

Social Entrepreneurship Competency in Higher Education: An Analysis using Mixed Methods.

Journal of Social Entrepreneurship

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Abstract: Social entrepreneurship is a necessary competency in higher education; however, research in this area is in its early stages. This study sought to evaluate social entrepreneurship competency and identify the factors and educational processes that promote its development. The research consisted of mixed method. The tools included a questionnaire, interviews with professors, and a focus group with students. The questionnaire showed not variation by disciplinary area, semester grade, or previous experience. The interviews and the focus group led to an analysis that described the development of the SEC as a continuous learning process around the validation of the social enterprise.

Keywords: social entrepreneurship; entrepreneurial education; social entrepreneurship competencies; educational innovation, higher education.

Introduction

Currently, university systems are challenged to generate knowledge that positively impacts society through education that is creative and innovative and promotes social awareness. Current social issues require a university education to develop entrepreneurial skills also (Hamizan-Roslan et al. 2019; Solomon, Alabduljader, and Ramani 2019; Wagner 2012). Therefore, universities have promoted training activities that focus on entrepreneurship, but the research about these is incipient (Alakaleek 2019), especially for social entrepreneurship (Austin and Rangan 2018; Saxena 2019). Thus, it necessary to document and analyze the experiences of students in universities that have integrated social entrepreneurship into their institutional strategies.

Research about social entrepreneurship training does not have consensus as strong as traditional entrepreneurship; however, their teaching methodologies share common elements. The teaching of entrepreneurship occurs in active learning environments that connect with and influence regional development (Jones and English 2004; Galvão, Ferreira, and Marques 2018). Likewise, research on entrepreneurial competencies is solid; Lackéus (2015) discusses it in terms of cognitive competencies (knowledge and skills) and non-cognitive competencies (attitudes). It is important to consider the differences between traditional entrepreneurship and social entrepreneurship (Austin, Stevenson, and Wei-Skillern 2006) to identify the profiles and competencies needed to achieve the latter. In this research, it was considered that social entrepreneurship competencies (SEC) could vary.

This study took place within the framework of the *OpenSocialLab* project. This experiential learning lab considers levels of mastery in *SEC* as measured on a scale. The study was carried out within a Mexican private university that has promoted social entrepreneurship from an interdisciplinary perspective for the last five years. In previous reports, it has

explained the construction of the data collection and assessment instruments and the validation processes as well as the preliminary results obtained (García-González, Ramírez-Montoya, et al. 2020). This study aimed to assess SEC from the perspective of undergraduate students and professors in higher education, using quantitative (Likert scale) and qualitative (focus group and interviews) instruments, in order to identify the factors that influence the development of competencies and the training processes that promote their development.

Education in social entrepreneurship

Entrepreneurial education starts with the understanding and delimitation of the attributes that characterize people who carry out social undertakings. This makes it possible to establish the elements of training environments where students join as "newcomers," develop skills, and undergo experiences that help them build capable profiles and prepare for their professional careers (Fuller et al. 2005; Melro and Oliveira 2017) in today's economy (Tekin et al. 2020; Iglesias-Sánchez, Jambrino-Maldonado, and de las Heras-Pedrosa 2019). It is important to note that the development of skills for social entrepreneurship is increasingly demanded in all disciplinary fields.

Entrepreneurial education starts from the perspective that the entrepreneur is self-made. Winarno et al. (2019) establish that the entrepreneurial profile is constructed through the acquisition of specific skills. In this study, education in social entrepreneurship is characterized by the development of the person, the identification of opportunities, initiative, and the search for solutions to social or environmental problems (Martínez 2015; Gandhi and Raina 2018). The development of entrepreneurial competencies is influenced by contextual factors of the individual, such as previous experience and exposure, as well as family motivation that boosts entrepreneurial activities (Liguori et al. 2019; Krueger 2007).

Social entrepreneurship is a transversal competency. It is not exclusive to any disciplinary field; it draws on knowledge from various disciplines and personal experiences

(Tecnologico de Monterrey 2019). Traditionally, entrepreneurial education has focused on business disciplines. Social fields of study and humanities are usually good technically; their weaknesses are usually the lack of specific business knowledge and skills (Vázquez-Burgete et al. 2012). It is desirable to promote education in social entrepreneurship, regardless of the area of professional training, to provide tools for the implementation of sustainable and ethical solutions in any context of life.

A crucial requirement to prepare training for entrepreneurship is the opening of the institutional walls for collaboration with the external sector. The university's embracing of project development and training experiences generates positive impacts on the social needs of the communities (Ardito 2017; Padial et al. 2018). Interactions of the university with the public, economic, and social sectors generate shared values (McAdam and Debackere 2017), which come together in scenarios of active learning, fundamental for the development of skills in innovation and creativity (Sagardia, Urdin, and Fernández 2017; Chua 2018). In other words, entrepreneurial training takes place in open learning environments linked to real contexts.

A generic conception of the SEC has not been identified. In this study, social entrepreneurship is understood as a meta-competency that incorporates traits, knowledge, skills, and attitudes that can be developed through learning processes (Edwards-Schachter et al. 2015; Brown 1994; Le Deist and Winterton 2005) that are characterized by the interrelationships of creative, innovative and entrepreneurial competencies (Edwards-Schachter et al. 2015). Lackéus (2014) identifies the skills of traditional entrepreneurship, while Sáenz-Bilbao and López-Vélez (2015), Orhei, Nandram, and Vinke (2015) and Miller, Wesley, and Williams (2012) present various operationalizations of the competency. Similarly, Velasco Martínez et al. (2019), Portuguese, Valenzuela, and Navarro (2018), Capella-Peris et al. (2016) and Capella-Peris et al. (2019) provide advice for both the

operationalization and the design of the instrument specifically, which was adapted to the context of our project (García-González, Ramírez-Montoya, et al. Forthcoming).

Once the components of the SEC have been identified, the strategies for teaching them can be determined. Its development occurs when students participate directly in the solution of a social problem and face difficulties that exist beyond institutional boundaries, which leads to competency-based training (Vargas-Mendoza, Gallardo-Córdova, and Castillo-Díaz 2018). In this perspective, the experiential learning (EBA) approach (Kolb 1984) is an adequate pedagogical basis for the training of social entrepreneurs (Lipinski, Lester, and Nicholls 2013), for example, service learning (Halberstadt et al. 2019). In this process, the student participates through the university in making a social impact, gets inside a problem in-depth, and interacts with other sectors that relate to and impact the social problem of interest.

In the practical application of this model, the student and the professor play roles that differ from traditional training. The student is actively involved in the acquisition of knowledge and skills (Awaysheh and Bonfiglio 2017; Thomsen, Muurlink, and Best 2019) in the process of interaction between the person and the environment (Boyatzis and Kolb 1991; Wu and Martin 2018). The teacher plays the role of a facilitator, capable of setting objectives and structuring activities, offering feedback and opportunities for reflection so that the student reaches his or her goals (Barron 2020; Kolb and Kolb 2005). Bloom (2006) highlights the relevance of applying theoretical knowledge to practical problems for training in entrepreneurial skills.

Materials and methods

The research was conducted with a mixed method, using a concurrent triangulation design (Creswell 2008). Qualitative and quantitative data were collected simultaneously, analysed separately, and the mixing occurred when interpreting the results of both analyses. This procedure seeks to confirm the results within a single study (Harwell 2014) (Figure 1). The

use of the mixed methodology allowed us to analyse the study phenomenon from two perspectives and understand and explain more profoundly the results obtained using the instruments implemented (Creswell and Plano Clark 2011; Tashakkori and Teddlie 1998). The qualitative part corresponds to a phenomenological study approach, describing the formative environments for social entrepreneurship as a study-phenomenon, the quantitative part to a multivariate analysis to identify the differences that exist in factors of previous experience, career stage, and disciplinary area.

[Figure 1 here]

Participants

The participants in the questionnaire were 88 students enrolled in different disciplinary areas of the university and with different levels of experience in entrepreneurship (Table 1). The focus group was conducted with four students having at least one year of experience in directing and managing entrepreneurial and innovative social projects generated within the university, either through class projects or working on their initiative under the guidance of professors or other departments of the institution. The structured interviews were applied to five professors having experience in teaching related to innovation and social entrepreneurship.

[Table 1 here].

Instruments

Profile Questionnaire for Social Entrepreneurship

The students' perceptions of their levels of mastery in social entrepreneurship were measured with a Likert scale questionnaire (García-González, Ramírez Montoya, et al. Forthcoming). The instrument was validated by the judgment of eight experts with a Kendall concordance coefficient $W = .198$, $p\text{-value} = .000$. An exploratory factorial analysis (EFA) was conducted

that demonstrates five constructs with a variance = 50.911%, KMO = .711, and Bartlett's sphericity test: $X^2 = 1000.973$, p-value = .000]. The internal consistency showed a favorable result (Cronbach's alpha = .96).

The questionnaire consisted of 28 items, in Spanish, that evaluate the level of perception of the five sub-competencies that make up the SEC: personal (six items), leadership (four items), social innovation (eight items), social value (five items), and entrepreneurial management (five items). The participants responded on a scale with the following values: 1: Totally disagree, 2: Disagree partially, 3: Agree partially, 4: Totally agree. They also were asked about the disciplinary areas in which they were enrolled, the stage in their university career, and their previous experience with entrepreneurship. The participants were 88 students pursuing different career programs at a private university in Mexico.

Focus group

A focus group was held to listen and gather information from a group of students, who provided in-depth data on how they think and feel about the learning process when undertaking social entrepreneurship projects at the university (Krueger and Casey 2014). The questions explored those competencies that are tested when designing and implementing a social enterprise and acquiring knowledge. The validity of the qualitative study was tested through a process of triangulation of the results of the focus group, interviews, and literature reviews employing a phenomenological analysis (Maxwell 2012; Creswell and Poth 2018). Four students with more than one year of experience in design, execution, and management of innovation and social entrepreneurship projects, each with different objectives, participated.

Structured interviews

Five structured interviews were applied to establish a communication flow between

the interviewed teachers and the researcher to understand in-depth the object of investigation. The objective was to collect experiences, feelings, subjectivities, and interpretations of the training phenomenon of social entrepreneurship within the university. The interview script was written to explore the components of the SEC and the pedagogical and methodological aspects of its teaching at the university with a focus on transversal skills. The participants were five professors from the areas of entrepreneurship, social entrepreneurship, and social innovation.

Analysis procedure

Quantitative analysis

The data were analysed using descriptive and inferential statistical tests to meet the research objectives. The central tendency and dispersion measures were calculated, providing the overall results and multivariate normality of the data. The T-Test and one-way ANOVA tests were applied in order to know significant differences depending on the variables of disciplinary area, career stage, and previous experience with entrepreneurship. The data were analysed using the statistical program IBM SPSS.

Qualitative analysis

The qualitative analysis was conducted with the phenomenology approach (Moustakas, 1994, cited by Creswell and Poth 2018), following the methodology enunciated by Colaizzi (1978). This involved (i) familiarization with the phenomenon of study, (ii) identification of significant statements, (iii) formulation of meanings, (iv) grouping into themes (clusters), (v) development of a comprehensive description, (vi) production of a fundamental structure and, finally, (vii) a search for a verification (validation) of the structure. The transcriptions were analysed using the software, Atlas.ti. The validation consisted of the triangulation of the data.

Results

Quantitative results

The questionnaire identified the perceptions of the domain levels of the SEC and presented descriptive results (Table 2). The results are presented for each of the sub-competencies that make up the social enterprise meta-competency. The sub-competency with the highest score was that of social value ($M = 3.32$, $SD = .45$), followed by the leadership sub-competency ($M = 3.32$, $SD = .45$), then the personal sub-competency ($M = 3.28$, $SD = .45$), the social innovation sub-competency presenting a lower score ($M = 3.05$, $SD = .44$), and ending with the lowest-scoring-entrepreneurial-management sub-competency ($M = 2.98$, $SD = 0.62$). These results show similar variability of data in the sub-competencies, except the last one that corresponds to the entrepreneurial management sub-competency.

[Table 2 here]

The Kolmogorov-Smirnov test was used to assess the normality of the data distribution and to choose a statistic for the study's hypothesis tests (Elliott and Woodward 2011c). The results yielded a p -value = .2 ($M = 88.84$, $SD = 9.48$); therefore, $p > 0.05$ indicates that the overall results maintained a normal distribution and parametric tests can be used. To analyse the results for the disciplinary areas and previous experience, the one-way test ANOVA was used, since the means of two or more groups are compared (Elliott and Woodward 2011a). For the career (discipline), a T-Test was used, because the means of two groups are compared (Elliott and Woodward 2011b). The results showed no significant differences in terms of disciplinary area (p -value= .140, $F = 2.015$, $gl = 2$), career stage (p -value= .777, $t = -.284$, $gl = 86$), nor previous experience (p -value= .065, $F = 2.502$, $gl = 3$). (See Table 3.)

[Table 3 here]

Quality results

The phenomenological analysis in this study allowed us to examine the formative experiences through a lens that allowed us to go deeper into the essence of the object of study. From this perspective, the researcher's bracketing is manifested in this space to subtract biases from the results obtained (Creswell and Poth 2018):

The background of their insertion in this field of study corresponds to their activities in teaching basic education within disadvantaged social contexts and their interests and experiences in pedagogical proposals that transcend school limits. These factors have influenced the interest and motivation to train creative, innovative, and socially conscious people at the university level through the development of the SEC. So, this study integrates entrepreneurial education focused on the solution of social problems within the domain area, education.

The transcribed conversations were analysed and resulted in 113 significant statements. Each of the statements was assigned a meaning and grouped into 13 topics (Table 4). The transcription of significant statements, formulated meanings, and clusters that emerged can be viewed in this link: <https://doi.org/10.6084/m9.figshare.12462131.v1>.

[Table 4 here]

The *immersion in the project* cluster presents significant statements from both teachers and students. On the students' side, it was found that being in contact with the target population motivates them not to give up despite failures, for example, this student comment:

I think it is the awareness when you go with the population that you are benefiting, it is this, that many times there are things that fail and fail, that we have made mistakes, but we continue.

In the cluster *awareness of the problem*, factors were identified that range from problem identification, interest in working towards its solution, sensitivity, empathy, and elements of social innovation, such as the identification of opportunities. The teachers' answers were more oriented to sensitivity, as seen, for example, in this comment:

We have seen that the most successful social enterprises are those where students developed parallel ethical and citizenship competencies. We see it in their essays, their sensitivity to problems, and what leads them to something beyond solving something they saw only on the surface.

On the other hand, students commented on the motivations of their proposal to identify the unmet needs of others, for example:

We know that there are people who have been waiting for years for someone who can support them to improve their situation.

In the case of *transversal skills*, students highlighted the implementation of these soft skills. They found the need for collaborative work skills, leadership, communication, and sensitive attitudes, but also firmness; they valued administrative and management knowledge but assigned less relevance to it. One teacher commented:

The social entrepreneurial career provides content that supports theoretical issues: administrative, accounting, and financial, which is fundamental to entrepreneurship ... although training in these impacts entrepreneurship (knowledge), perhaps, at the time of implementation, this is less important because the solution to the problem and how this can be sustainable in the long term are more relevant and pressing.

Another theme is the *external sector linkage*. Students emphasized how the linkage with governmental and non-governmental organizations strengthened their projects. They also considered the business sector but perceived that as somewhat closed to social initiatives. It should be noted that although the government sector is open to possibilities, agreements are not always reached. One student commented:

Another actor is the government, in this case, the SEP (schools and administration) they are more open than companies, but they do not always do what they say they are going to do (courses, people, planning).

Concerning *idea validation*, only the significant statements from the teachers were

integrated. The validation suggested that a project has possibilities to solve the social problem of interest, so this relates to the *immersion in the project* and *awareness of the problem* clusters. Idea validation was recognized as a crucial phase for the success or failure of a venture, as one commented:

The validation part starts with individual consultations. There are many validation biases, which makes this more complicated. The process could take up to 16 weeks.

The rest of the clusters presented less than ten significant statements; however, they were integrated into the analysis in order not to leave relevant aspects that emerged from them.

Regarding an *entrepreneurial identity*, it was identified that it comes from one's own experiences and personal interests, but it can also be fostered through education that leads the student to a state of self-perception within his/her environment and the social problems that exist there; a professor commented:

Along with the development of 'entrepreneurial competencies' or 'business disciplinary competencies', a model for the development of transversal competencies must be developed, where their function in their environment or in the society to which they belong must be explained.

In the cluster *disciplinary knowledge*, students pointed out the need for knowledge of accounting, law, economics, administration, financing, management, and fiscal aspects. The need for knowledge ranging from mastering innovation development methodologies to the need to know how to manage an organization, ensure workers' salaries, and generate profits, among others, was presented. In the story of an engineering student regarding the scalability of his enterprise, he emphasized:

You need hard skills: accounting, administration to start the business, a constitution for trademark registration, know how to read a contract without watering it if you sign it, and well in engineering, you don't learn many facts of law and economics.

The cluster, *perseverance through uncertainty and failure*, highlights the part of facing difficulties and mistakes, which, through perseverance and motivation, achieves the objective. The meanings formulated indicate that it is in the process of entrepreneurship that difficulties and mistakes are faced, which, through perseverance and motivation, become learning to achieve the goal. For example, the experience of a group of entrepreneurs who sought to impact the quality of education in public schools in vulnerable contexts:

In my case, it was the whole process of making it start it teaches you to have the courage not to let yourself fall, even if they tell you that the school is gone, it is to be persevering, and it brings its reward.

In the cluster, *social entrepreneurship is not philanthropy*, special attention went to identify social entrepreneurship as economically sustainable, and, more than helping, it is about empowering communities. One student commented, "It's a social project, not a charity". Concerning *learning processes in real contexts*, it was identified that the development of knowledge and skills occurs in the process through interactions with others and that project-based learning can be an appropriate teaching methodology. In this regard, it is relevant to highlight the following statement from a professor:

There is no one-size-fits-all methodology [for teaching entrepreneurship], but something suitable is project-based learning.

To this end, the cluster of *institutional promotion of social entrepreneurship* describes the support of the university for the development of projects, which is usually found in "non-academic departments." It also emphasizes that even if the university promotes entrepreneurship, efficient communication strategies are required to know the opportunities

for entrepreneurship.

The cluster, *authentic delimitation of the problem*, relates to *awareness of the problem* and *idea validation*. It highlights the key actions that the social entrepreneur must execute to understand the problem he or she intends to solve. It is a matter of defining and recognizing the limitations of the problem, documenting it thoroughly, knowing the impacts of other organizations in the same context, reflecting, analysing the own way in which they perceive the problem:

Once I really understand the problem, I know it like the back of my hand, I know who to ask for resources, which organizations are going to give me more information because they are the actors involved, then it's time to move from theory to practice.

Finally, the *continuous process* cluster highlights that entrepreneurial activity corresponds to a series of iterative steps; there is no pre-established beginning and end. a professor commented:

(...) making everything part of a personal interest, and of an interest in a problem, to soak up the problem, some skills knowledge and handling of very specific techniques to know information of the reality, to go to the reality, to contact, to take out the information of the reality, to return to the document to enrich, it is a continuous process, to enrich and now yes, to be able to formulate a project, to execute it and to evaluate it.

The data obtained indicate that the educational experiences within the university establish an ecosystem of relationships that can have an origin in the very conception of social entrepreneurship, which defines it and distinguishes it from philanthropic activities. From this, it is possible to provide the university community with disciplinary tools and training in transversal skills so that students find possibilities to enter into a continuous learning process oriented toward generating social entrepreneurship projects. This process revolves around the validation of the project (or entrepreneurial undertaking) based on recognizing the existence

of a social problem and self-defining an entrepreneurial identity to respond to it. It involves entering into an iterative process of immersion in the context, defining and authentically delimiting the problem. Within this dynamic, the interactions and connections with other actors (sectors) are integrated, confronting scenarios of uncertainty or failure. These are learning scenarios in real contexts, teaching perseverance, and focusing on the entrepreneurial objective (Figure 2).

[Figure 2 here]

Discussion

Quantitative data analysis

Personal, leadership, and empathy skills can be more significant than the disciplinary content taught in the courses of social entrepreneurship. The highest means correspond to the sub-competencies of social value, leadership, and personal; on the other hand, the lowest were those of social innovation and entrepreneurial management, and the latter presented greater variability in its data (Table 2). The last data coincides with the study of Vázquez-Burgete et al. (2012), who found weaknesses in knowledge and entrepreneurial skills in areas other than business disciplines; hence, the relevance of promoting transversal competencies in higher education (Solomon, Alabduljader, and Ramani 2019). Similarly, it is evident that the skills highlighted by other studies are more focused on the development of personal skills, leadership, and empathy with the needs of others (Sáenz-Bilbao and López-Vélez 2015; Miller, Wesley, and Williams 2012; Capella-Peris et al. 2019). One possible explanation could be that based on the identification and delimitation of the problem, personal and leadership skills can persuade management and administration about the importance of sustainability when considering entrepreneurship.

The results of the social entrepreneur profile instrument did not show any significant differences when analysing the disciplinary area, stage of professional training, or previous experience with entrepreneurial activities. The independent variables did not present significant statistical association, having p-values of .140, .777, and .065. These results are understandable, considering that entrepreneurial training has more to do with the improvement of quality within a community of practice (Fuller et al. 2005; Melro and Oliveira 2017), than with disciplinary aspects or the university grade of the student (freshman, sophomore, junior, senior). In other words, social entrepreneurship activity is more related to personal aspects than to specific disciplinary content.

Previous experiences with entrepreneurship by the participants in this research did not determine the level of the perceived domain of the SEC. The independent variable of previous experience with entrepreneurship did not present significant statistical differences (Table 2). This contrasts with Krueger (2007), who considers that social capital influences motivation and entrepreneurial activity because social entrepreneurship is based on the intrinsic need to resolve a social or environmental cause (Martínez 2015). The developmental context of the individual is often a determinant in the inclination for entrepreneurial activities; however, when talking about social entrepreneurship, the social cause is probably the more decisive factor for motivation.

Qualitative data: a phenomenological analysis

The definition of social entrepreneurship is key to its promotion within the institution. The social entrepreneurship cluster is not philanthropy; This activity is the result of activities proper to (commercial) entrepreneurship (Austin, Stevenson, and Wei-Skillern 2006) and social projects, not philanthropy. This argument coincides with Bloom (2006) when he speaks of defining and examining social entrepreneurship critically, considering the relevance that universities have attached to training activities for entrepreneurship and innovation

(Alakaleek 2019; Wagner 2012). The universities have defined social entrepreneurship integrally; that is the starting point for its design and implementation.

Entrepreneurial activities require the mastery of disciplinary knowledge of the business area, but the development of transversal skills is fundamental. Conducting a social enterprise requires the development of collaboration, leadership, communication, and empathy skills. Similarly, and to be economically sustainable, the social entrepreneur must master accounting, financial, administrative, fiscal, as well as administrative and management skills. This approach is in line with various conceptualizations of social entrepreneurship competencies, considering domains specific to entrepreneurship (Lackéus 2015) with the social impact differentiator (Sáenz-Bilbao and López-Vélez 2015; Orhei, Nandram, and Vinke 2015; Miller, Wesley, and Williams 2012; Ruiz-Velasco and Ortega 2014; Portuguese, Valenzuela, and Navarro 2018; Capella-Peris et al. 2019, 2016).

The development of these competencies occurs within an active process of exploration, design, validation, and execution of the value proposition. The continuous process cluster refers to the activities developed by the entrepreneur to validate projects so that they solve the social problem of interest. This process occurs in an active learning environment that is built to develop skills in innovation and creativity (Sagardia, Urdin, and Fernández 2017; Chua 2018), which is always focused on solving the social/environmental cause (Martínez 2015). Therefore, profound knowledge of the problem is a crucial compass for the problem solution.

The deep knowledge of the problem implies, firstly, to recognize that a problem exists, to give place to a self-exploration of the identity of the individual related to the social problem, and later, the immersion into the problem with the purpose of defining and delimiting it. This process is evident in clusters two, six, one and twelve, respectively (Table 4). The direct contact between the student and the social problem to be solved generates a

dynamic that represents an adequate pedagogical basis for training social entrepreneurs, i.e., getting inside the problem, knowing it, interacting with other sectors (Lipinski, Lester, and Nicholls 2013). The relationship between these four clusters gives light to the pedagogical practices that are expected to be practiced within the university.

The training of entrepreneurs happens on the real-world action fields, where interaction with agents external to the university lets the students experience difficulties and failures. The results indicated that this connection and collaboration are necessary to understand the problem. (Ardito 2017; Padial et al. 2018; McAdam and Debackere 2017) identified key organisations that established collaborative networks that made impacts, but the action in the real-world provides the experiential learning, where the essential thing is persevering in the face of difficulties (Boyatzis and Kolb 1991; Wu and Martin 2018).

The process of social entrepreneurship is aligned with the processes of adaptation, creativity, learning, and knowledge generation. Within our analysis, it was found that the cluster learning processes, in reality, immerse the students in living the experiment, facing the challenges of enterprise development, passing through a reflective process to understand the problem, and conceptualize fully, experiencing the validation processes actively, and implementing the proposal. These elements are aligned with the basic adaptive process models of experiential learning theory (Kolb 1984; Akella 2010; A. Kolb and Kolb 2005; Awaysheh and Bonfiglio 2017). This process can explain and guide the improvement of formative models of social entrepreneurship based on active learning methodologies.

Interpretation of results: mixing data

The institutional promotion of social entrepreneurship with transversal orientation permeates the development of competencies in students regardless of their majors or areas of discipline. These data were corroborated by not showing significant differences in the group means by disciplinary area and by the similarity in the variability of the data of the personal, leadership,

social value, and social innovation sub-competencies; the clusters of transversal skills and the institutional promotion of entrepreneurship were tested in the same way as the qualitative analysis. This is in line with the proposal of the development of transversal (or soft) skills for the training of creative and entrepreneurial people (Wagner 2012; Velasco Martínez et al. 2019), where the development of skills and transformation occur within a community of practice and the interactions with other sectors (Fuller et al. 2005; McAdam and Debackere 2017).

The student's stage (grade) in the university did not, per se, determine the perceived level of mastery of the SEC. The development of this competency is complex because of its constitution as a meta-competency (Edwards-Schachter et al. 2015). The absence of relevance of the university stage can be explained in the quantitative analysis with the continuous process cluster, which validates the concept of authentic delimitation of the problem (Figure 2). The heart of social entrepreneurship lies in the motivation to solve a problem (Austin and Rangan, 2018); therefore active experimentation and learning to find a solution explained the students' levels of perception more than maturity in cognitive and procedural aspects such as business knowledge (Jones and English 2004; Vázquez-Burgete et al. 2012; Lipinski, Lester, and Nicholls 2013). Progression in the university stages should mean greater mastery of various competencies, but the results of the study show that the development of the competency is more closely linked to personal factors.

Previous experiences with entrepreneurship also did not determine the level of perceived mastery; rather, the interaction with the problem to be solved was more determinant. The means of the groups of previous experience (Table 2) did not show significant differences; in the qualitative analysis, it was identified that the recognition of the problem and the immersion in solving it, as well as identifying the need for social change, guide the full understanding of the problem that enables proposing a valid solution. This

coincides with the proposals of Martínez (2015) for entrepreneurial education that trains the person to have initiative and identify opportunities; and of Halberstadt et al. (2019) that are oriented toward service-based learning, where the ultimate goal is the development of high-impact projects (Ardito 2017; Padial et al. 2018). This type of data corroborates the previous results that distinguish entrepreneurial education as very focused on finding a personal turning point.

Conclusion

The study objective of this work was to evaluate the social entrepreneurial competency (SEC) in the university in several disciplinary areas to identify factors that influence the development of the competency and the formation processes that promote its development. It was found that training activities in social entrepreneurship within universities should include learning experiences for students that are relevant and motivational for entrepreneurship. The project brought us to realize that social entrepreneurship activities are not determined by the disciplinary area but by the student's intrinsic motivation to solve a problem. However, the university must have a clear strategy for promoting entrepreneurship. The study analysis resulted that the perceived level of mastery of the SEC is associated more with transversal skills than with disciplinary knowledge, and this finding should underpin the university's strategies.

The process of generating and implementing a social enterprise should occur in an ecosystem of experiences and resources for the student to exploit his or her potential. In particular, the educational context of this study suggests maintaining a solid entrepreneurial ecosystem with activities increasingly oriented toward social entrepreneurship. Along these lines, the weak significance of independent factors in entrepreneurial capacities in our study is understandable because educational activities usually are directed toward projects that solve environmental problems.

This study explores and shares substantial elements for the implementation of educational activities in social entrepreneurship. However, there are some limitations. Regarding the quantitative study, it is suggested applying a sampling test for future applications, as well as to expand the sample, in order to obtain more conclusive results. Similarly, must be consider it appropriate to incorporate more questions related to the social capital of the participants. On the other hand, it is suggested considering representative participants from diverse disciplinary areas and other university contexts.

Acknowledgments

This paper is a product of the project "OpenSocialLab: linking experiential learning to scale levels of mastery in social entrepreneurship competency," with funding from the NOVUS 2019 Fund. The support of the Tecnológico de Monterrey for educational innovation projects is appreciated (Agreement: Novus 2019). This research work has been completed within the Ph.D. program in Educational Innovation, with CONACYT support.

The authors acknowledge the technical support of Writing Lab, Teclabs, Monterrey, Mexico, in the production of this work.

Disclosure statement

The authors declare that there are no potential conflicts of interest.

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