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Local Approaches to Address Global Challenges: Educating Local Innovators for Positive Social Change

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LOCAL APPROACHES TO ADDRESS GLOBAL CHALLENGES
Educating Local Innovators for Positive Social Change

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ABSTRACT

Aligning global concerns with local challenges is essential for achieving long-term sustainability. This entails addressing local communities' needs and issues to develop effective and sustainable solutions. This approach not only benefits communities but also has the potential to impact the environment and society positively.

Local innovators play a fundamental role in promoting sustainable development by devising creative and sustainable solutions to problems affecting their communities. However, in the case of local entrepreneurs in the Guadalajara Metropolitan Area (GMA), their ventures often have a fleeting lifespan, limiting their impact on global challenges.

This research study, therefore, focuses on empowering these local innovators by providing them with the knowledge necessary to become change agents in their communities. The central question is: How can local innovators be empowered with the knowledge needed for generating positive social change? To answer this question, we explore how local entrepreneurs acquire knowledge through formal and informal training to drive social innovation projects that address local issues.

The results reveal that more than 50% of entrepreneurs participate in entrepreneurship-related meetings and events to establish connections with other entrepreneurs. These spaces also become significant sources of knowledge and resources for their projects. Furthermore, it

was observed that while entrepreneurial ideas are rooted in local concerns, they often have a global scope.

This study addresses the importance of social-driven entrepreneurs for sustainable innovation and highlights the need to establish connections between formal and informal education. The paper is structured into six sections to provide a comprehensive overview of the research, from contextualization to findings and final implications.

KEYWORDS

INTRODUCTION

Aligning global sustainability concerns with local challenges is essential for realizing long-term sustainability. To achieve this, addressing local communities' specific needs and challenges is necessary for developing effective and sustainable solutions. This approach not only promotes the sustainability of individual communities but also has the potential to impact the environment and society positively.

In this regard, local innovators play a crucial role in sustainable development by generating creative and sustainable solutions to societal problems. These innovators can be highly effective at the local level since they have firsthand knowledge of the needs and challenges in their community. However, in the case of local entrepreneurs in the Guadalajara Metropolitan Area (GMA; commonly known as Guadalajara), their ventures often perish within the first year, thereby failing to impact global challenges positively.

This research study aims to expand the conversation on how local entrepreneurs acquire the knowledge necessary for driving their projects and to empower them to become agents of change in their communities. This situation raises the question: How can the knowledge of local innovators be improved to generate positive social

change? To find the answer, the authors delve into the formal and informal education accessed by these entrepreneurs to acquire knowledge and drive social innovation projects that address local issues.

A qualitative methodological approach allows for an in-depth understanding of the current dynamics of how entrepreneurs gain knowledge in meetings or events organized by entrepreneurial communities. Nine community events were observed, three of which were massive: Talent Land, Campus Party, and Epicentro, with the latter focusing on social innovation. However, Epicentro no longer exists in Mexico as of 2023. In addition, 30 local entrepreneurs were randomly selected and interviewed from a database of 72 entrepreneurs identified by the Secretariat of Innovation, Science, and Technology (SICyT) as having projects with a social purpose. Their responses were categorized and the more than five hundred resulting data units associated with the research question were analyzed.

The results initially revealed that 52% of the entrepreneurs interviewed participate in entrepreneurship-related meetings to establish connections with other entrepreneurs. This indicates that entrepreneurs attending community meetings and events do so to develop relationships with their peers. These spaces transition from having a relational function to becoming vehicles for interaction to acquire knowledge and obtain the resources necessary for executing their projects. In this regard, it was observed that the underlying reasons for attending these meetings are linked to the desire to stay informed and meet the entrepreneurs' immediate knowledge needs to drive their ventures, most of which are associated with locally relevant issues. This demonstrates that entrepreneurial ideas are deeply rooted in the fabric of their local environment.

In the theoretical context, the relevance of local knowledge as a driving force behind sustainable innovations is explored, highlighting the need to empower entrepreneurs with knowledge that fosters positive social change. It is evident that entrepreneurs in Guadalajara often acquire the knowledge necessary for catalyzing their projects through non-formal learning environments, thereby emphasizing the importance of forging connections between formal and informal education. Furthermore, the data analysis recognizes that while entrepreneurial ideas are embedded in the local fabric of the lives of local innovators, these are intricately intertwined with global concerns that resonate worldwide.

This paper is structured into six sections. The first section aims to provide the reader with an overview of the research; the second considers the concepts of social innovation as a conduit for social change and entrepreneurs as agents of change, which serve as a reference framework for the analysis. The third section outlines the methodology of the study and explains the approach, strategy, and techniques for obtaining data. Moving on, the fourth section presents the results obtained from the analysis of the interaction spaces of entrepreneurs (meetings and massive events for innovation) and the exploration of the dynamics that arise for learning and driving their projects. The fifth section extends the theoretical conversation of the results to fulfill the objective of recognizing how to empower local innovators with the knowledge necessary for generating positive social change. Finally, a concluding commentary is provided.

KEY CONCEPTS

This article is based on three key concepts that guide the analysis: social innovation, social change, and local innovators.

Social Innovation: A Conduit for Social Change

To make the concept of social innovation coherent, it is necessary to distinguish between the terms "social entrepreneurship," "social enterprise," and "social innovation" which are sometimes used interchangeably. The scale of each term's action is a valuable factor in differentiation. Social entrepreneurship focuses on the individual, social enterprise refers to organizations, and social innovation is oriented toward the system (Westley & Antadze, 2010), transcending individual or organizational levels and implying that social innovation focuses on systemic change to promote social solutions.

For the purposes of this research, broad definitions have been followed to facilitate data interpretation. Among them is the definition by Moulaert, Mehmood, MacCallum, and Leubold (2017), who establish that social innovation must be interdisciplinary, transdisciplinary, and have platforms that allow interaction between both. Another definition is that of the Institute of Innovation at ESADE, which guides the practical application of social innovation characteristics: intersectoral collaboration, technical sustainability, financial sustainability,

scalability, and replicability (Buckland & Murillo, 2014). Additionally, the analytical framework of the Munk School of Global Affairs at the University of Toronto conceives social innovation as a process aimed at social change through creative strategies in terms of agency and the capacity to induce structural changes in the ecosystem (Pue et al., 2016).

Social innovation, therefore, is operationally defined in this research study as a new process, product, or service resulting from a creative social strategy that changes a system's fundamental routines, thereby improving its functioning for the benefit of society. This definition implies the adoption of a systemic thinking framework characterized by a comprehensive approach to solving social problems centered on actors to identify where changes in interaction dynamics can enable innovation.

Social Change and Social Development: Two Complementary Ideas

Social change is a broad concept that expresses the dynamic nature of a society. In this paper, social change is considered part of social development. There are many definitions, in this case, from the perspectives of Davis (2004) and Midgley (1995). The authors understand social development as the process by which various actions are promoted to improve the quality of life and the well-being of people in a society (Nahar, 2015).

This development is linked to the initiatives and proposals of local entrepreneurs seeking to address specific social demands through the development of collaboration networks, applications, and projects that reach an essential group of vulnerable populations, i.e., beneficiaries, who benefit from social innovation activities (Bloom & Dees, 2008). This often occurs within an institutional framework that promotes innovation, training, and economic support.

Social Entrepreneurs: Agents of Change

Social entrepreneurs are understood to be individuals who become agents of change (Arciénaga, 2009) in a social sector, putting their skills, talents, and personal background at the service of others through the fulfillment of five actions proposed by Smith and Woodworth (2012). These actions are 1) creating social value in their proposals, 2) recognizing and generating opportunities consistent with this mission, 3) committing to a continuous process of innovation and learning, 4) acting with

determination despite possible resource limitations, and 5) being accountable to those they serve through the goods and products they create. Achieving this last characteristic professionally or consistently in all projects, while desirable, depends more on the training than the goodwill of local innovators.

These five interrelated actions are key elements when considering a comprehensive training proposal that addresses the needs of both local innovators and society. The beneficiaries of social innovation are the beginning and end of the process, and one way to serve them is to increase connectivity between entrepreneurs, innovation capacity developers, government, academia, funds, and investment organizations. This is done to increase the number of inputs (social innovation projects) in ecosystems and generate more outputs (businesses oriented toward social values) in areas such as quality of life, social inclusion, citizen participation, environmental quality, healthcare, public service efficiency, and educational improvement.

METHODOLOGY

The methodology used in this study was structured based on the following research question: How can the knowledge of local innovators be improved to generate positive social change? The response is in the context of a qualitative methodology based on the case study method, which was chosen for its ability to investigate contemporary phenomena in their real context (Yin, 2009). This approach aligns with the emergent nature of the research, focusing on aspects that evolve and adapt as the researcher engages with the field of study, allowing for continuous deepening.

To collect data, semi-structured interviews were used as a technique which sought to record reliably and validly the attitudes and behaviors of entrepreneurs and their beliefs, ideas, and intentions reflected in their oral discourse (Creswell, 2009). A total of 30 local entrepreneurs were randomly selected and interviewed from a database of 72 entrepreneurs identified by SICyT of Jalisco as having projects aligned with one or more UN Sustainable Development Goals (SDGs). The interviews were audio-recorded and transcribed to identify explicit and immediate theories expressed by the interviewees in response to questions (Flick, 2007). Responses were categorized without prior bias, allowing the data to reflect reality.

In addition, observations were conducted at nine events organized by entrepreneurial communities, including massive ones like Talent Land, Campus Party, Epicentro, and regular monthly meetings of local entrepreneurs. The intention of attending these events was to capture first-hand information about the interactions and situations experienced by entrepreneurs in specific contexts (Flick, 2007), providing access to the daily life of the community in its natural environment and focusing on actions rather than words. This allowed for an understanding of the dynamics of entrepreneurs and the subjective meaning of their social behaviors in real situations.

A systematic and objective analysis of written or visual communication documents was also conducted to understand the knowledge shared by local entrepreneurs. Retrospective information was also obtained to contrast the data collected and review proposals related to formal and informal educational programs. This comprehensive methodological approach allowed for an enriched understanding of the experiences and perspectives of local entrepreneurs regarding the promotion of their projects to recognize how to empower them to generate positive social change.

RESULTS: UTILIZATION OF RELATIONAL MECHANISMS AND KNOWLEDGE ACQUISITION

The findings respond to the following research question: How can the knowledge of local innovators be improved to generate positive social change? The research reveals that local innovators in the GMA are building their knowledge by utilizing monthly meetings to develop their skills and acquire the knowledge needed for structuring their projects. Each monthly meeting uniquely harnesses intellectual capital, and innovators there interact with individuals they aim to connect with. This serves as a relational mechanism and a source of knowledge acquisition as shown in Figure 1, where the authors analyze 138 data units related to the motivation for attending entrepreneur meetings. The data distribution is as follows:
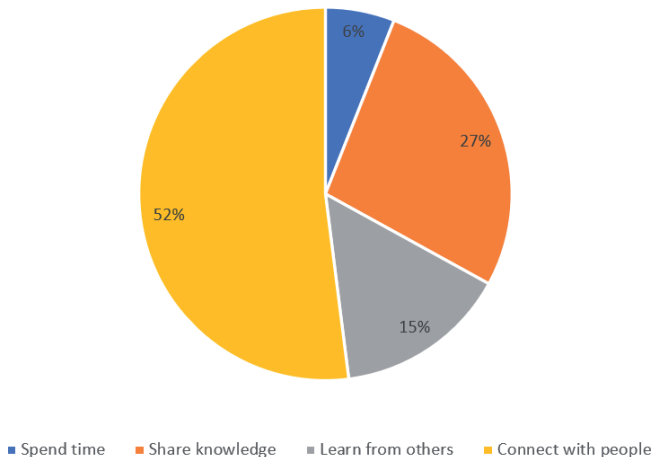
Figure 1: Motivation for Attending Entrepreneur Meetings

As shown in Figure 1, connecting with people (52%) is the primary motivation for attending community entrepreneurs' meetings. However, based on observations and interviews, knowledge acquisition is a more profound underlying motivation which becomes evident when focusing on the meeting content. For instance, in the calendar of one of the well-established entrepreneur meeting places in Guadalajara, *HackerGarage*, for August 2023, it can be noted that the meetings revolve around knowledge-centered content for the community members: a programming course, a 3D printing workshop, a Java course, etc.
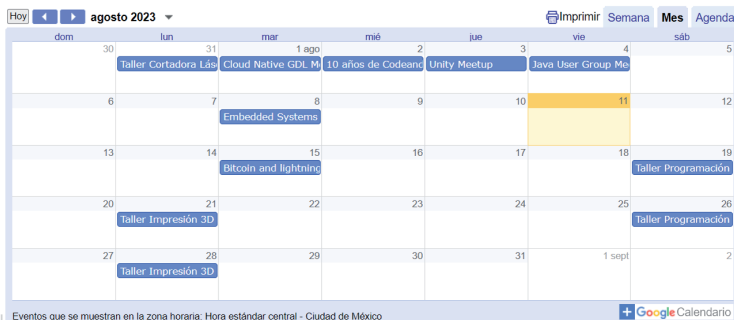

Figure 2: Activity Calendar at HackerGarage (https://hackergarage.mx/eventos [accessed August 11, 2023])

Figure 2 displays workshops and courses to which community members are invited. This underscores the central premise that the scheduled meetings revolve around harnessing the intellectual capital present in the community. In particular, the courses and workshops are led by members of the same community of entrepreneurs, illustrating a knowledge-sharing dynamic. In this context, grassroots innovations (Seyfang & Haxeltine, 2012) have the potential to generate a directionality for change (Geels & Schot, 2007) that can lead to a transformation of sociotechnical systems (Geels, 2010). Social interactions within emerging innovation structures (communities, events, etc.) provide valuable insights into how entrepreneurs leverage these resources to establish meaningful connections and relationships that amplify their professional and project growth. The following statements from members of the entrepreneurial community underscore the fundamental role of relational mechanisms:

> I enjoy attending Hacker Garage meetings; they constantly introduce me to people who know a lot.

> The format works incredibly well for me; I coordinate with those I want to connect with, we meet here, relax with a beer, have fun, and also get the work done.

The exposition above highlights how monthly meetings effectively function as relational mechanisms, facilitating collaboration, experience exchange, and knowledge sharing among entrepreneurs. This perspective significantly enriches the analysis of how interactions during these gatherings stimulate knowledge acquisition. Furthermore, it also allows one to recognize how the local context of Guadalajara profoundly influences the dynamics of the meeting. For example, SDG-related content was addressed locally at a meeting near the Talent Land event which focused on issues relevant to the SDGs. Everyday situations that connect with the SDGs, such as issues related to clean energy, waste management in the tequila industry, and improved water sanitation, among others, were explored. According to another member of the entrepreneurial community,

> we have a project to collect pesticide containers used in agave fields; these containers are left abandoned in the fields and are highly polluting, even for animals, and we want to organize workshops to raise awareness among agave producers about the harmfulness of this practice.…

Local entrepreneurs take advantage of monthly meetings to germinate ideas aligned with the resources and connections promoted by community members. In

addition, links between entrepreneurial practices and local issues are recognized in the observation records. For example, *Barretec*, an entrepreneurship project for an ecological sweeper, was born out of a particular local need in the town of Jalisco. The desire to solve a local problem led them to have a sweeper in the town of one of the founders. During the festivities for the town's patron saint, the garbage thrown in the church square is usually too much, and the broom sweeping system remains inefficient. Since the town does not have industrial sweepers or sweeping trucks, this innovation solves a local problem that aligns with SDG 9—Industry, Innovation, and Infrastructure. It is an example that illustrates how ideas for entrepreneurship are rooted in the local fabric of the founders' lives but also intricately intertwined with global concerns.

Unlocking the Potential of Local Innovators: Skills, Knowledge, and Professionalization

To analyze the findings further, this question was addressed: What is the basis upon which local innovators promote their projects? It is to stimulate positive social change based on the recognition of their installed capacities. The research indicates that social entrepreneurs exhibit qualities documented by renowned authors in the field (Nicholls, 2010; Seelos & Mair, 2005; Mair & Martí, 2006). These qualities include a deep commitment to the common good, a visionary mindset, and a selfless dedication to using personal resources in terms of time and finances. Several interviewees even highlighted that they financed their projects with personal or family funds and reinvested the profits into the business. As one entrepreneur, Daniel, stated, "We have funded everything ourselves and are financially stable. Although the profits have been minimal, they have been reinvested in the same project. I have no regrets about the time and effort invested."

While the foregoing is crucial, local innovators still recognize the need for additional knowledge. Hence, they seek resources within entrepreneurial communities to gain technical knowledge and stay updated on relevant advancements. They attend workshops, hackathons, and meetings on specific topics such as Arduino programming, 3D printing, and software interface enhancements. They also turn to university resources, leveraging the social capital of small- and medium-sized enterprises associated with incubation programs offered by institutions like ITESO's LINK, Universidad Panamericana's SPARK UP, ITESM's Zona Ei Guadalajara, and other

university platforms. However, entrepreneurs acknowledge their need for training, especially when presenting their projects to potential funders.

This study reveals that the demand for expert knowledge increases as projects mature. This is reflected in data from Jalisco's SICyT. In 2020, they registered 72 projects by local entrepreneurs addressing social issues in various areas such as biotechnology, responsible consumption, financial services, agribusiness, and the environment, among others (see Figure 3).

Figure 3: Projects Aligned with Social Values in Jalisco (data from the Secretariat of Innovation, Science, and Technology)

Projects were monitored intermittently for over four years, from 2018 to 2022. 35% did not reach one year of existence, 59% survived between 1 and 4 years, and only 6% managed more than four years of survival (see Figure 4).
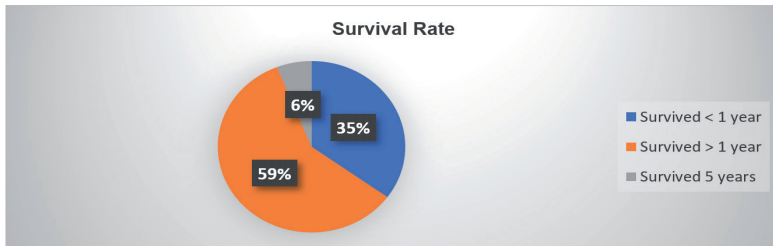

Figure 4: Survival of Social Innovation Projects

Entrepreneurs whose projects did not survive for more than four years were interviewed, and it was discovered that a lack of funding was one of the causes of the early demise of their projects, as well as a lack of expertise on the part of some project founders. Furthermore, projects that managed to survive for five years or more were characterized as having access to more specialized knowledge, such as in impact assessment, among others.

On the other hand, other vital actors related to local innovation, such as technology companies conducting research in Jalisco, recognize social entrepreneurs as disadvantaged due to their inexperience and lack of training:

> We already know that the capabilities of graduates are not in the field of technological specialization for innovation; we are even more interested in problem-solving capabilities because there are technologies that they have never seen [before] because to study them, you need equipment that universities do not have. For example: if they want to analyze a computing protocol, they need a logic analyzer worth a million pesos, and it has a lifespan of three years or four years maximum because the protocol changes and you have to update all the equipment or buy another one, and the universities are not going to do it. (personal communication with collaborator from Intel Corporation)

Both elements—the lack of training and the lack of education—are recognized as factors that limit the survival of social innovation projects. This leads to the other aspect of this research study: training programs on topics related to social innovation.

Exploring Local Entrepreneurs: Formal Learning and Capacity Development

The authors observed the informal nature of the training of local entrepreneurs which is generally linked to their communities. Although the authors identified postgraduate programs related to social innovation in Jalisco, this type of entrepreneur does not seem to be connected to university education. However, social entrepreneurs do rely on resources like monthly meetings and annual events like *Talent Land* or *Zapopan Challenge* where knowledge and experiences are shared.

For example, Luis, a graduate of ITESO, shared his experience:

> I am on vacation visiting my family now, but next week, I will be giving a course on computer security protocols. I wish someone had taught me what I know now earlier, but I only learned it when I started working. Now I want to share what is useful.

Institutions like the Forum for Science and Technology Consultation (FCCyT) have also made efforts to develop training initiatives. FCCyT emphasizes the need for a formative commitment with a systemic focus, guarantee of quality, international standards, and certification systems in social innovation (Acosta & Arteaga, 2019).

University training programs, however, often follow more traditional models, offering participants a predetermined set of contents according to what is authorized

by educational authorities (a situation that makes them less flexible). This results in curriculum designs focused on essential theoretical elements that underpin the disciplinary area and vary little over time, leaving out tools and techniques for specific tasks that are generally associated with highly dynamic international standards and certification systems.

In contrast, community meetings are based on the participants' desire to learn specific content that changes continuously. Some local entrepreneurs emphasize the need for practical knowledge beyond what they have already learned in university. For example, Daniela, a participant in the Bootcamp Health program of ESMEX (Emprendimiento Social México) said, "I studied business administration, and they taught me all the theoretical aspects of starting a business. However, I decided to follow my path and learn through trial and error. I come here to learn from practical experience."

This illustrates the dynamics of knowledge acquisition that local entrepreneurs follow. These entrepreneurs with an interest in social issues and a desire to address them generally do not consider enrolling in university programs to address social issues. Two prestigious programs in Jalisco—the Masters in Strategic Design and Social Innovation at ITESO and Masters in Social Innovation and Welfare Management at the University of Guadalajara's Center for Economic and Administrative Sciences— are currently low-demand programs. For example, only five students enrolled in the ITESO masters program for the Spring 2023 semester; for the UdG masters program, around 20 students enrolled.

If we consider that social entrepreneurs are usually young—between 20 and 22 years old—they represent a market size of 1.3% of the total population in Jalisco (8,348,151 inhabitants according to the 2020 census of INEGI) of which 261,000 are studying for a university degree (Secretariat of Economy, 2023). Out of the total number of students, according to the digital platform Data México, 62,800 are students of business and management, 45,500 are from the social sciences, and 7,350 are studying exact sciences, representing a potential market of 115,650 young people from Jalisco (INEGI, 2020). Considering the aforementioned data, why does social entrepreneurship education in universities seem to have little demand?

In this regard, and according to the results of this research study, the choice between formal programs and informal training is based not only on the depth of

learning and content involved but also on agile responsiveness to changes in the social, business, and labor environment. Therefore, formal educational programs at higher education institutions do not necessarily favor local entrepreneurs as these are designed with a focus on long-term stability.

DISCUSSION: POSITIVE SOCIAL CHANGE

In Mexico, a country marked by social inequality, there is an urgent need for local innovators who can bridge the gap between sustainability concerns and everyday challenges. Educating entrepreneurs who can generate innovative solutions while promoting social change and inclusion is crucial. These entrepreneurs can play a vital role in sustainable development by creating effective and sustainable solutions tailored to their communities' specific needs and challenges.

In this regard, it can be said that the role played by universities is crucial in developing the skills necessary for addressing problems in various areas such as poverty, education, environment, health, and sustainability. However, it can be noted that the configuration of formal higher education programs tends to lean toward stability and long-term sustainability, a situation that does not favor local entrepreneurs. This focus on the permanence and stability of university entrepreneurship programs is based on the difficulty and bureaucratic hurdles involved in making substantial changes to academic curricula (Wildavsky et al., 2011). The inherent rigidity of the formal curriculum structure results from the need to comply with accreditation requirements, internal approval processes, and institutional considerations (Frank et al., 2023).

In contrast, informal training programs such as short courses or workshops offer greater flexibility and adaptability to the market's changing demands (Eraut, 2010). This agility in quickly adjusting to emerging trends in the labor market can be attractive to entrepreneurs and professionals seeking constant and relevant updates.

Thus, according to the findings of this research study, the choice between formal programs and informal training is based not only on the nature of the content and the depth of learning involved but also on the ability to respond in agile fashion to the changing dynamics of the social, business, and labor environment. This affects

the potential of local innovators to address sustainability challenges through their direct knowledge of local issues.

This approach to innovation based on a deep understanding of local needs and dynamics aligns with the principles of user-centered innovation (Von Hippel, 2005). However, its impact in specific local contexts such as Guadalajara is affected by various factors, including the availability of resources and effective collaboration among different actors in the innovation ecosystem (Silva-Flores & Murillo, 2022). Insufficient collaboration and coordination between formal (universities, innovation centers, etc.) and informal (entrepreneur meetings, massive innovation, entrepreneurship events, etc.) training structures restrict the ability to catalyze local knowledge into ventures that effectively generate sustainable development.

Authors like Eraut (2010) point out that effective collaboration between formal and informal learning contexts has been identified as crucial for facilitating comprehensive learning experiences that empower innovators. Moreover, facilitating this collaboration between formal and informal learning contexts is one of Guadalajara's local challenges for global sustainability because it impacts the capacity building of innovation ecosystem stakeholders who are needed to solve problems that threaten sustainability.

Furthermore, other studies have highlighted the relevance of networks and inter-organizational relationships in the context of sustainable development. Huggins and Thompson (2015) emphasize how collaboration and connection between various entities, both public and private, are essential to achieving effective, sustainable development in a territory. Similarly, Tödtling and Trippl (2005) have pointed out how regional innovation networks can promote knowledge transfer and the adoption of sustainable practices in the business environment.

In the specific context of Jalisco, the presence of local innovators with valuable potential to address local sustainability challenges is undeniable. However, their ability to make a significant impact is limited by specific barriers, namely, the lack of innovation ecosystem stakeholder capabilities and the insufficient concentration of actors committed to innovation (Silva-Flores & Murillo, 2022). This coincides with Rogers's (2003) conclusions about how sustainable development can be hindered or promoted by the creation of a dynamic or static ecosystem. Furthermore, the

fragmentation and lack of connection between the agents operating in formal and informal training contexts can also undermine their actions' effectiveness.

These challenges highlight the need for a more comprehensive and collaborative approach that combines the different actors involved in social innovation and entrepreneurship at the formal and informal levels. Only through joint efforts and greater interconnection can we unlock the true potential of local innovators and their contribution to solving sustainability problems, thereby creating a lasting impact on society and the environment.

CONCLUSIONS

This article addresses local innovators (change agents) as critical actors in generating sustainable solutions to society's problems, with the potential to contribute significantly to the global sustainability agenda. Recognizing their importance especially in emerging countries like Mexico is essential for promoting social change.

However, local innovators in Mexico need more knowledge than they can acquire in their formal education, leading them to be part of schemes that extend training opportunities to entrepreneurial communities or events to implement transformative change effectively. Therefore, empowering local innovators with the knowledge necessary for generating positive social change is crucial. This involves reviewing universities' educational and training programs and adapting these to equip change agents with the necessary skills.

In the context of Jalisco, Mexico, it was observed that local innovators acquire knowledge and skills primarily through emerging innovation structures such as entrepreneurial meetings and massive events for innovation or entrepreneurship. This is because they do not find suitable solutions within the formal programs available at universities, and these programs generally lack the dynamism to drive sustainability by solving social problems through innovative ventures that address local needs.

In this sense, the theoretical discussion highlights the division between community-generated means of acquiring knowledge and formal means of acquiring

knowledge in institutions. In addition to the importance of inter-organizational networks as a crucial factor, these are vital to the success of innovation and sustainable development initiatives. In Jalisco's case, the presence of local innovators offers significant potential. However, their effectiveness is conditioned by the lack of interconnection among different actors. These findings emphasize the need to promote collaboration and networking in the local innovation ecosystem to maximize the impact of actions toward sustainability.

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