Edtech Startups: Determining the Factors Involved in Internationalisation

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Abstract: In the last 10 years, the connectivity of the human being with technology has become evident all over the world, we are in times of high use of technology in everyday life, as evidenced by the use of an Uber to study an online class with colleagues from other countries. Technology has led to the growth of education in Peru during the Covid-19 pandemic, which has allowed entrepreneurs to have a global perspective by creating enterprises in the education sector with a vision of scaling up to the foreign market. These startups are startups known as edtech startups. In this context, this research aims to determine the factors involved in the internationalisation of startups. The qualitative approach was used with a cross-sectional design based on in-depth interviews with experts and founders of this ecosystem, and a group of founders shared a success story of two startups selected for convenience. Networking and financing. Through innovation, strategies are applied in the startup processes to retain the consumer and obtain high recognition; networking helps to have contacts in all target countries, easy access in the selected market and financing allows sustainability in the market. It is concluded that these most relevant factors cooperate in the entrepreneurial ecosystem achieving a business model with high innovation and technology focused on improving education and at the same time entering the international market.

Keywords: Entrepreneurship, Global Business, Exponential Growth, Peru, Startups, Edtech

1. Introduction

The present research is focused on education ventures where technology is the pillar of their development, these ventures are called startups. “A startup seeks to be a profitable and scalable business model in a faster and easier way” (Blank & Dorf, 2012, pp. 17), through the systematic application of technical knowledge and, they operate in high-tech sectors showing innovative behaviour (Marin-Bello, 2019).

According to an article published by Harvard Business Review, written by Michael Fertik, creator of the start-up reputation.com, the whole world is fast becoming a single market, where money is the universal language that unites society. Single market, where money is the universal language that unites society, and where it has become as easy to profit from international customers as from local ones (Fertik, 2013).

There are several definitions of the term "start-up". According to Steve Blank (known as the as Silicon Valley's master of innovation), a start-up is a temporary organisation designed to pursue a repeatable business model (Fertik, 2013). Designed to pursue a repeatable and scalable business model. The founders of a start-up are called entrepreneurs (Blank, 2010).

In the latest report developed by the Global Entrepreneurship Monitor (GEM, 2017), Peru has obtained 0.37 points in the entrepreneurship index, ranking number five worldwide, and in Latin America as number one. With an average annual unemployment rate of 7%. Entrepreneurship in Peru has always been present, in its beginnings, as a response to the adversities of the country's economic environment, but over time, it developed the skills and confidence in Peruvians to take risks and undertake new businesses.

For the education sector, only 6 Peruvian startups have been ranked in Latin America. The startup Crehana, which has reached more than 3.5 million students in more than 25 countries around the world, Fratal up, was one of the five finalists in the Big Data category in 2014, consists of the creation of a virtual assistant to generate customised learning paths on the web and free of charge, then, Laboratoria, with presence in Mexico, Chile and Peru, Simcase is a virtual education platform that seeks to improve the quality of life of Peruvian children and young people, Sofia is a virtual assistant that provides information on tax and customs issues in a quick and easy way, There is also the Tannder platform that helps to create didactic and creative virtual learning environments, designs content and meaningful learning experiences, and provides tutoring services for continuing teacher training, and finally there is Code, which promotes programming education by providing interactive courses.
Edtech has been progressively developing in Peru and is growing steadily thanks to the investment opportunities offered by the government and the high level of entrepreneurship provided by each partner who wants to take their venture idea to the local and global market (Oliva et al., 2022).

The internationalisation process has several perspectives of development that have been analysed by different authors, this study is grouped in three types of perspective: economic, gradual and born global. The faster a startup goes global, the greater its ability to exploit growth seeking opportunities worldwide perspective (Crick & Spence, 2005). For this purpose, it is therefore important to know what are the factors involved in the development of the internationalisation of an edtech startup?

The general objective is to explain the most relevant factors such as innovation, networking and financing involved in the development of the internationalisation of an edtech startup.

2. Literature Review

Throughout the life cycle of a startup, there are 4 important phases involved in the development of a technological venture, starting in the first phase, called the initial phase, in which the product or service is formed, and the startup is analysed. In Figure 1 the author Blank y Dorf (2012) presents other stages of startup development such as the creation of new companies which requires adequate forms of financing.

In gestation and creation, initial investment capital is essential. In the expansion phase, angel investors and venture capital act as bridges before successful companies can tap the capital markets (Madsen y Servais, 2017), thus, this ecosystem tends to opt for new strategies that contribute with high innovation and advanced technology to sustain in the target market (Allison y Browning, 2006).

![Figure 1: Stages of startup development](image-url)

Internationalisation is the process of globalisation of a company, that is, when a company projects its activities outside its country of origin. This is done with the purpose of obtaining greater profitability and creating value. According to Canals (1994), the objectives of internationalising a company are threefold: Opening new markets, minimising production costs, and maintaining an efficient production and distribution process. Internationalisation is seen as a process by which companies increase their international involvement (Johanson,
Internationalisation is the set of operations that generate stable relationships between a company and the international market through a process that requires greater commitment and international perspective (Welch & Luostarinen, 1998).

To date, several methodologies related to the internationalisation of startups have been suggested. According to, Puerto (2010) presents research where he explains the internationalisation process of startups in Madrid, highlighting the following main factors: financing, innovation and marketing network, the results indicate that early internationalisation is key for technology startups. On the other hand, Santos (2014) researcher from the University of Cordoba Spain, analysed an industrial cluster containing companies that have achieved significant presence in international markets, and also sought to determine the key variables that drive local and global success. The study method has a mixed approach, corroborating the validity of networking as one of the main success factors for a company that wants to have a presence abroad.

Sekliuckiene (2019) from Kaunas University of Technology conducted research with the aim of analysing success factors at the start-up stage in international companies. It uses an in-depth qualitative research approach and a multiple case study with 9 cases. The result contributes to a relationship between the early success of new startups, direct experience in the foreign market and entrepreneurial orientation. The contribution of this benefits the understanding of determinants related to entrepreneurship in different business environments and proves the existence of a relationship between the experience acquired by the entrepreneur and success at an early entrepreneurial age (Brouthers et al., 2016).

Within the set, COFIDE (2021) highlights the need for investment to develop innovation and entrepreneurship projects, where more than $53 million has been invested to support the execution of 470 projects, to promote productive development in 23 regions of the country, including Lima, Arequipa, Junín, La Libertad and San Martín. He also highlights that the State continues to be the main driver of innovation and entrepreneurship in Peru. This author’s common logic supports the priority of a startup in the global arena.

On the other hand, PECAP (2022) reports that they are promoting the development of the Peruvian entrepreneurial ecosystem, the deepening of the financing and seed capital market for high-impact innovation ventures, The Alliance is being developed through an alliance with CONFIDE, PECAP and its Swiss entrepreneurship program, where they have as a priority to increase access to venture capital for startups, as well as for the development of Venture Capital funds in Peru (COFIDE, 2021).

The main factors to achieve scalability are innovation, classified as incremental or disruptive, which varies from company to company. The incremental is the value added while the disruptive incorporates improvements in its operation (Christensen et al., 2015; Puerto, 2010). Another fundamental factor is networking, it is present throughout the process of developing a startup, because it solves barriers at the beginning of creating a venture, it also forms strategic alliances with global companies that are likely to influence the external market (Chin et al, 2016). The following factor is found throughout the expansion process, it varies according to the income of a company, in it is used own investment or state investment, it also depends on the type of startup and the investor to find, either private or national, this description mentioned corresponds to the financing (Fernandez, 2020 & Marin-Bello, 2019).

3. Methodology

The research is qualitative and cross-sectional, characterised mainly by presenting an interpretation of the factors of internationalisation of a startup and the relationship between them. For the sample, 6 Peruvian edtech founders from Peru, 1 Chilean expert and 5 Peruvian experts from the startup ecosystem were interviewed in depth. In addition, inclusion criteria were established, minimum 4 years of experience in a public or private institution in the startup ecosystem and representatives who are in the process of internationalisation of their company.

The present study used the in-depth interview technique, the instrument used was the open-ended question guide and also keep the rating response options. The guide was elaborated with questions applied to 6 founders of this ecosystem and general questions to experts in order to gather information on the development factors in the internationalisation of a startup. The guide of questions was divided into two parts; the first part consists of 16 questions to the founders, these evaluate internationalisation, analysing 3 factors (financing, networking and innovation), the second part has 4 questions that evaluate the intervention of the factors within the
educational startup according to the previous experience of the experts. The validation of the interview form was done through the approval of 6 experts on the subject, who analysed the coherence and importance of each of the questions and that they respond to the dimensions of the variable under study. All this data was elaborated in Excel, then exported to Power BI for better visibility, also APA was used for the tables, through which the following results were obtained.

Table 1: Group of interviewees

<table>
<thead>
<tr>
<th>Interviewees</th>
<th>Number</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founders of edtech startups</td>
<td>6</td>
<td>They are the CEO of the best Peruvian edtech, their startups managed to internationalise in their first years of creation in Latin America and worldwide.</td>
</tr>
<tr>
<td>Experts in the startup ecosystem</td>
<td>6</td>
<td>They are professors and participants with more than 4 years of experience in private and national innovation and technology institutions of this ecosystem.</td>
</tr>
</tbody>
</table>

4. Results

In Peru, edtech startups are developed between incubators and accelerators, the interviewees of the expert group detail that in 2021 only 9 startups with scalable growth have been identified. Among them stands out the winner of the COVID-19 challenge project, Fractal up, Crehana who managed to get a record amount in investment operations for 70 million dollars (Fernández, 2020), thanks to this funding he had the opportunity to scale to more than 5 countries and improve the innovation of his startup. On the other hand, Fractal Up is presented as a digital platform that allows to quickly locate videos, applications and massive open web courses that facilitate the study of primary, secondary and pre-university students, through a content map that meets their learning needs (PECAP, 2022).

The interviewees of the founding group indicated that the reason for internationalising their edtech depended on the pandemic, since at that time education became virtual, and for technology companies it was an opportunity. They also highlighted a case example of edtech Crehana, which was born being international, Crehana’s parent company is in England and the main destination countries are the USA, Mexico, Chile, Ecuador and Brazil.

On the other hand, the interviewees of the founders and experts agree that there are difficulties when going abroad, because they consider the language as the first difficulty, also the type of currency, since in each country is different, so the startups implemented on platforms the type of currency according to the destination country, other challenges to consider was to know the legal level of the company, review the finances, taxes, hiring as everything is different from the country of origin, Peru.

This qualitative analysis aims to determine the factors involved in the internationalisation of edtech startups. To this end, the interviewees from both groups indicate that the main factor applied was networking, thanks to contact with clients in each selected country, opinion leaders in each country, as well as public relations and the use of different media.

According to networking is extremely important in the development and scalability of the startup, the group of interviewed founders indicates that it favours the entry into new markets, they add an example of the startup Netzun, who made an alliance with Tondero in Peru to connect with people abroad, this edtech operates mainly in Mexico, Colombia, Ecuador, Argentina.

According to innovation, we have the group of interviewed founders where they pre-sent innovation as an important factor for the internationalisation of an edtech, since it helps the customer to maintain brand loyalty, differentiate itself from the competition and be recognised in global destinations. This group of interviewees indicated that without innovation there is no growth; in the technology sector they must innovate every day to maintain the entrepreneurial spirit and have the vision to scale to other markets. They also present an example of Netzun, where they used disruptive innovation, managing online classes, this has allowed low costs, less time and teaching with great professionals.

In this sense, it is highlighted that innovation is a key point, it applies to all stages of a venture. Another example they detail is the edtech Crehana, which produces 10 courses every week, this analyses the impact of the
investigation of money, in what metrics it develops and tests to increase participation in the education sector. The expert group interviewees confirm that incremental innovation is based on a previous business model to which they have added value in order to differentiate themselves from the competition. They mention Crehana as an example; it has launched products from scratch with a totally new format and the profitability generated has been excellent.

According to the financing factor, the expert group interviewees add an example of the startup Crehana, since it recently raised series b financing, it is the first series b of the Peruvian startup ecosystem, it is also reported that the main financing of Crehana was led by General Atlantic, a firm dedicated to investing in startups when they are in a growth stage, where they have already evaluated the initial business model.

Also, in this interview the group of founder’s report that funding is important at all stages of the startup, this factor helps an edtech to achieve internationalisation quickly, also determine the series of financing with greater use, known as Series A, which is obtained by Mexican funds such as Dylan Capital and Mountain Nazca, as it was presented by several founders with B2B businesses.

### Table 2: Selection of international market

<table>
<thead>
<tr>
<th>Stages</th>
<th>Features</th>
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<tbody>
<tr>
<td>1</td>
<td>Market selection</td>
</tr>
<tr>
<td>2</td>
<td>Type of consumer</td>
</tr>
<tr>
<td>3</td>
<td>Market growth</td>
</tr>
<tr>
<td>4</td>
<td>Government type</td>
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</tbody>
</table>

According to Table 2, the group of interviewed founders reports that before entering a new market they analyse the main characteristics of their edtech, among them the selection of the target market, the type of consumer to visualise who their product is aimed at, the market growth to know the flow of income and profit they would have and the type of government, this data coincides with the group of interviewed experts, who confirm that from the first stage of a startup it is important to know the international market niche to which their venture will enter.

### Table 3: Number of operations and customers abroad

<table>
<thead>
<tr>
<th>Years</th>
<th>Foreign operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Only in 1 country Netzun</td>
</tr>
<tr>
<td>3</td>
<td>2 to 3 countries Netzun</td>
</tr>
<tr>
<td>4</td>
<td>More than 3 countries Crehana</td>
</tr>
<tr>
<td>5</td>
<td>More than 6 countries Crehana</td>
</tr>
</tbody>
</table>

In table 3 by operations, presents the startup Crehana stands out with foreign operations in more than 5 countries. The presence of a startup is in more than one country, which allows to diversify the risk of a startup and develop a more scalable business model, and obtain a better positioning, greater competitiveness. For both startups, the client countries are more concentrated in Latin America.

In general terms, the main factor that has facilitated and promoted internationalisation is the innovation of the business, by constantly innovating it will differentiate itself from the competition, by the theme of Networking, entrepreneurs have received much of their success abroad thanks to partnerships with global business institutions, as in the current case of Crehana, with Nic Newman, on the other hand, Netzun has been receiving support from accelerators and incubators, such as Wayra and Startup Peru. This topic is fundamental for the founders because it has allowed them to inter-act with specialised mentors and entrepreneurs from other countries, opening up the possibility of new business opportunities and easy access to foreign markets.

Regarding funding, it is argued that it is easier to obtain it if the business is scalable both in the local and international market, as it is one of the necessary factors for every startup, although it is not a relevant factor that prevents internationalisation. For example, Netzun obtained funding thanks to Angel Investors in 2018 which al-lowed them to program a learning platform, as a result, they had higher sales.
5. Discussion

Within the framework of this research, we had the opportunity to connect with great authors thanks to their experience acquired along the entrepreneurial path that provided us with data to strengthen this study. In one of the interviews conducted for internationalisation criteria, a new variable was found: the global vision of the business. Well, this should be considered for future research, as well as for future entrepreneurs who are starting to connect in the development of a startup, as it is one of the main factors that determines that a startup can internationalise.

For this future variable we have the example of the edtech Crehana, where the group of expert interviewees indicates that from the beginning this startup maintained a global vision with the objective of providing experience and security at the time of acquiring the service and through this allows them to build consumer loyalty. This coincides with the writings of the authors Ganichev & Koshovets (2021), since in his research on the structure of digital markets as a result of covid-19, he also found that security, experience and satisfaction in purchasing and consumption decisions are important characteristics that a company must provide. On the other hand, Rocha et al. (2022) & Cordova & Paredes (2022) argue that SMEs usually strive to achieve the loyalty of technological and constantly changing consumers, these researches highlight that customer loyalty is mainly related to proper communication and rewards received from the company.

Internationalisation influences various sectors, the sector that has had the greatest boom is education. Within the context, the influential factors to internationalise a startup are innovation, networking and financing, which proposes to develop internationalisation in a more efficient way (Gabrielsson et al., 2008; Oliva et al., 2022). The qualitative study has determined the main influential factors for the internationalisation of a company, which are explained in the following lines.

In Cerqueira (2021), networking is considered a fundamental factor, since without networking the entrepreneur cannot operate locally, much less enter abroad, although it is true that it does not guarantee success, but it is the necessary basis for its execution. This coincides with what was mentioned by Debrulle & Maes (2015) since in its application it was found that the proper management of the network of contacts allows the team to learn from other experiences, get feedback and be a main source of recommendations.

In Amorós & Romaní (2016) they determine that the innovative factor makes it easier to effectively reach future customers, the business, the company itself and each technological area. Innovation is the starting point of any project, improving processes to scale to new markets, since it provides the opportunity for growth. This coincides with what was mentioned by Moen (2022) since in its application it was found that innovation is classified as a differentiating feature of a startup, it should be clear, if it does not innovate the venture declines and it should not happen when they are about to scale to a foreign market.

Blank & Dorf (2012) conducted research with the purpose of establishing the internationalisation process in startups in Madrid, the results indicate that early internationalisation is key for technology entrepreneurship and the main strategies are financing, innovation and marketing network. The contribution of this research favours our independent variable which specifies the important factors for the development of expansion in the competitive market.

In this analysis we have evaluated the current influence of globalisation and trade that have achieved the opening of local economies that is now the whole world, against this we have seen the phenomenon of internationalisation of a company (Blank & Dorf, 2012). Thus, to develop a business model with better chances of surviving the international market, it must rely on factors such as networking, innovation, financing and global vision (Brouthers et al., 2016; Johanson & Vahle, 1997).

6. Conclusion

The overall objective was to determine the factors involved in the internationalisation of an edtech startup, thereby seeking to cooperate in the entrepreneurial ecosystem achieving a business model with high innovation and technology focused on improving education. The most relevant factors related to internationalisation are networking, innovation and financing. Innovation is the basis for the product or service to remain in the competent market, differentiate itself from the competition and have greater customer loyalty, followed by networking, which helps to have quick access to the target market, and financing, which helps to remain in the market and improve the startup.
Likewise, in the interviews, financing has been identified in three ways in which startup founders can obtain funds for the development of internationalisation. These are: Family Friends Fools funding, which is characterised as the first contribution to their equity, seed capital or public entities, and the third funding is obtained from private equity, better known by the group of angel investors. The international market abounds with entrepreneurial ideas that seek to generate profits for their founders. It should be noted that in the last four years, the State and private entities have improved the supply of financing for technological ventures.

On the other hand, the results identify the network of contacts known as networking as a main issue that founders should consider, since it will provide easy access to global markets and interaction with mentors, generate strategic alliances with state and private institutions in order to open new ventures. They suggest looking for information in the chambers of commerce of the country, embassies, the purpose they provide is to connect entrepreneurs with destination countries, making use of this greatly favors entrepreneurs, especially at the beginning of scaling a startup.

Finally, it is determined that the low level of internationalisation is due to the lack of more research, education and development, also for not improving the value proposition, where the objectives provide a solution and differentiate themselves from the competition by developing these characteristics, more edtech startups will be able to transcend locally and internationally. In this sense, thanks to this research, future entrepreneurs will be able to improve the business model they need to develop, considering a global vision, as well as allowing new researchers to advance with a newly discovered variable as mentioned in the results, this will transcend constructive improvements in the startup ecosystem.

References


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