Espirales
Revista multidisciplinaria de investigación científica

University students' perception of skills training for developing sustainable entrepreneurship

Percepción de estudiantes universitarios en la formación de competencias para desarrollar emprendimiento sostenible

Pedro Aguilar Pérez*, Lucila Patricia Cruz Covarrubias*

Received: May 16, 2025
Approved: July 29, 2025

Aguilar, P., Cruz, L. (2025) University students' perception of skills training for developing sustainable entrepreneurship. *Espirales. Revista multidisciplinaria de investigación científica*, Vol. 9, No. 4. 1-19

Abstract

The purpose of this research is to examine the extent to which the university, through its training activities, promotes sustainable entrepreneurship skills among students. A tool is implemented among 384 students in the field of administrative economics. The statistical factor analysis method is used to calculate descriptive statistics and measures of central tendency and dispersion. The research is based on the study of five dimensions that determine the competencies linked to sustainable entrepreneurship. These dimensions achieve reliability levels exceeding 0.80 on Cronbach's alpha, which is highly acceptable. The method used consisted of a 59-item self-perception questionnaire that included the potentialities that constitute the sustainable entrepreneurship model. It was observed that the educational activities offered by the university have an impact on the development of entrepreneurial and sustainability orientation in students. Furthermore, no statistically significant variations were observed in the variables analyzed in relation to gender.

Keywords: university students, sustainable entrepreneurship, competencies, university teaching.

* Msc. Universidad de Guadalajara
app017@cucea.udg.mx
https://orcid.org/0000-0001-8071-6671

* Msc. Universidad de Guadalajara
lucilapcc@cucea.udg.mx
https://orcid.org/0000-0002-1396-2482

Resumen

El propósito de esta investigación es examinar hasta qué punto la universidad, mediante sus acciones de formación, fomenta en los estudiantes habilidades para el emprendimiento sostenible. Se implementa una herramienta a 384 alumnos del campo de las ciencias económicas administrativas. Se emplea el método de análisis factorial estadístico para calcular estadísticos descriptivos y medidas de tendencia central y dispersión. La investigación se fundamenta en el estudio de cinco dimensiones que determinan las competencias vinculadas al emprendimiento sostenible. Estas dimensiones alcanzan niveles de confiabilidad que superan el 0.80 de Alfa de Cronbach, lo que es altamente aceptable. El método utilizado consistió en un cuestionario de 59 elementos de autopercepción que incluía las potencialidades que constituyen el modelo de emprendimiento sostenible. Se observa que las acciones educativas que brinda la universidad impactan en el desarrollo de la orientación emprendedora y hacia la sostenibilidad en los estudiantes. Además no se han observado variaciones estadísticamente relevantes en las variable analizadas en relación al género.

Palabras clave: estudiantes universitarios, emprendimiento sostenible, competencias, docencia universitaria.

Introduction

Sustainable entrepreneurship has emerged as an essential element in the transition towards a more responsible and environmentally friendly economy. In a global context marked by environmental and social challenges, entrepreneurs play a crucial role in integrating practices that promote ecological and social well-being without sacrificing economic viability. According to Hall et al. (2020), sustainable enterprises seek not only to generate economic value, but also to maximize benefits for society and the environment, contributing directly to the Sustainable Development Goals (SDGs) established by the UN. In relation to this, in the 2030 Agenda for Sustainable Development (drawn up in 2015), goal four states that students should acquire the knowledge and skills required to promote sustainable development (Aznar et al., 2017).

Historically, universities, in their role as educational and research institutions, have been a significant catalyst for change, generating responses to societal challenges through their core responsibilities: training professionals, conducting research and generating science, spreading culture, and extending their services to society. In this context, universities can be seen as highly important generators for promoting the formation of a culture based on innovation, strengthening society and the environment in which they operate, and fostering creative and transformative thinking in people (Araque et al., 2018). Thus, universities can function as drivers of economic development through sustainable entrepreneurship.

In this context, we have focused on sustainable entrepreneurship, understood as the process of investigating who discovers, organizes, and exploits business models to generate products and services, considering their social, environmental, and economic effects (Cohen and Winn, 2007; Cohen and Franco, 2005; López, 2012). In this entrepreneurial process, Lajara et al. (2022) point out that the aim is to meet growth demands with a touch of innovation and to take advantage of lucrative business opportunities (avoiding charity or altruism). Likewise, one of the key aspects for promoting this type of entrepreneurship is the training of new generations of entrepreneurs. Students must develop specific skills that enable them to integrate sustainability principles into their projects. These skills include critical thinking, social innovation, responsible leadership, and efficient management of natural resources. According to a study by López-Morales et al. (2023), future entrepreneurs must be able to identify opportunities to create economic value while minimizing negative impacts on the social and ecological environment, which requires skills in ethical and sustainable decision-making.

Increased ecological and social awareness among businesspeople and entrepreneurs has led to a paradigm shift from conventional business practices to more sustainable ones. According to Criado-Gomis et al. (2017), sustainable entrepreneurship arises from the fusion of entrepreneurial guidance and an entrepreneur's inclination toward sustainability or sustainable growth. In addition, Rodríguez Moreno (2016) conceptualizes sustainable entrepreneurship as the implementation of sustainable innovation aimed at a specific market with the goal of offering social benefits. In this context, there is a daily increase in entrepreneurial initiatives that take advantage of the opportunities offered by sustainable development to produce benefits, in addition to those that address personal concerns arising from commitment.

In Mexico, it is crucial to include skills for sustainable entrepreneurship in the educational proposal of Higher Education Institutions (HEIs), as this helps to raise the quality of education. In addition, they become drivers of social welfare, as they promote a transformation of perspective focused on priority goals in the environment and elements related to sustainable development (Ramírez-Mancilla et al., 2023). Hence the relevance of this study, as it is essential for students to develop a deep understanding of market dynamics, sustainability management at the business level, and cross-sector collaboration to generate solutions that are both viable and responsible. Fostering these skills will be key to ensuring that the entrepreneurs of the future can successfully lead initiatives that promote economically, socially, and environmentally balanced development.

In this context, the commitment of Mexico's higher education institutions (HEIs), members of the National Association of Universities and Higher Education

Institutions (ANUIES), to sustainable development goals is reflected in objectives such as:

> By 2030, ensure that all learners acquire the theoretical and practical knowledge needed to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship, and the appreciation of cultural diversity and the contribution of culture to sustainable development (ANUIES, 2020, p. 47).

At the university level, efforts to promote sustainability-oriented entrepreneurship are becoming increasingly important, seeking to enhance skills and competencies among university students from a cross-cutting perspective (Lajara et al., 2022). Like other entities, the University of Guadalajara (U de G) aspires to carry out a variety of actions (academic education towards social responsibility, internship programs, entrepreneurship promotion and advisory programs, entrepreneurship fairs, etc.). The U de G must generate opportunities to establish businesses based on the idea of sustainable entrepreneurship through educational and training programs that represent a compendium of knowledge situated in complex contexts.

However, despite the efforts made, Zúñiga Sánchez et al. (2022) mention that many universities have focused solely on "the implementation of programs related to the reduction of natural resource consumption, the reuse and recycling of waste, and actions related to the greening of university campuses..." (p. 5), actions that are insufficient to contribute to the improvement of the university curriculum, as they are limited to providing extracurricular courses or workshops (Zúñiga Sánchez et al., 2022).

In light of the above, this study is justified, as its objective is to investigate the influence of university education on the development of skills for sustainable entrepreneurship, establishing whether there are gender differences in order to address them in more detail. To carry out this study, we first conducted a literature review on the topics of entrepreneurship, gender, and university, which was fundamental in creating a questionnaire that enabled us to achieve the following specific objectives: (1) to investigate elements that induce sustainable entrepreneurship skills and, especially, a particular disposition toward entrepreneurship and sustainability; (2) to recognize the role that university education plays in this area; and (3) to observe whether there is any tendency toward a particular gender.

Materials and methods

This research used a descriptive quantitative approach with the aim of investigating undergraduate students in the field of Economic and Administrative Sciences regarding the skills they acquired during their university education in relation to sustainable entrepreneurship.

To evaluate the sustainable entrepreneurship skills of future entrepreneurs and leaders, an electronic survey was sent to students in various undergraduate programs (14 majors) related to the business field. The survey was conducted in September 2024 (2024-B school year) and was aimed at students at the University Center for Economic and Administrative Sciences (CUCEA) of the University of Guadalajara who are in advanced or intermediate semesters (from the 5th semester onwards) in the Bachelor's degrees in Administration (LIAE), Tourism (TURI), Marketing (LIME), Financial Administration and Systems (LAFI), International Business (LINI), Human Resources (LIRH), and Accounting (LCOP). The sample consists of 384 students enrolled in the bachelor's degrees described above. The participants are students who have taken the courses Entrepreneurial Development and Corporate Social Responsibility, which require students to have completed more than 50% of the credits obtained. Thus, the criteria of semester and degree program were taken into account.

The instrument used was a survey divided into two sections: the first section included questions on sociodemographic characteristics, and the second section presented the scale (see Table 1) composed of five dimensions: 1) Academic training, 2) Competencies for sustainable entrepreneurship, 3) Entrepreneurial orientation, 4) Personal orientation towards sustainability, and 5) Perception of Corporate Social Responsibility (CSR). The response options were based on a 7-point Likert scale (from Strongly Disagree to Strongly Agree).

The instrument was developed in Google so that students could answer it online. To promote it among students and motivate them to participate in the survey, several teachers at the University Center who teach the course on Entrepreneurial Development and Organizational Responsibility presented it in their face-to-face lessons.

Table 1. *Escala de conocimiento de Emprendimiento Sostenible.*

Dimension	Foundation	Variable	Items
Personal guidance on sustainability	The level of student engagement in sustainability issues is appreciated. Research by Kuckertz and Wagner (2010) and Muñoz and Dimov (2015) has been used.	v2.37	It is our obligation to set goals that go beyond making money.
		v2.38	It is our commitment to promote the improvement of people's quality of life, well-being, and health.
		v2.39	It is our duty to support job creation.
		v2.40	Protecting the ecosystem is our commitment.
		v2.41	Natural resources must be used in a responsible manner.
		v2.42	We must support the production and consumption of wholesome, ethical, and sustainable products.
		v2.43	We must establish our participation in fair trade.
		v2.44	In order for everyone to have a voice and a vote, we must value models of collaboration based on democratic principles.
		v2.45	We must help transform society for the better.
Perception of Corporate Social Responsibility (CSR)	To understand students' perspectives on the role that companies play in sustainability, such as: the use of resources, the improvement of their employees, the creation of wealth for the community, among others. It is based on the research of Alonso-Almeida et al., (2015), Lämsä et al.,	v3.46	Meet customer demands
		v3.47	Provide useful, high-quality services and products.
		v3.48	Foster reasonable relationships with customers and suppliers.
		v3.49	Stakeholder satisfaction should be as high as possible.
		v3.50	Companies should not only generate economic profits.
		v3.51	For investors, the goal is to achieve competitive returns.
		v3.52	Invest in training, development, and improving the evaluation of all staff.
		v3.53	Formalize job stability.
		v3.54	The company should include competitive compensation policies.
		v3.55	The organization must provide equal opportunities for all workers.

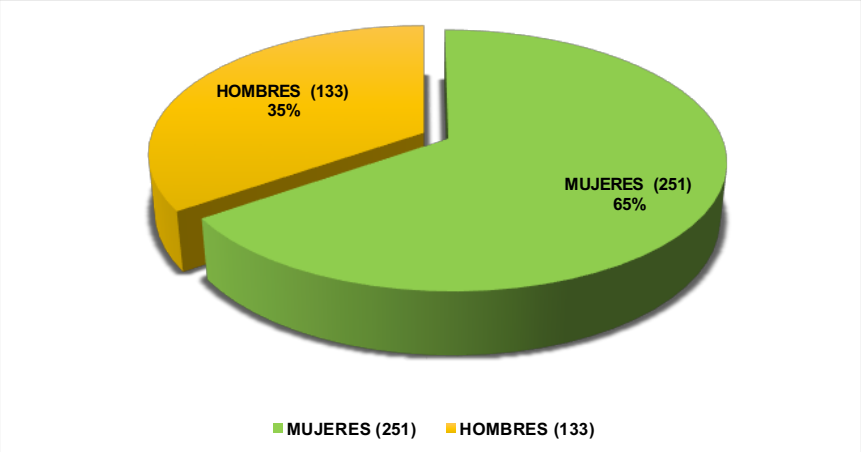
	(2008), and Seva-Larrosa et al. (2021).	v3.56	Everyone in the company must comply with regulations and provisions.
		v3.57	The company must at least not worsen the natural environment, but rather improve it.
		v3.58	Implement controls and confidentiality in employment and transfer information appropriately.
		v3.59	The organization must generate benefits for the community in which it participates.

Data processing was performed using SPSS version 27. A descriptive analysis was carried out and presented in tables and figures (graphs) with absolute and relative frequencies. Subsequently, the contrasts between groups were evaluated using, in certain cases, Student's t-test and the ANOVA test. For reliability, Cronbach's alpha internal consistency index was used, with suitable alpha coefficients for each of the five sections.

Results

For descriptive purposes, we first refer to the most notable aspects of the analysis, which relate to demographic characteristics: gender, age, semester, and degree program. In terms of age, nearly 65% of respondents are between 20 and 22 years old. The gender distribution of the sample can be seen in Figure 1, where 65% are female and 35% are male.

Figure 1. Gender distribution of the sample (2024 "B" cycle)

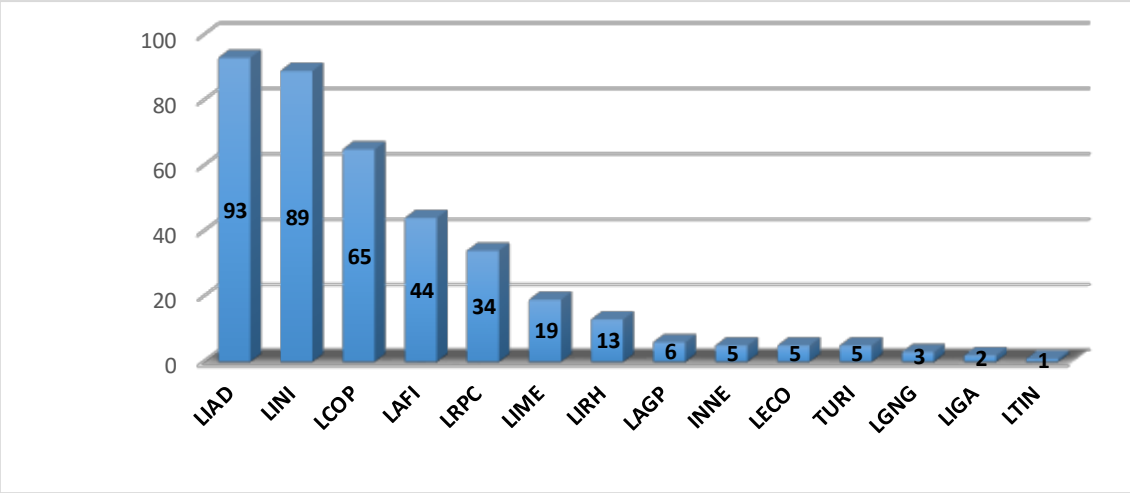


Note: Prepared by the University Center for Economic and Administrative Sciences (CUCEA).

In terms of their field of study, 24.2% are business administration students, 23.1% are studying for a degree in international business, while 16.9% are

Accounting students, 11.4% are studying Financial Management and Systems, 8.8% are studying Public Relations, and 4.9% are Marketing students. The rest of the majors (see Figure 2) belong to other degree programs offered by the University Center.

Figure 2. Sample distribution by degree program



The first step in evaluating the results is to analyze the internal consistency or reliability of the variables using the original criterion (Cronbach's alpha). All constructs or evident variables obtain optimal values of 0.80, which guarantees satisfactory levels of reliability in advanced stages of research (see Table 2). However, (Rossiter, 2002; Hair et al., 2016) criticizes Cronbach's values and composite reliability exceeding 0.9, while Nunnally (1978) sees them as a recommended standard for applied research.

Table 2 shows the means ($\bar{x}$), standard deviation (SD), and internal consistency coefficients (Cronbach's alpha) for each dimension that makes up the research topic. In the Academic Training dimension, item 5 ($\bar{x}$= 5.35 and SD= 1.28) has the highest value. This is because participants believe that the subjects they have studied during their university education have enhanced their ability to detect opportunities. In contrast, item 3 ($\bar{x}$= 4.12 and SD= 1.29) has the lowest mean, as participating students consider that the practical skills they have acquired at university to start a business have not been satisfactory. On the other hand, in terms of the dimension Competencies for sustainable entrepreneurship, a higher value is observed in variable v2.21 ($\bar{x}$= 5.86 and SD= 1.22), which is the result of students being empathetic towards other people in a conflict and therefore trying to understand their point of view. Conversely, this dimension includes the item (v2.17) with the lowest rating ($\bar{x}$= 4.93 and SD= 1.44), which suggests that the participating students do not take the initiative on the issue of sustainability. In relation to the Entrepreneurial Orientation dimension, variable v3.34 ($\bar{x}$= 5.82 and SD= 1.28) has a high rating in terms of university students trying to meet their established goals.

Regarding the Corporate Social Responsibility dimension, participants are clearly aware of the role that companies should play in the field of sustainability, such as: the effective use of all resources, the improvement of their employees, the generation of wealth for the community, and the protection of the environment, among other aspects. This is because all the variables related to this dimension achieved high values (the 14 items exceeded the mean of $\bar{x}$= 6.15). It is clear that they value social responsibility issues, as all participants (the sample universe) were taking or had taken the Corporate Social Responsibility course. Now, with regard to internal consistency in each dimension, Cronbach's alpha coefficients are high.

With regard to variance values, the AVE measures for each construct were examined, ensuring that all constructs reached values above 0.5. Ultimately, the study of divergent validity shows us that each given construct differs from the rest, in such a way that it surely captures phenomena that are not represented by other constructs found in the prototype. An evaluation was carried out using cross-ratings and the criteria of Fornell and Larcker (1981), achieving acceptable results. In addition, the HTMT ratio criteria were verified, showing that our model has adequate discriminant validity.

Finally, another of the most interesting findings is the role played by gender and its impact on the main variables analyzed. The findings indicate that the gender of students does not significantly influence sustainable entrepreneurship skills. This result coincides with the research carried out by Marco Lajara et al. (2022), although it contradicts the findings of Severino González et al. (2024), who found significant differences depending on gender.

The purpose of this study is to examine the skills acquired in university education for sustainable entrepreneurship, in terms of their entrepreneurial application and orientation toward sustainability, among students at the University of Guadalajara. This public educational institution in Mexico plays a crucial role in the country, which highlights the challenges of serving a demanding society with challenges of various kinds (Morales Salas and Rodríguez Pavón, 2022). In this context, this study provides scientific research for public universities, which have several factors to consider when designing educational strategies to train entrepreneurs with a focus on sustainability. This provides background information that can be used by universities to establish sustainable entrepreneurship policies, behaviors, and strategies that favor the comprehensive training of future professionals with social responsibility and commitment, who contribute to addressing and promoting solutions to social injustices, economic inequalities, and environmental problems.

However, there are statistically minimal differences in each of the dimensions studied that refer to sustainable entrepreneurship skills for university students.

The findings show that the skills acquired in sustainable entrepreneurship originate from a training process that is fundamentally made up of several elements, ranging from policies and the institutional structure of the university to the content of courses and teaching practices in the comprehensive training of entrepreneurial students related to sustainability. The findings are consistent with other research (Severino Gonzáles et al., 2023; Marco Lajara, 2022), which highlights the importance of universities in developing and implementing strategies to enhance skills in sustainability knowledge, given that these educational institutions are the space where young students obtain this training. However, of the five dimensions studied, Corporate Social Responsibility presents the highest values, indicating advanced and successful training and understanding of the social obligation that companies must have, which reinforces an interdisciplinary trend of professional social responsibility (Ko et al., 2023).

Nevertheless, according to the information collected about academic teaching in this study, there is a slight institutional weakness that contributes to reducing the development of sustainable entrepreneurial awareness, despite the fact that there is a notable interest in entrepreneurship, although this does not imply that it is derived from a social or environmental problem. Furthermore, in order to start a sustainable venture, it is essential that all those involved (managers, teachers, students, parents, and government) understand the relevance of this type of entrepreneurship (Fichter and Tiemann, 2018). These authors point out that this involvement strengthens support for entrepreneurs, as well as valuing them as generators of change and development for the community in general.

To enhance sustainable entrepreneurship skills, the University of Guadalajara also needs other collaborators such as private entities, government agencies, and the media (Sharma et al., 2023), as these could enhance the ability of future professionals and society as a whole to detect economic, social, and environmental problems. Currently, the university faces the challenge of enhancing the entrepreneurial motivation of its students, which is why it needs to implement systematic tactics and strategies that enhance their ability to recognize the difficulties of the environment and thus create solutions based on their skills (Calderón-Martínez and Peláez-Higuera, 2024).

Conclusions

As a result of the documentary research, it was found that several studies consider that education for sustainable entrepreneurship consists of providing students with an interdisciplinary education in ethics and values, enabling them to take conscious and appropriate action to solve economic, social, and environmental problems in favor of sustainable development.

As for the term sustainable entrepreneurship, there is no consensus on this issue, although the literature reviewed suggests that it is a dynamic model of skills and attitudes that contributes to the creation of actions and programs that generate value for the community and, in particular, for university students.

The research carried out determines that it is essential for universities to develop strategies to enhance responsible entrepreneurship skills, in addition to ensuring that students contribute to solving social problems, regardless of the particular type of entrepreneurship chosen. It is not enough for students to learn how to draw up a business plan; entrepreneurship requires more capable training that promotes the sustainability of the entrepreneurial purpose, and to achieve this, young students need to have an appropriate skill profile.

In conclusion, we perceive the development of student skills as an essential means of achieving an optimal level of sustainable entrepreneurship and of being able to face challenging and unexpected circumstances that they would otherwise not necessarily be competent to deal with. To a certain extent, the education of social entrepreneurs in universities is limited and focuses mainly on the business field as the only area of competence. One of the challenges for higher education institutions is to develop social responsibility policies and strategies that influence student education, with values and principles such as solidarity, responsibility, and social commitment. To this end, it is essential that all participants in education are involved.

Regarding limitations, this study takes into account a non-probabilistic sample; additionally, it is crucial to use other more complex methodologies that facilitate a better understanding of the situation under study. Another limitation of the study is that it did not take into account situations such as whether they had started a business project, whether they intended to become entrepreneurs, or whether they were engaging in intrapreneurship in their work or family business.

It is crucial to develop institutional policies in line with pedagogical strategies that contribute to the formation of dignified citizens with social responsibility. It is crucial that new research can cover the different interest groups that make up educational communities, with the aim of creating comparisons and identifying inequalities for the implementation of actions aimed at training social entrepreneurs. It is essential to carry out mixed (quantitative and qualitative) and multidisciplinary studies that facilitate a better understanding and growth of sustainable entrepreneurship among university students.

Referencias

Araque, Y., Córdoba, V., & De Meriño, C. (2018). El clima organizacional en el emprendimiento sostenible. *Revista Escuela de Administración de Negocios*, 84, 43-61.

Asociación Nacional de Universidades e Instituciones de Educación Superior [ANUIES]. (2020). *Contribución de las instituciones de educación superior en México al logro de los Objetivos de Desarrollo Sostenible: un esfuerzo colectivo en el marco de la Responsabilidad Social*. ANUIES.

Aznar Minguet, P., Ull, M. A., Piñero, A. & Martínez-Agut, P. (2017). La evaluación de la formación de formadores. Un catalizador en el proceso de cambio curricular hacia la sostenibilidad. *Revista Iberoamericana de Educación, (73),* 225 – 252.

Bolton, D. L. & Lane, M- D. (2012). Individual entrepreneurial orientation: development of a measurement instrument. *Education + Training*, 54(2/3), 219-233. https://doi.org/10.1108/00400911211210314

Boons, F., & Lüdeke-Freund, F. (2021). *Business models for sustainability: Innovation and transformations*. Routledge.

Calderón Martínez, G., Pelaez-Higuera, J. (2024). Educación en emprendimiento y sostenibilidad para la configuración de intenciones emprendedoras sostenibles en

estudiantes universitarios. *Telos: Revista de Estudios Interdisciplinarios en Ciencias Sociales*, 26(2), 709-724. https://doi.org/10.36390/telos262.15

Cohen, B., & Winn, M. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29-49.

Cohen, E & Franco, R. (2005). *Gestión Social: Como Lograr Eficiencia e Impacto en las Políticas Sociales*. Editorial siglo XXI S.A. En coedición con Naciones Unidas. México.

Criado-Gomis, A., Cervera-Taulet, A. & Iniesta-Bonillo, M.A. (2017). Sustainable entrepreneurial orientation: a business strategic for sustainable development. *Sustainability*, 9(9), 1667. https://doi.org/10.3390/su9091667

Espín Álvarez E. (2019). *La docencia universitaria para el desarrollo social sostenible*. Diplomado en Docencia Universitaria e Investigación Educativa, México: CIFE. https://www.researchgate.net/publication/334230606_La_docencia_universitaria_para_el_desarrollo_social_sostenible

Fichter, K., & Tiemann, I. (2018). Factors influencing university support for sustainable entrepreneurship: Insights from explorative case studies. *Journal of Cleaner Production*, 175, 512–524. https://doi.org/10.1016/j.jclepro.2017.12.031

Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with

unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. https://doi.org/10.2307/3151312

Hahn, D., Minola, T. Van Gils, A. & Huybrechts, J. (2017). Entrepreneurial education and learning at universities: exploring multilevel contingencies. *Entrepreneurship and Regional Development*, 29(9-10), 945-974.

Hair, J., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. A. (2016). *Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM).* (2ªed.). USA: SAGE Publications.

Hall, J., Daneke, G., & Lenox, M. (2020). Sustainable entrepreneurship: Past research and future directions. *Business & Society*, 59(3), 539-577. https://doi.org/10.1177/0007650320916673

Ko, Y., Shim, S., & Lee, H., (2023). Development and Validation of a Scale to Measure Views of Social Responsibility of Scientists and Engineers (VSRoSE). *International Journal of Science and Mathematics Education*, 21, 277–303. https://doi.org/10.1007/s10763-021-10240-8

Koe, W. L. (2016). The relationship between Individual Entrepreneurial Orientation (IEO) and entrepreneurial intention. *Journal of Global Entrepreneurship Research*, 6, 1-13.

Kuckerts, A. & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions — Investigating the role of business experience, *Journal of*

Business Venturing, 25, 524–539. https://doi.org/10.1016/j.busvent.2009.09.001

Lajara, B. M., Úbeda García, M., Zaragoza Sáez, P., Rienda García, L., García Lilo, F., Guerrero, R. A., Manresa Marhuenda, E., Seva Larrosa, P., Ruiz Fernández, L., Sánchez García, E., Poveda Pareja, E., Martínez Falcó, J., Millán Tudela, A. & Arjona Giner S. (2022). Contribución de la docencia universitaria al desarrollo de competencias para el emprendimiento sostenible, en Satorre Cuerda, R. (coord.), Menargues Marcilla, A., Díez Ros, R. y Pellín Buades, N. (Eds.). Redes de Investigación e Innovación en Docencia Universitaria. Volumen 2022, Capítulo 28, pp.361-374. Ediciones ICE: Alicante.

Lämsä, A.M.; Vehkaperä, M.; Puttonen, T., & Pesonen, H.L. (2008). Effect of Business Education on Women and Men Students' Attitudes on Corporate Responsibility in Society, *Journal of Business Ethics*, 82(1), 45-58.

Lans, T., Blok, V. & Wesselink, R. (2014). Learning apart and together: towards an integrated competence framework for sustainable entrepreneurship in higher education. *Journal of Cleaner Production*, 62, 37–47. https://doi.org/10.1016/.jclepro.2013.03.036

López-Morales, L., Sánchez, D., & García, A. (2023). Developing sustainable entrepreneurship competencies: An educational approach. *Journal of Sustainable Business Education*,

8(2), 105-123. https://doi.org/10.1016/j.jsbeb.2022.12.005

López, J. (2012). Modelos actitudinales y Emprendimiento Sostenible. Cuaderno Interdisciplinar de Desarrollo Sostenible. *Revista Cuadernos interdisciplinar de desarrollo sostenible*. (8), 111- 131. https://repositorio.ual.es/bitstream/handle/10835/1402/Act_Emp_Sost.pdf?sequence=7&isAllowed=y

Marco Lajara, B., Úbeda, G. M., Zaragoza, S. P., Rienda, G. L., García, L. F., Andreu, G. R., Manresa, M. E., Seva, L. P., Ruiz, F. L., Sánchez, G. E., Poveda, P. E., Martínez, F. J., Millán, T. L. & Arjona, G. S. (2022). Contribución de la docencia universitaria al desarrollo de competencias para el emprendimiento sostenible. En Satorre Cuerda, R. (coord.). *Redes de Investigación e Innovación en Docencia Universitaria* (pp. 361-374). Instituto de Ciencias de la Educación (ICE), Universidad de Alicante. https://rua.ua.es/dspace/handle/10045/128674

Marqués, C.S.E., Santos, G., Galvão, A., Mascarenhas, C. & Justino, E. (2018). Entrepreneurship education, gender and family background as antecedents on the entrepreneurial orientation of university students. *International Journal of Innovation Science*, 10(1), 58-70.

Morales Salas, R. E. & Rodríguez, Pavón, P. R. (2022). Retos y desafíos en la educación superior: una mirada desde la percepción de los

docentes. *Education in the Knowledge Society*, 23, e264020. https://doi.org/10.14201/eks.26420

Muñoz, P. & Dimov, D. (2015). The call of the whole in understanding the development of sustainable ventures, *Journal of Business Venturing,* 30(4), 632-654. https://doi.org/10.1016/j.jbusvent.2014.07.012

Nunnally, J.C. (1978). *Psychometric Theory*. (2ª ed.). New York, NY, USA: McGraw-Hill.

Ploum, L.; Blok, V.; Lans, T. & Omta, O. (2018). Toward a Validated Competence Framework for Sustainable Entrepreneurship. *Organisation & Environment*, 31(2), 113-132. https://doi.org/10.1177/1086026617697039

Ramírez Mancilla, L. A., Pérez Montoy, L. M. & Cázares Ramírez, R. I. (2023). La sustentabilidad en las Instituciones de Educación Superior en México, ¿un desafío o una oportunidad? *Ciencia Laina Revista Científica Multidisciplinar*, 7(2), 5076-5087. https://doi.org/10.37811/cl_rcm.v7i2.5705

Rodríguez Moreno, D. C. (2016). Emprendimiento sostenible, significado y dimensiones. *Katharsis,* (21), 449-479. https://doi.org/10.25057/25005731.775

Rossiter, J.R. (2002). The C-OAR-SE procedure for scale development in marketing. International *Journal of Research in Marketing*, 19, 305–

335. https://doi.org/10.1016/S0167-8116(02)00097-6

Santos, G., Marques, C.S. & Ferreira, J.J.M. (2020). Passion and perseverance as two new dimensions of an Individual Entrepreneurial Orientation scale. Journal of Business Research, 112, 190- 199. https://doi.org/10.1016/j.busres.2020.03.016

Seva-Larrosa, P., Marco-Lajara, B., Úbeda-García, M., García-Lillo, F., Rienda, L., Zaragoza-Sáez, P., Andreu-Guerrero, R., Manresa-Marhuenda, E., Ruiz-Fernández, L., Sánchez-García, E., Poveda-Pareja, E., & Martínez-Falcó, J. (2021). Conocimiento y percepción de los alumnos en el ámbito universitario sobre los Objetivos de Desarrollo Sostenible (ODS), en Satorre Cuerda, R. (coord.), Menargues Marcilla, A., Díez Ros, R. y Pellín Buades, N. (Eds.). Redes de Investigación e Innovación en Docencia Universitaria. Volumen 2021, Capítulo 14, pp. 161-170. Ediciones ICE: Alicante.

Severino-González, P., Sánchez-Limón, M., Rodríguez-Jasso, L., & Reyes-Cornejo, P. (2023). Percepción de estudiantes universitarios sobre responsabilidad social: entre el estallido social y la crisis sanitaria, *Formación Universitaria*, 16(1), 67–76. https://doi.org/10.4067/S0718-50062023000100067

Sharma, L., Bulsara, H. P., Trivedi, M., & Bagdi, H. (2023). An analysis of sustainability-driven entrepreneurial

intentions among university students: The role of university support and SDG knowledge. *Journal of Applied Research in Higher Education*, 16(2), 281– 301. https://doi.org/10.1108/jarhe-11-2022-0359

Zúñiga Sánchez, O., Marúm Espinosa, E., & Rodríguez Armenta, C. E. (2022). La educación para el desarrollo sostenible en la educación superior: El efecto de las áreas del conocimiento en las concepciones del profesorado universitario. *Archivos Analíticos de Políticas Educativas,* 30(157). https://doi.org/10.14507/epaa.30.7271