access to support networks. These actions will allow students to acquire the necessary skills to become successful entrepreneurs. Furthermore, university management must adapt to effectively support student entrepreneurship, which requires significant organizational changes, such as the creation of incubators, promotion of innovation culture, and establishment of links with the business sector, which will allow universities to lead in the training of future entrepreneurs.

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