A design contribution to the entrepreneurial experience

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In recent history, different design approaches have been entering fields like management and strategy to improve product development and service delivery. Specifically, entrepreneurship has adopted a user-centric mindset in methodologies like the business canvas model and the value proposition canvas which increases the awareness of the users’ needs when developing solutions. What happens when a service design approach is used to understand the entrepreneurs’ experience through the creation of their startups? Recent literature suggests that entrepreneurial activity and success is conditioned by their local entrepreneurship ecosystem. This study investigates the Entrepreneurship Ecosystem of Medellín, Colombia - an ecosystem in constant growth but that lacks qualitative analysis. The sample consists of 12 entrepreneurs in early-stage phase. The data was gathered with two design research methods: Cultural Probes and Semi-structured interviews. The analysis of the information collected facilitated the development of 4 insights about the entrepreneurs and an experience map to visualise and interpret their journey to create a startup. The results of this study reflected the implications of the ecosystem, the explanation of the users’ perceptions and awareness and propose a set of ideas to the local government to improve the experience of undertaking a startup in Medellín.

Keywords: Entrepreneurship ecosystem, Service design, Entrepreneurship, Startup, Design methods

User centred Design in Entrepreneurship

In recent years, there has been an increasing diversification of user centred design approaches, due to the exploration of experiences, products and services as a whole system. This trend could be seen in fields like management and strategy (Martin, 2009); retail, financial services, hospitality and human resources (Reason, Lovie & Flu, 2016); health management (Lin, Hughes, Katica, Dining-Zuber & Plsek, 2011), social innovation (Anderson, Ostrom, Corus, Fisk, Gallan, Giraldo, Mende, Mulder, Rayburn, Rosenbaum, Shirahada & Williams, 2013) and manufacturing processes (Lighting, 2017). Specifically, entrepreneurship has adopted a user-centric mindset in the development of methodologies like the Business model generation (Osterwalder, Pigneur, Smith & Movement, 2010) and the Value proposition design (Osterwalder, Pigneur, Smith, Bernarda & Papadakos, 2014), which increases the awareness of the users’ needs when creating solutions as the core of a business model.

The aforementioned methodologies have flourished as assistance for entrepreneurs in the planning, ideation and implementation of business ideas, in order to create and capture value (Trimi and Berbegal-Mirabent, 2012). This case study undertakes a different perspective and aims to explore the consequences of using a user centric approach to understand the entrepreneurs’ experience through the creation of their startups.

Between the different streams of user centric methodologies, this study uses service design as stated for its capacity and methods to investigate and understand people’s experiences, interactions and practices as main sources of inspiration for designing better services. (Meroni and Sangiorgi, 2011).

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Complemented by Stickdorn, Hormess, Lawrence & Schneider, (2017) perspective about service design, first as a mindset, to help us to determine how to respond to situations; second, as a process, to find an elegant and innovative design driven solution and third, as a toolset, that should be used after understanding the mindset and process.

As some writers (Klaar, 2015; Penin, 2018; Stickdorn et al., 2018) suggest, service design is a holistic approach, which understands that users (or customers) are not only influenced by the core offering but by all the layers around the experience of buying/using, and therefore deliver a suitable solution. Due to this, the exploration of the broader context of entrepreneurship should be taken into consideration.

The systemic support for entrepreneurship

Particularly in the field of entrepreneurship, Fuerlinger, Fandl & Funke (2015) argue that start-ups’ survival is conditioned by not just the business itself, but the (Entrepreneurship) Ecosystem. According to Isenberg (2010), the Entrepreneurship ecosystems (EE) are a set of conditions that foster entrepreneurial activity, which involves culture, policies, support, human capital, an open-minded market and that are limited to a metropolitan area.

In order to identify the conditions of EE, The Aspen Institute (2013) reviewed 9 different diagnostic tools for EE, mapping them by the level of complexity (number of indicators) and the geographical analysis (local or national) (See: Image1). This study selected Isenberg’s (2010) Six Domains to understand the ecosystem where entrepreneurship moves in cities, for its analysis capabilities based on different aspects on a local and a national level with the same importance. This allowed to acquire contextual data for the analysis of the entrepreneurial support as a system.

![Figure 1: Diagnostic tools. Adapted from The Aspen Institute (2013)](image)

The Entrepreneurial activity in the context

According to the Global Entrepreneurship Monitor (2017), Latin-American Countries has been increasing their entrepreneurial activity and their participation in early-stage entrepreneurship is even higher than in bigger economies. In a regional scale, Colombia is ranked fourth for ease of doing business in Latin-America (Doingbusiness.org, 2017); at a local scale, Medellin is the second largest Colombian city and it concentrates the second industrial centre in Colombia.
The EE of Medellín has been developing across 20 years of cooperation and work (Universidad Nacional de Colombia, 2016), led by the local government, but expanded by the industry. Figure 2, shows the interconnection of the most visible actors around the domains.

*Figure 2: Medellín’s domains of entrepreneurship.*

From the entrepreneurs’ (users) perspective, the ecosystem is compounded by a set of activities, programs or institutions that can support their venture and entrepreneurial development. These activities and programmes are services for entrepreneurs, which could be construed as touchpoints of an entrepreneurial support service (the entrepreneurship ecosystem itself). Figure 3, presents Medellín’s inventory of programmes and activities of the EE of Medellín.
Analysing the conditions of the ecosystem through the Isenberg's domains can be perceived that Medellin has a complex system loaded with actors, programmes and activities, but also that it has the characteristics that fosters its entrepreneurial activity. Although this approach explores in deep different characteristics, it leaves on a side the experiences, emotions and personal goals that entrepreneurs have. Based on Lederman, Messina, Pienknagura, & Rigolini (2014), the entrepreneurs are the actors that add value to the EE, therefore they need to be understood.

**The research**

The research used a sample of 12 entrepreneurs located in Medellin, with a start-up on early-stage development phase, which includes two types of individuals: Nascent entrepreneurs and New business owners (Global Entrepreneurship Monitor, 2017).

The first tool used for data collection is Cultural probes, defined by Gaver, Boucher, Pennington, & Walker (2004), as collections of evocative tasks meant to elicit inspirational responses from people, and also consider as a tool that produces unbiased data collected by participants themselves (Stickdorn et al., 2018). Its appliance consists of the filling of a booklet with a set of activities that participants solved by themselves. Specifically, the activities were designed to inquire about the entrepreneurs’ emotions in relation with important events; to investigate, when and how they feel comfortable or challenged; to explore, how they have interacted with the entrepreneurship ecosystem; and how the entrepreneurial experience can be better (from their perspective). Figure 4, presents the booklet sent to the participants. It worth to mention that participants are native in Spanish which is the reason for the language in the booklet.
The probes generated a range of diverse messages, storytelling and descriptions that provide an understanding of how entrepreneurs feel and act around the EE, even if they are unaware of what the ecosystem is. For this reason, an initial scan of the responses was undertaken with the objective of identifying keywords in the answers, looking for patterns within opinions and the actions taken by the participants through their own experience. As described by Gaver et al. (2004), participants interpret questions and activities in different forms, and that was reflected in their answers. This required critical analysis of the data to clarify the meaning of the answer given based on the profile of the participants.

The initial keywords scan spotted similarities in perceptions, definitions and attitudes, but it further allowed the division of the participant entrepreneurs into two categories: entrepreneurs who have had access to some of the programmes offered by the entrepreneurship ecosystem, and entrepreneurs who have not had access to any programmes offered by the entrepreneurship ecosystem.

For both cases, the first scan identified missing information in the results. Therefore, a set of follow up questions was developed to be asked in an online semi-structured interview tool, to use with the participants. Yin, (2018) define semi-structured interviews them as a flexible tool that adapts to the situational context with a set of open-ended questions where a conversation guided by the interviewer develop the studied theme. The emerging inquiries allows the understanding of the entrepreneurs’ awareness, particularly on what (other) programmes they knew existed to support entrepreneurs or ventures in the city; how they knew about those programmes; and why they did not access them.
**Key Results and interpretation**

Based on the answers in the probes in relation to the entrepreneurs’ experience and complemented by the online semi-structured interviews, the data was separate as follows:

- Satisfactory events
- Stressful events
- Complex challenges
- Overcoming challenges
- Support and resources
- Mentoring advice
- Knowledge about programmes
- Programmes’ communication
- And reasons to avoid participation

The key findings reveal valuable data about entrepreneurs in Medellín, their experiences, values and perceptions. The amount of data and its relevance requires deep analysis to interpret it properly. The following mindmap shown in Figure 5, presents a summarised viewpoint from the probes and interviews, and facilitated the definition of insights following Dalton’s (2016) suggestion. The context sets a place, one activity and one condition that the entrepreneurs have in common; the dilemma is divided into two categories perceived by the entrepreneurs, and analysed by the researcher after transcribing the data; each item from the dilemma is related to a why, which would present possible reasons that produces the gaps in the ecosystem operation; the motivations are divided in motivations to be an entrepreneur and motivations to not interact with the ecosystem, the last motivation may not be related to all the entrepreneurs but aims to suggest what they think based on their comments; and ideal, presents optimal conditions for the different entrepreneurs when interacting with the ecosystem.
After identifying the five characteristics around the theme, Dalton (2016) also recommends to state the insights by three sentences: the first one to describe a situation for a user’s behaviour; second, to define the dilemma; and third, to describe an ideal situation. As a result, the following insights were developed:

“I decided to start my own business in Medellin because I will be working for something I feel passionate about. I’ve seen institutions that offer courses or contest for start-ups but I don’t know which type of help they provide or where to look for it. If there was a source that briefly described the opportunities, I would give it a chance.”

“I have been working for a year on my start-up and I am really busy trying to do everything, I am feeling tired and I don’t have time to look for courses or advice, I don’t even know what they can provide me. If someone had told me about the challenges and difficulties of setting a start-up, I would have thought more about it”

“I have my own business with a partner. We know Medellin supports entrepreneurs through advertisements and marketing, but that is just for technology-based ventures. I would like to see successful entrepreneurs outside of the technology fields.”

“I had participated in contest and courses for entrepreneurs before, all of them are the same, they are too general: business model canvas; but nothing on growth strategies, finance or staff management. I wish I could find offered valuable mentorship in specifics areas by people with real experience and not by junior advisors.”
The insights created aim to represent a variety of entrepreneurs’ voices about their journey in venture development in Medellín, collecting different thoughts and opinions. Emulating diverse entrepreneurs, the first one was an entrepreneur that had chosen not to interact with the ecosystem; the second is an entrepreneur without any type of training in entrepreneurship, that started empirically and had experienced a difficult path; the third voice represents entrepreneurs that had encountered different sources and types of support but was meant for a different type of entrepreneur, which made them lose interest; and the last one is an entrepreneur that does not trust the ecosystem, someone that has experienced it and is tired of the redundant offers.

**The entrepreneurs’ experience in the EE of Medellin**

One of the service design characteristics is the facilitation to visualise an experience through graphic maps that allows revealing different issues within the service. This research uses a method presented by Kalbach (2016), the experience map, which targets the observation of human behaviour and how the organisation fits in the user’s aim.
Figure 6: Experience map “As-Is”.

Figure 6 shows an experience map chronologically divided into phases: Pre-Idea, Business idea generation, Launching the start-up, Handling operations, and (Post) Growth. Each phase is described by a set of...
characteristics divided into two sections. The first section includes: the activities, what entrepreneurs develop and focus their efforts on in that time-set; their satisfaction and stress level at each moment; followed by the triggers of those feelings and their corresponding level. The second section contains: the support, which is subdivided into two types of entrepreneurs. Character one, represents an entrepreneur who chose to interact with the entrepreneurship ecosystem in order to receive support for each of the phases; Character two, illustrates an entrepreneur who had chosen not to interact with the ecosystem by choice or acknowledge anything about it; following the support is the entities section, institutions or organisations that provided the support mentioned in the previous characteristic; support missed, mentions programmes that could be used by the entrepreneurs but did not; and the final characteristic is the Moments of truth, the characteristic of the reflexive statement realised by the entrepreneur in that phase, which may affect its future interactions. It needs to be highlighted that this map may not represent the whole spectrum of entrepreneurs in the city but aims to simulate how some of the entrepreneurs’ experience interact with the EE.

What else can Service Design offer to entrepreneurship?
By visualising Figure 6 and the identified insights from the entrepreneurs’ experience, the needs of the users and the limits or conditions of service providers are clear. An idea generation stage can be used now to propose how to improve the service experience. Starting with a divergent step, where all the possible solutions to the ecosystem issues are explored; followed by the clustering and filtering of ideas based on cost, current facilities available of the ecosystem and easiness of development; to finish with a convergent step, by the selection and adaptation of the best options for the context.

This process results in a set of ideas implemented in Figure 10, an Experience Map “To be”, that represents an ideal experience for an entrepreneur.
The previous map presents some similarities with Figure 6 (The Experience Map “As-is”), in its composition. It is divided into the same five phases; as well as the activities entrepreneurs realise, the levels of stress and satisfaction with their triggers. The difference lies in the support received, this experience map represents one journey, not two as Experience Map “As-is”, and the legend that highlight the new programmes. The ideas implemented in this map, aim to make suggestions that can be useful in Medellín and are described in the following paragraphs.

The first Service/Idea proposed is an online platform named Emprende Medellín (Medellín Undertakes), where through an easy interaction, entrepreneurs will find programmes available in the city according to the development stage. This is a database that includes a basic description of the programme, the provider and the deadline to apply. Also, the type of development for each stage will be described to guide the entrepreneurs in their self-identification.
The internships programme Práctica emprendedora is the second idea, which will allow university students to have internships in start-ups and live the entrepreneur experience in order to understand the commitment this requires, this programme can be implemented as a tax reduction for start-ups that receive potential entrepreneurs.

The third proposal, are local co-working spaces. This initiative needs to be supported by the local government to allow the usage and synchronisation of public spaces available to the community as libraries, to generate a network compound by entrepreneurs encouraging the inter-disciplinary work which facilitates venture development and problem-solving.

The fourth idea is Validando ideas, a program that facilitates entrepreneurs to meet users and test their product or service, as mentioned before, Colombians are no early-adopters and that limits entrepreneurial products and services, this programme can be undertaken by Cultura E (the lead local initiative for entrepreneurship).

The last idea applied on the map, De emprendedor a emprendedor (From entrepreneurs to entrepreneurs), aims to use entrepreneurs that gained previous support from the ecosystem, to share one-on-one with new entrepreneurs the knowledge they earned through their initial experience, this programme is proposed to share successful experiences and motivational support that influence the entrepreneurial culture of the city.

**What has been the service design contribution?**

This study has used service design in two perspectives, as a mindset and as a toolkit (Stickdorm et al., 2018). In this case, it has helped to analyse the context, understanding it as a complex system (Sangiorgi and Prendiville, 2017). It also had been used for its research tools that represent a medium to acquire the information gathered from the entrepreneurs. Which helps to realise not just their awareness but the qualities and characteristics of the challenges the entrepreneurs face, but also their behaviours and values. Combining it through a holistic view and realising organisations’ structure and resources, to be able to make suggestions (Junginger and Sangiorgi, 2009). Additionally, it has facilitated the discovery of hidden information and the visualisation of those in order to stimulate the idea generation for the issues previously found.

Furthermore, it has allowed us to raise the question about the effectiveness of the implementation of programmes to foster entrepreneurship in the city. It challenges the different design approaches to keep the exploration in new fields different than retail and services for massive consumption.

**Suggestions and future research directions**

Literature in entrepreneurial activity, entrepreneurship ecosystems and design approaches need to be explored in depth to strengthen the framework of information in particular for Medellín as the context, as well as the secondary sources to verify and track the number of programmes developed along with their impact.

From the methodological perspective, a larger and more distributed sample will increase the opportunities and approaches taken based on the different needs of the entrepreneurs, depending on their venture development stage and the local government’s needs within the projections for the ecosystem and possible impacts. Using service design thinking, this issue can be undertaken by the tool personas to fulfil this categorisation and its understanding of users (entrepreneurs of Medellín), including an experience map for each entrepreneur profile if the differences in communication (strategy) and entrepreneurial needs require it.

Likewise, in the methodological approach, the tool 'Cultural probes' provided a large amount of data about the experience of being an entrepreneur (in Medellín), and also developed a reflective process in some of the participants who revealed that in the complementary interviews. Although the tool provides partial information in some cases as Gaver et al. (2004) explained because of the engagement of the participant variate, it produced a high value for the research and this study highlights its potential to use for other qualitative research studies.

The prototype stage needs to be considered in order to test the ideas proposed. This is a key stage for service design in order to iterate the ideas by test and improving them.

Another possible approach for future research identified in this study is the multiple case study within efficiency-driven economies. As highlighted by the Global Entrepreneurship Monitor (2017), particularly in Latin-America and Africa, they present similarities and are highly active in early-stage entrepreneurship. This
quantitative current approach needs to explore and confirm from the qualitative perspective in order to reveal new knowledge and patterns hidden in the experiences of the entrepreneurs.

References


