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Artículos

Factors influencing hybridization of entrepreneurship methodologies. An exploration of academics and practitioners' motivations*

Factores que influyen en la hibridación de metodologías de emprendimiento. Una exploración de las motivaciones de académicos y profesionales

Fatores que influenciam a hibridização de metodologias de empreendedorismo. Uma exploração das motivações de acadêmicos e profissionais

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Abstract:

This paper presents an analysis of the reasons and motivations behind several educational figures in the constructing of hybrid methodologies through combinations based on entrepreneurship education as a method. A qualitative exploratory study was carried out, and data was collected through 19 semi-structured interviews. Data was analyzed through a discourse analysis technique which made it possible to appreciate that hybrid methodologies are built as part of a contextualization process that seeks to apply correctly the methodologies concerned to the educator's culture, context, and even personal style present at the time. The understanding of the role that an educator´s context plays in his or her choice of contents and teaching approaches could help to avoid biases and create transformational education practices.

JEL Codes: M10, M30.

Keywords: Education, entrepreneurship, innovation, methodologies.

Resumen:

Este artículo presenta un análisis de las razones y motivaciones de varias figuras educativas en la construcción de metodologías híbridas a través de combinaciones fundamentadas en la educación emprendedora como método. Se llevó a cabo un estudio exploratorio cualitativo, cuyos datos fueron recolectados a través de 19 entrevistas semiestructuradas. Los datos fueron analizados mediante una técnica de análisis del discurso que permitió apreciar que las metodologías híbridas se construyen como parte de un proceso de contextualización que busca aplicar correctamente dichas metodologías a la cultura, el contexto e incluso el estilo personal del educador de ese momento. Comprender el papel que juega el contexto del educador en su elección de contenidos y enfoques de enseñanza podría ayudar a evitar sesgos y crear prácticas educativas transformadoras.

Códigos JEL: M10, M30.

Palabras clave: Educación, emprendimiento, innovación, metodologías.

Resumo:

Este artigo apresenta uma análise das razões e motivações por trás de várias figuras educacionais na construção de metodologias híbridas mediante combinações baseadas na educação empreendedora como método. Foi realizado um estudo exploratório qualitativo, com dados recolhidos através de 19 entrevistas semi-estruturadas. Os dados foram analisados utilizando uma técnica de análise de discurso que possibilitou perceber que as metodologias híbridas são construídas como parte de um processo de contextualização que busca aplicar corretamente as metodologias concernentes à cultura, contexto e até mesmo estilo pessoal do educador naquele momento. A compreensão do papel que o contexto do educador desempenha em sua escolha de conteúdos e abordagens de ensino pode ajudar a evitar vieses e criar práticas educativas transformadoras.

Códigos JEL: M10, M30.

Palavras-chave: Educação, empreendedorismo, inovação, metodologias.

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Introduction

Entrepreneurship education is considered as the process of transmitting skills, ways of thinking and specific tools to students in order to assist students in the identification of new opportunities and their execution, generally through a business model (McIntyre & Roche, 1999). There is a bond between entrepreneurship education and the creation of value arising from entrepreneurial activity (Raposo & Do Paço, 2011). This process is generally considered paramount in the development of the entrepreneurial ecosystem, as it tends to produce mechanisms for the socialization or transmission of skills, ways of thinking and pathways for applying both, which help business stability (Kautonen, Van Gelderen & Fink, 2015).

Hägg & Gabrielsson (2019) point out that the evidence in entrepreneurial education research has shifted from linear instruction models to a constructivist model based essentially on experience. Each academic context has its own unique way of transmitting entrepreneurial capabilities, mindsets and tools. Teaching practices are crafted from the cultural contexts from which they have developed, which is why we can find a wide diversity of ways of transmitting entrepreneurial education. Recent studies place the teacher's agency as a key element in the creation of entrepreneurial competence within their classrooms (De la Torre Cruz, Rico, Llamazares, Cámara & Eguizábal, 2016). Such diversity of paths for the transmitting of knowledge is useful in understanding the way in which academics interact with their academic context and the way in which they pay attention to certain problems, and use specific tools to solve them.

Understanding the diversity of teaching practices that is involved in each academic context is key to the identification of particular ways in which academics interact with their contexts as well as the motivations to use them linearly or otherwise combine them. The use of entrepreneurship methodologies is subject to the cognitive world of the teacher, which is in a constant dialogue with its own context. The study of the teacher's agency sheds light in the ways he understands the problems in his social environment, as well as the way in which he addresses them and ultimately solves them.

Entrepreneurial education has traditionally focused its studies mainly on the figure of the student and the formation of the necessary skills to undertake the launching of a business. It has recently opened to investigate the teacher as a constructor of knowledge in the classroom through his own symbolic world. A particular quality of entrepreneurship teaching lies in its wide diversity of teaching profiles. Traditional academic profiles can be found, coexisting with other profiles more focused on consulting, and even some entrepreneurs looking for a classroom to share their experiences in the entrepreneurial world. In any case, these teachers seek to develop the skills of curiosity, problematization and solution finding in their students.

The approach of Neck & Green (2011) is particularly useful to frame motivations from different teaching profiles in order to identify the methodological uses, modalities and types taught in their courses. This framework identifies three types of mindsets in entrepreneurial teaching; the first model displays an individualistic view of the entrepreneurial process that conceives the entrepreneur as a distinct and differentiated actor from others, based on the possession of unique qualities and relevant skills that lead to the success of their companies. The second frame is related to the processual world, which refers to the teaching of entrepreneurial content and tools in stages and based on a specific plan. This model is supported by the teaching of case studies and business plans. Lastly, the cognitive world is a recently emerging model, which asks about the deciding factors influencing the mind of the entrepreneur to act in a specific way. This approach, although focusing in the individual again, analyzes him while considering his mind and his decision making. In this case, it recognizes the teacher as an agent who carries a symbolic world around and, based on it, frames social reality by selecting certain problems and solutions. Both problems and solutions arise from the entrepreneur's ability to choose rightly a key piece from his toolbox that will bring him to a resolution. This cognitive perspective is based on the teaching of method and is no longer transmitted from the planning of content and methodology, but rather from the consumer's problem and needs. The latter method, unlike the processual modality, is dynamic, interpretive and context dependent.

This research aims to expand the understanding of the creation and application of such methodological combinations in an academic context, given that the current focus of the literature has centered mainly on software development and the improvement of health processes (Decker & Stead, 2008; Dobrigkeit & De Paula, 2017; Andersen & Røvik, 2015; Poth, Sasabe, Mas & Mesquida, 2018; Al-Refaie, Abbasi & Al-shalaldeh, 2019; Sandner, Sieber, Tellerman & Walthes, 2020). This research also aspires not only to shed light on the forms that these combination processes take on the education arena, but also to detect specific combination drivers and applications depending on the educator's background.

Thus, its purpose is to understand the thought processes behind the combination of two or more methodologies –either completely or in parts– by educators in entrepreneurship teaching process, as well as the patterns or differences these processes may show depending on the particular educator's profile and the educative approach they may adhere to consciously or otherwise. In order to achieve this, this paper focuses on the study of the motivations behind the crafting of new hybrid methodologies by educators with three distinct profiles: High level mentors, entrepreneurs-educators, and academic educators teaching entrepreneurship. It studies the way in which Design Thinking (DT), Lean Startup (LS), Agile (AG), and other methodologies are combined in entrepreneurship classrooms by these different educator profiles. It should be noted that all methodologies were considered a starting point in order to frame and understand the techniques behind the combinations generated by each profile. The main goal is to examine the motivations of teachers in the use of methodologies beyond the specific configurations that may arise from them. This is the central research question: Which are the reasons behind the creation of hybrid methodologies in the world of entrepreneurship education?

In order to answer the research question, an exploratory approach was designed consisting on 19 qualitative in-depth interviews with mentors and educators that are considered methodological experts of the entrepreneurial ecosystem. A discussion guide was designed in order to collect data from semi-structured interviews and later analyzed using a discourse analysis technique.

Literature review

Since the first entrepreneurship class was held in 1947 in the Harvard Business School (Katz, 2003), entrepreneurial education has gone through different distinct approaches that may have a certain chronological order but are not entirely lineal and cannot be considered either progressively, or as mutually exclusive. The entrepreneurial education can be deeply complex and extremely varying from culture to culture, business school to business school, and even from one educator or mentor to another. Some authors have even posed the question of whether teaching entrepreneurship is possible at all.

The authors of this paper agree with educators and researchers Neck & Greene (2011) when they answer with a confident yes, not without continuing with the sobering acknowledge that it depends on what you understand by entrepreneurship education, and that current popular approaches might not always be successful.

Entrepreneurial teaching models

Neck & Greene (2011) points the first of three approaches can be called The Entrepreneur World, and has revolved around the traits, personality, and skills of an archetypical entrepreneur, such as managerial, resilient and strategic (Hadi & Abdullah, 2018). This figure however has proven hard to pin down, let alone teach in a classroom, since it can be extremely variable and context dependent. In this model, the personality of the entrepreneur is situated as a referential framework through which the good practices that make up the world of the entrepreneur can be analyzed. The figure of the entrepreneur is characterized from symbols such

as the hero or other myth-like narratives. It is framed in the debate of whether the entrepreneur is born or entrepreneurship is an acquired skill, confirming the first option. It underlines the skills that the successful entrepreneur must have in order to navigate in high-risk, ambiguous contexts. In this model, descriptive knowledge is transmitted and pedagogical teaching is based on elementary business concepts, readings and exams.

The second approach refers more to prediction processes and may be termed The Process World. This approach is often considered as more *teachable* by educators and mentors since it aims to systematize and present analytical and empirical tools from other disciplines than can be adjusted and applied to entrepreneurship alumni. This planning and forecasting model focuses on New Business Development and issues such as capital markets, resource allocation, and business performance.

The third approach, The Cognitive World is more related to cognitive processes and aims to teach, not an entrepreneurial character, but an entrepreneurial way of thinking that can be applied in specific moments as needed. The third approach comes from an understanding of entrepreneurship as a method rather than a process. Educators can be situated in either a process-oriented model of teaching or a method-based one according to the traits, attitudes and performances carried out in the classroom. The process model is a linear system supported in stages that allows reaching the end based on the information provided by the user. On the other hand, the method model is based on practice and the action of the entrepreneur in a context of high uncertainty. The first implies repetition; the second, creation (Neck & Greene, 2011).

The cognitive model is based on practice and focuses its attention on the decision-making process of entrepreneurs, hence its preference for case studies, framings and knowledge structure as learning tools. Neck & Greene (2011) point out the emergence of a world of method that seeks to understand the causes that trigger the creation of value from the study of entrepreneurs technique portfolios. It focuses on entrepreneurs, organizations and work teams. His pedagogical approach is based on games, meaningful observations, practices and constant reflections. The student's self-knowledge, as well as his relationship between doing, thinking and collaboration in problem solving. It is a world situated in entrepreneurial action, especially recognizing the agency of the student and teacher in terms of the construction of their social reality. See figure 1.

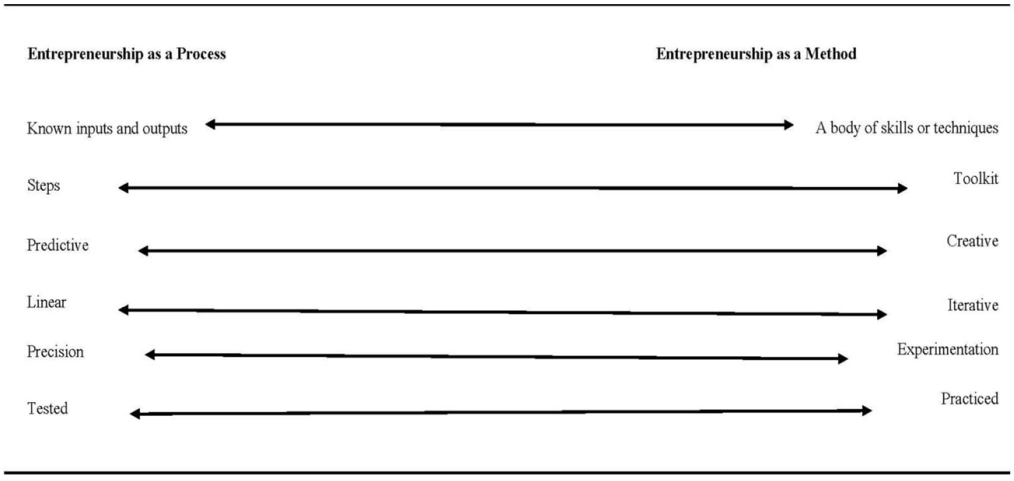

FIGURE 1
Process versus Method
Source: Neck & Greene (2011).

In the model proposed by Neck & Green (2011), the teaching process in entrepreneurship is analyzed through two different perspectives. On the one hand, entrepreneurship is seen as a process, on the other, it's seen as a method. Each perspective proposes a symbolic world in terms of knowledge structures and teaching practices. It provides a useful framework to study the way in which different teacher profiles create and unfold certain methodological configurations in accordance to the perspective they might take on teaching, namely,

entrepreneurship as a process or entrepreneurship as a method. In other words, the authors aim to understand the logic behind methodological configurations from teachers, and correlate it to the perspective they have towards entrepreneurship in their classrooms.

Educators and mentors have a wide variety of backgrounds and experiences that make them naturally prone to a certain approach or another, which is frequently manifested in the methodologies that they choose to present in their classes, and the manner in which they do. The educator's preferences and seen or unseen biases are translated into the classroom in the form of content which may include basic methodologies but emphasizes some over others, often mixing them. Thus, it is not infrequent to find different methodological integrations that may even end up developing new derivations as in the case of the Agile Methodology (Lopez-Nores, Pazos-Arias, Garcia-Duque, Blanco-Fernandez, Diaz-Redondo, Fernandez-Vilas, & Ramos-Cabrera, 2006).

The use of methodological combinations for training and support purposes in entrepreneurship is common for practitioners, and now becoming part of training or mentorship curricula, for example, the combined use of Lean and Agile in industries such as software development (Wang, 2011). Some of the most common reasons to use combinations are related to the fact that single methodologies are considered insufficient, or to the pursuit of different benefits from different methodologies (Rodríguez, Markkula, Oivo & Garbajosa, 2005).

Methodologies: Iterative delivery

The high-risk, dynamic environments in which companies operate are conducing to innovation processes that are tightly tied up to their ability to survive. In this context, both companies and entrepreneurs require specific skills, abilities and tools that allow them to overcome challenges of their business contexts (Ghezzi & Cavallo, 2020). The actors of entrepreneurial ecosystems partake in the socialization of such good practices and skills from the dynamic business world. Investigating the relationship between theory and practices in a certain group of the entrepreneurial ecosystem, in this case business schools, allows us to better understand specific ways of teaching legitimate knowledge resources in these settings.

In the quest for innovation, companies and entrepreneurs need methods and tools that will help them generate new business opportunities and open up new possibilities for the creation of value. Agile methodologies provide useful guides in developing the necessary capabilities to interact with dynamic markets by establishing permanent feedback cycles with clients, and promoting a culture of constant change. The Agile approach is generally accompanied by Design Thinking and Lean Startup methodologies, which carry out research experiments with their target audiences in order to strengthen the validation and innovation processes of their business models (Ghezzi & Cavallo, 2020). These approaches are reviewed in this study, not because they are the only methodologies used by entrepreneurs, but because they provide an efficient starting point for the exploration of some of the used methodologies.

Another widely used methodology is Agile. This methodology sprung from the Agile Manifesto in the 90s, which establishes values that define the core of the agile mindset: "1. Individuals are more important than processes and tools; 2. Working software is more important than comprehensive documentation; 3. Customer collaboration is more important than contract negotiation, and 4. Responding to change is more than following a plan" (McAvoy & Samon, 2005, pp. 410-411). These key values guide the entrepreneurial action according to customer needs with the goal of creating value.

AG comprises a group of methodologies, all "based on values and principles that focus on iterative and incremental delivery" (Sulaiman, Mahrin & Yusoff, 2016, p. 161). In this process, awareness, knowledge, and people skills are fundamental. Unlike other methodologies, AG employs unexpected changes in the environment to react promptly, if necessary, applying different frameworks to be applied. Examples of AG frameworks include Scrum for software development, Kanban for manufacturing, Extreme Programming

and Crystal Family for software development, and others, such as Hackathons for events of product development (Böhmer, Beckman & Lindemann, 2015). Some authors have included DT and LS as Agile frameworks as well.

According to Czeropski & Pembrook (2017), there are other variations of the Agile model, such as ADDIE (Analyze, Design, Develop, Implement, and Evaluate), LLAMA (the Lot Like Agile Management Approach), SAM (Successive Approximation Model), and HPT (Human Performance Technology).

Lean startup and design thinking: Similarities and differences

The startup model is a business generation model centered on the creation of value for users, which thrives in an experimentation culture. In the culture of the lean movement, generated from the lean manufacturing, Ries called his methodology Lean Startup in 2011. The methodology is based in frequent experimentation and iteration cycles that allow the validation, step by step, of a business idea (Ries, 2012; Blank & Dorf, 2012). Its main tool consists on a flexible document coined Business Model Canvas of Ostewalder & Pigneur (2010), specifically designed to be adapted through each iteration. The Lean Startup has been considered by some authors the most popular methodology among entrepreneurs (Blank & Dorf, 2012).

Design Thinking on the other hand, focuses on the user. The methodology has a strong emphasis in the definition of the problem to be tackled, in order to build a prototype and test it. This cycle is meant to be repeated until the prototype testing shows a fit solution to the original problem (Brown, 2008). Some of the testing methods are focused on depth, most notably qualitative research approaches such as observation, interviews, ethnographic fieldwork and diaries. The entire research process is focused on abductive reasoning (Kurtmollaiev, Pedersen, Fjuk & Kvale, 2018).

Both Design Thinking and Lean Startup have key similarities, mainly the inclusion of external factors such as users, in the early development stages, and an iterative nature that welcomes uncertainty (Pereira & Russo, 2018). According to Mueller & Thoring (2012), both are focused on innovation and include prototype testing. There are also, however, important nuances. A key difference between Design Thinking and other methodologies lies in the fact that it is more than a process: It is a way of thinking. A fundamental aspect of the methodology is its inclination to use multidisciplinary teams and its set of tools for every stage of its non-lineal process. Design Thinking is more user-centered and thus relies more heavily in qualitative research for its explorations and validations, while Lean Startup is consumer-centered and usually uses mixed methods (both qualitative and quantitative) to validate hypothesis.

The Design Thinking methodology has several adepts, most notably IDEO (Aydemir & Cetin, 2018). Its focus is not so much the validation of a hypothesis and a business model, but rather ideation, which is not considered by Lean Startup, given that it assumes that the founders already entertain a vision of their product.

The hybrid methodologies: Previous research and findings

A hybrid or a combined methodology has emerged from LS and AG, Leagile. Some authors argue that these methodologies are not complementary; however, other groups defend the possibility of constructing such a hybrid to complement processes. The difference between LS and AG is notable: While the former focuses on low cost, the latter centers on adapting to customer requirements (Gurahoo & Salisbury, 2018).

However, the defenders of this hybrid assume that there is a midpoint at which they can join. Thus, the objective is to know the demands of the client at the lowest possible cost (Goldsby, Griffis & Roath, 2006). On the other hand, a hybrid between LS and DS can be found, that is the Lean Design Thinking Model or Lean Thinking. This hybrid seeks to increase the perceived value of the offer to the customers, by detecting

the characteristics that truly add value to them (Mohammad, 2017). It aims to leverage the strengths of both methodologies in order to arrive to the best solution (Mueller & Thoring, 2012).

In the analysis of these combinations, some previously published papers used qualitative techniques to understand the results (Andersen & Røvik, 2015; De Paula & Araujo, 2016; Dobrigkeit & De Paula, 2017; Halas, 2018; Mansoori & Lackéus, 2020; Sandner et al., 2020), without concern for the reasons behind the construction of such combinations. Such techniques are observation of experiments (De Paula & Araujo, 2016); comparative studies (Dobrigkeit & De Paula, 2017; Halas, 2018; Mansoori & Lackéus, 2020); elaboration of case studies through focus groups or interviews (Andersen & Røvik, 2015; Sandner et al., 2020), or even descriptive studies (Decker & Stead, 2008).

Most of these studies have been conducted in organizations that have applied hybrids of entrepreneurship methodologies within internal processes, mostly for software, product development, or implementation in certain company processes. The previously mentioned studies have been conducted seeking to understand the effects of the use of said combinations on the implementation process itself, rather than on the reasons that generate said combinations or wondering who is responsible for building and implementing these in organizations. Some of the combinations analyzed in terms of a focus of the effects of the implementation of methodological combinations comprise Agile, Design Thinking, and Lean Startup (Koen, 2015; Ximenes, Álves & Araujo, 2015; De Paula & Araujo, 2016), Lean Startup with Design Thinking or Lean Thinking (Halas, 2018; Andersen & Røvik, 2015), and that of Lean Startup and Agile or Lean Agile (Poth et al., 2018), among other combinations (Dobrigkeit & De Paula, 2017).

Some of the findings in the previous studies have been the challenges that working teams face when implementing combined methodologies (De Paula & Araujo, 2016); the criteria for success in the implementation of the combinations (Andersen & Røvik, 2015; Dobrigkeit & De Paula, 2017; Al-Refaie et al., 2019), or the reasons due to which a specific combination makes sense (Sandner et al., 2020). And some articles even provide theoretical discussions on the use of methodological combinations (Koen, 2015; Poth et al., 2018). The comparative strengths and weaknesses of some methodologies have not been discussed in depth. However, what has been studied shows that the use of each methodology depends on the context of application (Mansoori & Lackéus, 2020).

Absence of further research in this area can be attributed to the fact that research published in the field is growing, but predominantly in high-impact journals. This research focuses mainly on certain topics of interest and is limited to a reduced number of authors. A study carried out by Gupta, Ibrahim, Guo & Markin (2016) analyzed 371 papers published in high-impact journals and found that fewer than 20 authors had the highest production of articles, as well as the highest degree of impact, and that most of these articles were focused on the category of management.

Furthermore, most contributions to the field do not derive from countries where the Spanish language is spoken, but rather from the United States, Canada, and European countries. The most read articles are focused on topics such as entrepreneurial opportunity, value creation, and the entrepreneur's profile (Luor, Lu, Yu & Chang, 2014). In this respect, it is relevant to analyze other topics not explored in the literature, in order to find novel areas of study that can open further discussions and, above all, reflect and learn in ways that can be used by practitioners in daily life.

It is thus quite clear how methodologies can be mixed, as well as the advantages of doing so. The fieldwork for this paper aimed to go beyond in understanding the testing and construction techniques that can be found in a classroom. As seen, the literature to date has focused on the process world. In this framework, and while recognizing the usefulness of the process world, this paper seeks to go further and build on the cognitive world: That is, the processes, techniques and decisions that are taken in order to construct a hybrid methodology depending on the teacher profile.

The following section presents the methodological details of the study. It describes the research method in order to present the detected findings subsequently in the section entitled Findings. But unlike previous

research, it seeks to understand how and why these hybrids are constructed and which individuals generated these combinations rather than the effects or challenges of their implementation (Andersen & Røvik, 2015; De Paula & Araujo, 2016; Dobrigkeit & De Paula, 2017; Al-Refaie et al., 2019) which is the main focus in most of the literature.

Methods

A qualitative approach was used with the goal of kindling discussions and exploring the meaning lying behind the discourses. Such qualitative approach was started by designing a discussion guide and a questionnaire. The interviewees were then recruited in two different moments; first, the high-level mentors, and later on, the entrepreneurship and academic educators. Data from the mentors and educators was then collected through 19 semi-structured interviews; all of which were recorded, transcribed, and then analyzed using a discourse analysis technique to draw our final conclusions. A phenomenological approach was taken in order to explore the information obtained around different experiences through the interviews.

The goal of phenomenological designs is to explore the experiences of subjects concerning their capacity to construct meaning from their social reality (Hernández & Mendoza, 2018) or the world of life (Gadamer, 2006). This research perspective is based on the assumption that the social actor has numerous personal compasses and shortcuts to interact with others (Giddens, 2007). Hence, the interviewees' speech and their ways of naming reality are basic to the establishment of guidelines essential to the understanding of their experiences. It seeks, through interviews and other approaches, to determine the experience structure that subjects build around a specific phenomenon. Hence, both the exploration and contextualization of the participant's speech are fundamental for the researcher's understanding.

Having stated the latter, it is important to point out the role of language as a repository of social codes and meanings of a certain social group. These action signals are the foundation of what is instituted in the logic of their activities (Lindón, 2012). Hence, it is said that the institutionalization of social action essentially entails the entire typifications, signs, and patterns of interaction through which social groups construct meaning (Berger & Luckmann, 1996). Then, it is suggested from the previously mentioned material, that the phenomenological approach provides a framework for the understanding of the typification process through which subjects imprint meaning schemes on their social actions (Giddens, 2007).

Particularly in the field of entrepreneurship, qualitative research is frequently used, due to its focus on studying aspects such as the particular way in which entrepreneurs address situations of uncertainty, which depends on the context or the intertemporal, the difficulty in measuring aspects, or the study of unique or exceptional cases (Van Burg, Cornelissen, Stam & Jack, 2020). Hence, for this research project a qualitative approach was designed, in order to understand how mentors build methodological hybrids in certain contexts. It was also noted that previous studies have been carried out with this type of qualitative approach to analyze entrepreneurship methodologies and their combinations (Andersen & Røvik, 2015; De Paula & Araujo, 2016; Dobrigkeit & De Paula, 2017; Al-Refaie et al., 2019), however, they are focused on the effects or challenges of their implementation rather than the reasons and techniques involved in its construction. Having noted this, the methodology employed for this study is presented below.

The study was conducted in two phases, first, high level mentors were approached and interviewed; from the insight they provided a second wave of interviews with college professors that teach entrepreneurship was later conducted; half of them with an academic profile and the other half, with a consultant or entrepreneur profile.

First stage

The first wave of informants were selected from a highly specific pool of experts with the following characteristics: Both theoretical and practical background and sound experience as a guide for newer entrepreneurs were required. Our sample included experts from both the American and European continents, since the main studied methodologies originated, and are frequently applied, throughout both continents.

The interviewees were initially contacted by email and accepted to participate, all of them previously knew one of the authors of this article who used to be a practitioner in the entrepreneurial ecosystem. All participants authorized the recording of their interviews and confirmed knowledge of the purpose of the study. They were also informed of the privacy policies, including the fact that the information would only be used for research purposes, and that their names would not be disclosed, as some of them asked to remain anonymous. The interviewees' characteristics from this first wave can be consulted below in table 1.

TABLE 1
Participant characteristics

Participant	Profile	Gender	Country
1	He has been working within the entrepreneurial ecosystem for 15 years as a mentor for new entrepreneurs and has even designed public programs to create the Colombian Ecosystem. He has sold some of his startups and is a recognized coder in Colombia and other South American countries.	Male	Colombia
2	He started his first venture when he was still young. He is a serial entrepreneur in the United States. He is co-author of a book for entrepreneurs, and for some years, he has been training and mentoring entrepreneurs around the world.	Male	USA
3	He is a professor at one of the most recognized business schools in the United States (Number 1 in Entrepreneurship Education). He coaches entrepreneurs and was formerly in charge of a venture fund.	Male	USA
4	He is one of the most important Mexican mentors, professors, and entrepreneurs. He has traveled around Latin America, giving trainings at the most important business schools and helping in corporate ventures.	Male	Mexico
5	He is one the most important Hispanic figures in entrepreneurship in Spain and in Europe. He has been an entrepreneur, a trainer at European business schools, and a mentor for several corporate ventures.	Male	Spain

Source: Own elaboration.

After getting written confirmation from the participants, the five interviews were conducted in late 2019, four of them through online meeting services, and one in person. All interviews were recorded and transcribed. Three of the interviews were conducted in Spanish, while the remaining two were done in English. Only relevant quotes for the purposes of this article were translated. The semi-structured discussion guide included the three main investigation topics (personal, methodologies, and their combinations). As a next step, a questionnaire was generated that served as a guide for conducting the interviews. The topic guide and related questions can be found in Appendix (table A1).

Discourse analysis

The discourse analysis technique consists in the segmentation of the interview text into study units, which are coded for subsequent context and content analysis (Sayago, 2014). Transcriptions were instrumental in the translation of discourse into code categories, and in the retrieval of main findings and quotes. Next, the implementation of the technique for this analysis is described step-by-step.

As an initial step, all transcripts were read, and the text was divided into paragraphs for analysis. The first analysis consisted in identifying the main findings –insights and relevant quotes– of each interview, separated by topic. The person in charge was the second author.

As a second step, these findings were coded in two rounds by the second author. In the first round, a generic code was assigned to the topic discussed in the conversation, and in a second round, the 11 generated codes were reduced to only three, in order to identify the main themes found within the speech. The three main codes that were found during this process are: Simple methodologies, hybrid methodologies, and the mentor figure. Further information analysis was conducted, in which the most important common meanings in the discourse were retrieved. Key findings for each of these three codes are explained in detail in the findings section. All of the codes may be found in table 2.

TABLE 2
Main codes

Code	Main code (second review)	Codes (first review)
1	Simple methodologies	Most used methodologies Similarities Process Context/Replicators
2	Hybrid methodologies	Combinations Hybrids Lean Startup
3	Mentor	Profile Objective Methodology

Source: Own elaboration.

The following section presents the analysis' findings, grouped into the same three categories and subsequently coded.

Findings

The main findings of the first wave of interviews concerning high level mentors provided answers to five main questions: Which methodologies are frequently combined? What are the reasons behind the application of these combinations? How they are built? by whom? And finally, when are they used?

Their methodologies: Different methodologies for different purposes

During the analysis process, it became apparent that there are more common methodologies than the ones previously considered at the beginning of the study; however, each one has a particular purpose. Participants mentioned that they used different methodologies depending on their purpose: Design Sprint for its agility in process implementation, Design Thinking for discovery process; Scrum as a working method, Agile for agility and experimentation, Growth Hacking to scale a business, Customer Discovery, Lean Startup, or their own methodologies as an umbrella through which other tools or methodologies are embedded. Additionally, the interviewees also mentioned commonly used tools, such as the Business Model Canvas for business modeling and work analysis.

The main focus of most methodologies appears to be an overall understanding of consumers in order to create a product or service, or in the words of one of the interviewees,

> In the end, most methodologies do the same, identify who needs something and create a product or service of value for that person, then validate that it has enough value for that person to buy it or pay for it, broadly speaking. After you find a fit

> between product and market, other stages of growth come, new processes and methodologies for customer generation, lead generation, conversion, business development, etc. (Interviewee 1)

Some methodologies, however, have more depth and accumulation of knowledge than others, and may be used as umbrella methodologies around which other tools and methodologies are built into or incorporated.

> I would talk about consolidating tools to give you an example. The Business Model Canvas for me [in my opinion] many people have taken it lightly, thinking that we are just talking about a little map, when in reality there are many years of knowledge behind it. Osterwalder tried to synthesize, on a canvas, great knowledge accumulated over decades. Then, for me, those tools that allow you to see the whole picture allow other methods to be applied in parts, so that you can focus on certain aspects of the business model to use them and build specific tools. (Interviewee 4)

They frequently choose or mix methodologies based on the project stage that they are in at a specific time. In general, the interviewed mentors described four main stages of a business process in a similar fashion: Opportunity discovery, validation, growth, and consolidation. During these stages, methodologies appear to be seen as tools in a toolbox that work for specific purposes at specific stages. They are aware that there is no single recipe, and it lacks rigor (or metrics) in its implementation. This means that they take from each one whatever they feel serves them in a particular stage and context, including hybrids.

> We see the methodologies as basically tools that can be used to implement a process that will help you solve something specific at a given moment. So, for example, we use Agile software development methodologies from day one, because from day one you identify what you need to develop after a process of user research, customer discovery, etc. (Interviewee 1)

That means that, for them, their own processes prevail over methodological orthodoxy, or as an interviewee put it, "the methods are slaves of the projects" (Interviewee 1). Furthermore, methodologies are born out of specific contexts that vary, sometimes considerably, from the entrepreneurship context, so that making adaptations and combinations is not only a necessity for high level mentors, but also an essential and important part of their job.

> We are now seeing a phenomenon, that the methodology is not built in a general way, but in a particular way, I mean, Lean Startups are born as a combination of methods, in a very specific context for startups as business units. Same with Agile, it was born in the world of software, born out of that particular context, and Design Thinking was made for product development. Each method is born from a particular context, and afterwards it tends to move to other contexts, being generalized. Those of us who are a bit in the trenches of this world [of entrepreneurship] need to understand how to improve these methods, that it is our job to adapt them to different contexts, which methods require modifications, such as methods that hook onto each other, combining to make structures a little longer. (Interviewee 5)

Mentors also agreed in that the methodologies they use are sufficient and accessible for them, even mentioning that there are more than enough and sometimes may even appear to be similar in content. However, this doesn't mean that they are closed to new methodological developments and innovations. "I think innovations can always bring something better" (Interviewee 4). Or as another interviewee put it, "[methodologies] that are consistently customer-focused have an idea, test it, see customers' reactions, learn about what is wrong and what is right, and do it again and again" (Interviewee 1). Even when mentors are satisfied with the methodologies they use, insights provided show that these are indeed subject to innovations which could potentially enrich customers' experiences. Said innovations can provide opportunities to entrepreneurs who choose to use these methods.

It should be noted that even when most interviewees are open and even willing to mix methodologies and create hybrids, some of them acknowledged the existence of methodological *purists*; that is, individuals who aim to use methodologies accurately regardless of the particular context or situation. "if you do not have a method of conceptual scaffolding you will not be able to help effectively because you do not understand management in a traditional way" (Interviewee 4).

Furthermore, some informants consider the Mexican ecosystem a replicator rather than creative ecosystem, reflecting the difference between various entrepreneurship ecosystems. "I have seen, from the way I have been

working in different countries, that in Latin America we are more likely to replicate or repeat what others do, or to publish what others do, and not build new things that obey our own context, we are not comfortable creating" (Interviewee 4).

Hybrid methodologies: The combination of methodologies

Combinations or hybrids are used naturally all the time. As noted, the participants declared that the construction of these hybrids is a necessity depended on the particular process to be solved, its context, or the stage of a business.

> I could never adhere exclusively to a single methodology, because it will not be enough to face all the situations to which you expose yourself in the process of creating and developing a company, right? I believe that as an entrepreneur, you need a toolbox, tools, I mean processes, methodologies, also sessions with mentors, etc. (Interviewee 4)

According to mentors, methodologies form an interconnected system in which they feed on each other's tools and must constantly be reformulated according to specific objectives and adapted to specific contexts. It makes sense then, that some of the most popular methodologies are considered to be *meta-methodologies* that came from previous combination processes and are fit to continue the absorption or integration of newer ones. As one interviewee said, "There is no other methodology of this magnitude that also has the ability to mount other methods as Lean Startup. I call it a meta-methodology, because it is above various methods and brings them together..." (Interviewee 4).

If Lean Startup is a meta-methodology on which new methodologies are built, the question arises as to what awaits entrepreneurs and what will occur before these new methodologies are generated.

> What's next after Lean Startup? There is no Lean Startup to follow in and of itself because it is a scientific method approach. If the question is what there is after the scientific method, we still do not know. It does not mean that the scientific method is always useful. We know that the scientific method is useful for a set of contexts, but not for all (Interviewee 5).

It is noteworthy that, since methodologies are considered part of an interconnected system, hybrid methodologies are seen as stronger or weaker depending on their combinations and the process they follow. For example, for the process of *customer understanding*, one interviewee suggested mixing Design Sprint with Lean Startup and Agile (the first one, in order to understand, the second one to see the viability of the business, and the last one, to synthesize the findings and convert them into a prototype). Another interviewee mentioned combinations such as Lean Startup plus Agile (Lean Agile), the combination of Lean Startup and Design Thinking (Lean Thinking), the combination of the Business Model Canvas tool and Lean Startup, or the simultaneous use of methodologies such as Scrum and Lean Startup. This could thus be summarized in the words of one participant: "[All methodologies are] nourished by other tools" (Interviewee 1).

The figure of the mentor, mastering methodologies in order to create new ones

The interviewees consider the mixing of methodologies as an important skill for the figure of a mentor combination of theory and practice, which is sometimes considered complicated, because some mentors of the ecosystem are seen as *replicators* that "have no theory" (Interviewee 4). This incomplete profile which characterizes some mentors, also complicates their interpretation of the entrepreneur's problems, and as a consequence, their ability to select methodologies and construct new hybrids.

> A practitioner who does not master method will not be able to build tools or train new entrepreneurs using the existing ones, he won't always achieve adequate results. Mastering the method allows you to change or build tools because you know the method and can build the tools. Let me make an analogy: Driving a car is very different from knowing how to design cars. They are different things, and today it seems to me that this is mixed up. (Interviewee 4)

The interviewees emphasize that the mentor's value lies in the interpretation of the problem to be solved and the process (use of tools) to solve it. A mentor has ideally learnt the lineal orthodoxy of each methodology before starting to mix, change or edit them in any way. Thus, the value creation of a mentor is deeply rooted in the mastering of methodologies. This is why the absence of rigor when applying or implementing methodologies was considered by some to be a fault.

> Another context that really interests us a lot, I think it is also a challenge to work with, is how these methods are implemented, that people have sufficient reasons or justification for their implementation. What we see is that people, after this, are rigorous in following the methods. A method is an ideal concept which you can approach in the best possible way. But sometimes, people have little rigor when doing it - I am talking about entrepreneurs- as a mentor, as a start-up advisor, even small initiatives from universities or science parks. It is true that in the end everyone understands it and few people apply it. (Interviewee 5)

The guidance of a mentor regarding methodological implementation is considered, as an interviewee said, *business psychology*. A business psychologist would be a person with whom to talk about challenges, who can provide feedback based on their own experiences and not only on theory. The figure of a mentor should also include, according to them, the ability to support entrepreneurs in focusing on what really adds value, tailoring existing methodologies and creating new customized ones for each company.

> Mentoring is not about making explicit and precise methodological transfers regarding a specific process. Mentoring is about understanding what challenges you face; and a mentor, like me, with my experience, processes, frameworks, the methodologies that I have in my mind and, above all, experience, can help you. So, I see it as something different, one thing is teaching, that is, you teach a process, a methodology, and another thing is mentoring. And I think that sometimes, this is not very clear, and the feedback and mentoring is presented more as a class rather than as an experience-based feedback process. (Interviewee 4)

It can be concluded from this first wave that, from the point of view of these high-level mentors, the distinction between an entrepreneurship educator and a mentor is that a mentor is capable of balancing theoretical rigor and empirical experiences, which provides the necessary skills to mix methodologies in a professional and strategic way constructed for a specific company under a concrete context.

Five key insights about the combining of methodologies by mentors:

1. Each methodology has its own purpose and comes from a specific context that must be considered for a successful application in other contexts.
2. They process of mixing methodologies frequently involves a central one that operates as the base, and lesser satellite methodologies that are embedded or woven into the main one. Central methodologies are chosen for their depth of knowledge and capacity for synthesis.
3. They structure their combinations according to the phases of a process, choosing what methodology to use according to the phase they are in, considering them part of the context.
4. The creation of hybrid or combined methodologies is not only necessary and natural, but also a fundamental part of their job and crucial to the value creation that they themselves offer.
5. Combining methodologies is, for them, a very specific skill that requires the ability to move from rigor and orthodoxy to flexibility and circularity. They warn against using methodologies with an exaggerated rigor or otherwise an irresponsible shallow creativity that does not come from knowing the methodologies perfectly.

Based on our findings, a second phase of research with educators was deemed necessary and was conducted with both experienced based educators (entrepreneurs or consultants), whom will be called *practitioners* and theoretical based educators, whom will be called *academics*.

Second stage

During this stage, information was collected through a second round of qualitative interviews that followed the same structure presented in the first wave as to obtain comparable results. The aim was to deepen the understanding methodological combinations by contrasting what mentors had previously said with the educator's experiences, discourse and perspectives.

As previously stated, two different profiles of educators were recruited: Practitioners and Academics. Both were required to teach entrepreneur classes in high education in either private or public schools in Mexico City. Practitioners, however, are not professor full time, they have other main occupations related to the entrepreneurship ecosystem in Mexico, mainly as consultants or entrepreneurs themselves. Academics on the other hand are dedicated to research and education full time.

All interviewees were recruited through academic networks and contacted via email informing them of the characteristics and main purposes of the research. A total of 14 interviews were conducted face to face at the facilities of the Faculty of Economics and Business of Anahuac University in Mexico City. Interviews were recorded with permission from the participants and later on transcribed for the discourse analysis. A similar analysis process was followed than the one from the first wave (see table 3).

TABLE 3
Methodological sample, wave 2

Profile	Interviews	Characteristics
Practitioners	7	All practitioners teach entrepreneurship classes to undergraduate students in private or public universities. At the same time, they are part of the entrepreneurship ecosystem either as consultants or entrepreneurs themselves.
Academics	7	All academics have education and research as their main occupation. They teach entrepreneurship classes to undergraduate and postgraduate students in private or public universities.

Source: Own elaboration.

Based on the 5 insights obtained during the first wave of interviews, a discussion guide was developed with the aim of exploring how educators situated themselves within this discourse.

Findings

After the interviews were processed and analyzed, several key differences became apparent in the thought processes, drivers and combination methods of the different profiles. The first one being the motivation that kindles the mixing of methodologies. Whilst mentors have the success of a particular venture in mind, practitioners and academics are not so invested in their students' projects per se, but in the training and teaching through practices and venture prototypes that may or may not be translatable to real life markets.

From this key difference in motivation, the combining of methodologies is developed in a different way by each profile, as seen in the table 4.

TABLE 4
Drivers, reasons and ways of combining methodologies

	Drivers	Reasons for methodological combination	Ways of combining
Mentors	- Expertise - Methodologies as means to an end	- Adaptation to context - Considered crucial for their job - Combination as a natural evolving of methodologies	- Ad-hoc combinations - Central and satellite methodologies - By the phase of a project
Practitioners	- Innovation - Practice-oriented - They aim for clarity - As much references as possible - Want to be true to their own vision/ entrepreneurial style	- Expired methodologies - Adaptation to context - Focused on entrepreneurship experience - Problem first, methodologies second	- Empirical - By needs - Methodologies as a toolkit
Academics	- Knowledge - Process-oriented - They aim for a wide scope of methodologies and entrepreneurship styles (through guests) - Planning and syllabus compliance - Want to include a wide range of visions/ entrepreneurial styles	- Adaptation to student's profile - Processes are more important than problems - Focused on neutrality towards different ventures or styles - Problem as hypothetical teaching tool	- Lineal - By stages - Methodologies as a recipe

Source: Own elaboration.

Three key categories become apparent in the combination of methodologies; drivers, reasons for combination and methods or ways of combining.

From the mentors' perspective, the drivers for mixing methodologies are closely related to solving an issue, in other words, context. Context may include cultural traits, the particular market they're engaging and the particular phase a venture or business is going through. To be able to translate a methodology from one context to another requires a great level of expertise which according to them, constitutes their value generation as professionals. Hence the mixing of methodologies is inherent to their profession and they will never be finally or permanently complete but will keep on evolving through daily combinations. As previously discussed, this is why the mixing of methodologies is seen as a natural process inherent to the overall evolution of entrepreneurship, and as such, does not need a particular reason or driver to be carried out.

Mentors value methodologies that are able to synthetize copious amounts of previous knowledge into seemingly simple tools and methods, such as the Lean Startup and Business Model Canvas. They tend to use one of those *deep* methodologies as a base into which other methodologies can be woven into (completely or otherwise) depending on context, particularly the phase that the business is at the time.

For practitioners on the other hand, maintaining their own vision and entrepreneurial style during education is paramount. The construction of their own style is based in a certain degree in the methodologies they use and mix. "I mainly use Lean Startup alongside Design Thinking with the Business Model Canvas" (practitioner 2). They wish to inspire their students and teach through practice rather than theory, but without confusing them or creating an unstructured class that may be difficult to follow. "It's the art of teaching the mixing and matching of methodologies without confusing your audience" (practitioner 3). They feel that the adherence to only one methodology would impoverish their class, making the content insufficient. "No methodology covers all that you must teach" (practitioner 5).

Practitioners tend to mix methodologies (both in their practices and in the classroom) based on previous knowledge and even instinct. In a similar fashion than mentors, they too have umbrella methodologies to which they integrate other methodologies and tools. "I believe that design thinking is what could call the backbone, and from there you can start inserting others [different methodologies]" (practitioner 5). Another similarity with mentors is that they tend to perceive methodologies as a toolkit that must be applied according to the phase that the business or project is going through. "Whatever you need at the moment, that is the most useful one" (practitioner 6). "I know my toolkit well enough to know which tool to use, but I also need to know the problem well enough to know which tool will solve the problem" (practitioner 2).

A key difference between practitioners and mentors is that there is a certain rush in the former to come into contact with, or even create themselves new methodologies, based in the perception that methodologies may expire or go out of fashion. They are constantly on the hunt for newer, more innovative ones.

> The tools we currently have such as design thinking, and lean startup are expiring quite fast and it's necessary to either acquire or have new tools, or to specialize those that we already have, because at the time of applying them you realize that it is necessary to make certain adjustments. (Practitioner 6)

Academics are driven by the desire to educate complying to the pre-established programs and university canons, thus teaching in a more lineal way. "I go in linear fashion, using one [methodology] after another..." (academic 4). They think of themselves as more neutral agents that can provide the students both theoretical rigor and practical experience through business simulations and class guests, usually practitioners, with different profiles. "Teachers that have a full entrepreneurship practice have an inevitable bias towards the specific kind of entrepreneurship that they practice, acquire or like. That is often reflected on the student's own projects" (academic 4). One of their key motivators is to cover as much methodologies, entrepreneurship styles and perspectives as possible. They want to open the scope of methodologies that their students have access to, even if just as a reference, to give them more future options and a wider understanding of the entrepreneurial landscape.

In that sense, their criteria to mix methodologies does not respond to outer context, but to the teaching of a methodology itself. In other words, methodology comes first, and context comes second. Please note that this is a mayor difference with the other profiles.

> There's this expectation from the academic professors that comes in and teaches entrepreneurship they must know a lot, because it seems to me that the bias we have among full-time teachers is an academic bias, we're very focused in the method. (Academic 2)

Another interesting connotation of this mindset is that academics tend to be more aware of biases, both in their colleagues and in themselves.

The combination of methodologies does happen but in a more lineal fashion, since its underlying motivation is widening the scope of possibilities for students rather than solving a specific problem. Because of that, the hybrid methodologies are constructed in a more structured way, based in logic rather than experience, and with a clear differentiation or genealogy of the methodologies involved. "It's all cognitive, we are teaching a logic and although we are facilitating experimentation, the logic is very well established" (academic 6).

Five key insights about the combining of methodologies by practitioners:

- Their methodologies of choice depend on the entrepreneurial style they have as professionals. This varies somewhat from the way mentors define their preferences based on the depth and knowledge density of a given methodology.
- Unlike mentors, they operate under the perception that methodologies can quickly expire or become irrelevant, which fuels their desire to mix them in a more unique way and seek for new and novel evolutions of older or known methodologies. In that sense, they are deeply driven by the search for innovation.
- There is a tension between their steep preference for practice over theory and the desire not to confuse students.
- Practitioners, as mentors, combine methodologies as a way of adapting to different contexts. The difference lies in the feeling that practitioners have that outer circumstance are changing extremely

quickly, making it necessary for them to stay on top of variations and changes in order to avoid being obsolete themselves.
- Methodology combinations are, for them, a response towards the abuse or miss implementation of some of the methodologies.

Five key insights about the combining of methodologies by academics:

- They combine methodologies as a way of covering more ground in their classes and teaching more perspectives to their students.
- For them, methodology learning is the most important thing, as they are trying to teach a specific course syllabus.
- They apply methodologies in a linear fashion, distinguishing clearly between steps in the way.
- Processes and logic are important for them, even when combining methodologies, as they want to cover more ground in their classes.
- They usually build simple combinations between only two methodologies, namely Design Thinking and Lean Startup.

The different teaching practices and specific expectations regarding the use of methodologies and tools are defined by the teacher's mindset, and thus his or her particular perspective in entrepreneurship education. Academics tend to be methodology adopters, since they seek to teach in a precise, linear and predictive way; practitioners on the other hand, are methodology adapters, as they choose and mix based on the particular problems they are facing. Mentors are creators because they innovate in new combination of methodologies based on both the feedback they get from their participation in practical life, and a theoretical knowledge of the methodologies. See figure 2.

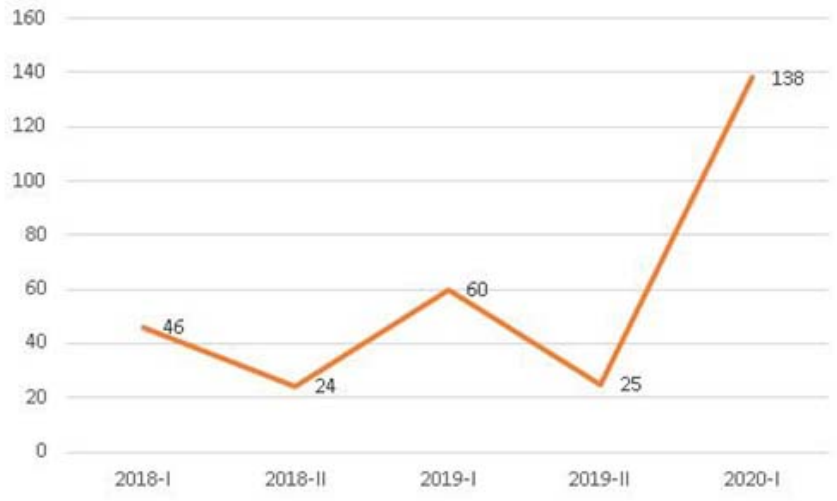

FIGURE 2
Motivations for combining methodologies
Source: Own elaboration.

As seen in the table 4, each studied profile tends to gravitate towards a different perspective. Teachers with an exclusively academic profile are usually found in the process perspective, since they are looking to control the process by following certain steps to achieve the effective development of the methodology. They maintain a lineal and predictive implementation of the methodology in order to teach it with precision, and combine

it in a limited fashion without much creation or exploration. For practitioners, methodologies are meant as a toolbox from which they select tools depending on the particular problem they are facing, and according to their own practical and professional experience. They combine methodologies in a creative and intuitive way that allows for permanent experimentation. The mentor keeps a professional and theorical profile that can move through both perspectives, combining precision in the use of methodologies with the experimentation of tools. Their practical and professional experiences foster a cognitive motivation to creatively seek new combinations.

Discussion and conclusions

The Neck & Greene (2011) framework provides an effective way of identifying the different ways in which methodologies are mixed depending on the symbolic contexts in terms of practices and structures of academic knowledge.

The main focus of this research was to understand the reasons behind the combination of methodologies in the world of entrepreneurship education. It was discovered that combination was considered both natural and necessary by all the interviewed profiles (mentors, practitioners and academics).They are deeply aware that each methodology was born from a very specific context, and that the adaptation into other entrepreneurship related contexts is highly beneficial but requires combinations or what the authors termed called hybrid methodologies.

Furthermore, they consider this to be the only way of evolving towards newer and more relevant future methodologies. A table was previously presented, showing how different approaches to entrepreneurship led to different learning methods. It could be concluded that academics tend to combine methodologies and teach them in their classes from the perspective of entrepreneurship as a process, due to the fact that classes in themselves tend to a lineal, predictable and precise structure that responds to the institutional limits that universities themselves enforce. On the other hand, practitioners tend to operate more under the entrepreneurship as a method model, since they are teaching from experience and favor practices over theory and structure.

This leaves both profiles with considerable pressure to compensate their own limitations as educators. Practitioners are aware that structure and clarity may be lost, and make an extra effort to avoid confusion, creating a tension between practice and clarity. On the other hand, academics feel the need to include more practice and experience into their classes, and they try to compensate by inviting practitioners and working cases in class as they adopt innovations seen in their research. This creates a tension for academics, who must balance the compliance to the university syllabus and the need to encouraging their students to explore and experiment with methodologies.

As previously discussed, it could be said from the analyzed discourses that mentors cherish both models as essential steps in the creation of value for the entrepreneurial ecosystem. In fact, they place their own status as recognized mentors in the ability to move through both paradigms; since they regard deep knowledge of the predictive, lineal and precise side of entrepreneurship as a necessary step to then break such rules and move into a more creative, iterative and experimental framework without losing rigor or precision. Furthermore, they consider the adherence to just one model as an excess and more broadly, a mistake.

In contrast to Neck and Greene's adherence to a single paradigm, namely entrepreneurship as a method, it could be argued that from the mentor's perspective, both educational models have an immense value for the teaching of entrepreneurship, or as one practitioner put it "it's one thing to understand a car, and even design a car, and a completely different thing to drive it" (practitioner 5).

Hybrid methodologies: LS as an umbrella for new hybrids

At the beginning of this work, only some hybrids were considered for research, such as Lean Thinking (Halas, 2018; Andersen & Røvik, 2015) or Lean Agile (Poth et al., 2018). Nonetheless, other hybrids emerged during the conducting of the research, for instance the combination of Lean Startup, Agile, and Scrum (Dobrigkeit & De Paula, 2017), or Lean Startup and Six Sigma (Sandner et al., 2020); amongst others (Dobrigkeit & De Paula, 2017).

Nevertheless, it would appear that there are some meta-methodologies that operate as umbrellas in the process of constructing new methodologies, onto which interviewees embed other existing tools or techniques, especially in the case of mentors and practitioners. There is also a perception amongst mentors that many of the current methodologies are the result of previous or historical evolutions via combination and could thus be considered hybrids themselves. This was however not mentioned in the other profiles. The most mentioned *meta-methodology* for most educators across profiles appeared to be the Lean Startup, which is frequently used as a base to build hybrid methodologies. This is consistent with the findings on some experts regarding the popularity of certain methodologies, which were found to be, alongside the Customer Development Framework, the most popular amongst the entrepreneurs' methods (Ries, 2012; Blank & Dorf, 2012).

One of the main contributions to current literature of this paper is its educator-centered perspective in examining a phenomenon that is frequently just studied from the students' point of view. With a constructivist approach, the way in which different methodologies are re-signified in accordance to each mentor's or teacher's individual trajectory could be analyzed, and some key factors behind the methodology combinations, including expansion and adaptation to different contexts could be detected.

This knowledge is an important step towards a deeper understanding of the role that an educator plays in the selection, transmission and application of contents in entrepreneurship education. The pedagogical model of Neck & Greene (2011) provides a useful framework to efficiently map different approaches and skills behind the methodological combinations that are happening in classrooms, symposiums and research seminaries in the world of entrepreneurship education.

There are geographical limits inherent to the results of this paper due to the fact that the college teachers interviewed were all Mexican, and thus responded to a particular context and culture. Another important limitation lies in the fact that the college educators interviewed all teach in private universities. It is important to note that this is not the case for high level mentors. The understanding of the role that a professor's personal and professional context plays in his or her choice of contents and teaching approaches could help universities and other educational spaces to avoid biases and create more inclusive, transformational education spaces.

Future research

Some future lines of research have emerged from this study, including studies about how methodologies are combined in other scenarios rather than universities, such as organizations and actual startups. A possible line of study could tackle the methodological configuration models that each profile creates, and discuss the academic contexts in which they take place and their implications in entrepreneurial education. A crossover study contrasting the drivers of Mexican entrepreneurship education programs to combine methodologies with other cultures' would also be extremely relevant to further understand this phenomena. Each country has their own knowledge context and will therefore apply distinct criteria in the creation of *ad hoc* hybrid methodologies.

Finally, it would be worthwhile to further study the reasons that make Lean Startup such a common basis in the construction of hybrid methodologies from the interviewees' point of view. The authors detected three

possible factors that make it such a common base for methodological hybrids, its depth, the fact that it is based on the scientific method, and a possible familiarity factor. However, it would be important to conduct a study including other possible factors behind the choice of a meta-methodology including legitimacy, social capital and others.

Ethical considerations

Interviewees were advised that their information would only be used for the purposes of this research.

Authors' contributions statement

Both authors participated in the collection of information, analysis of information and writing of the paper. Contacts with the interviewees were made through the main author.

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The authors have no conflict of interest to carry out this research.

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Appendix

TABLE A1
Topic guide and semi-structured interviews

N°	Topic	Question
1	Demographics and past experience on the topic	Good morning. First of all, we want to thank you for this interview (call). We consider you to be a relevant informant in the entrepreneur ecosystem and it is a pleasure to listen to you. It is important to mention that there are no right or wrong answers, only opinions, perceptions, or appreciations. So, let's start.
2	Personal information	Before beginning with the questions, could you give me your complete name and talk about what have you done (your experience) in the entrepreneur ecosystem?
3	Methodologies	With reference to methodologies, what can you tell me about that? Which methodologies do you currently use to help entrepreneurs and for what purpose? In your words, could you define each methodology or why you use it? Do you have sufficient tools or methodologies? Do you use the same methodology for needs for identification, evolution, and scale-up, or which one do you use at each company stage? Why?
4	Hybrid methodologies	What have you heard about the combination of methodologies? What do you think about this? Have you used a combined or a hybrid model with different methodologies? Which one? When and why? Who is in charge of building these hybrids? What is the role of a mentor regarding this topic?

Source: Own elaboration.

Notes

* Research article

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