Crowdfunding in educational projects: literature review

Crowdfunding en proyectos educativos: revisión de la literatura

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Abstract

Nowadays it is essential to know the diverse sources of capital to support entrepreneurs; for the development of any research project, the financial aspect is decisive for its correct execution since it corresponds to the economic resources. Crowdfunding or collective financing appears in the current market as an agile and efficient financing alternative for innovation and improvement of projects using technology, satisfying the needs of entrepreneurs due to the scarcity of traditional credit. In our country this source of funding is little known and therefore all its features and benefits are unknown to many entrepreneurs, therefore through this article, we intend to make a small mapping of literature related to this topic using Scopus and Science Direct two digital libraries to condense all studies on Crowdfunding. For the review we have articles with certain search criteria from the beginning to the end, the selected articles identify the contributions of their authors presented in their results; crowdfunding related to one of the phases of a business plan is a topic of interest for the development of the practical master’s project.

Keywords: Crowdfunding, Entrepreneurship, Project Financing, Systematic Mapping, Platforms.
Resumen

Es fundamental conocer las diferentes fuentes de capital como apoyo de los emprendedores; para el desarrollo de cualquier proyecto de investigación el aspecto financiero es decisivo para su correcta ejecución que corresponde a los recursos económicos. El crowdfunding o financiación colectiva aparece en el mercado actual como una alternativa de financiación ágil y eficiente para la innovación y perfeccionamiento de los proyectos haciendo uso de la tecnología; satisfaciendo las necesidades de los emprendedores debido a la escasez de crédito tradicional. En nuestro país esta fuente de financiación es poco conocida y por ende todas sus características y beneficios son desconocidos por muchos emprendedores, por lo tanto, a través de este artículo se pretende realizar un pequeño mapeo de literatura relacionada a este tema haciendo uso de Scopus y Science Direct dos bibliotecas digitales con el objetivo de condensar todos los estudios realizados al crowdfunding. Para la revisión se tienen artículos con ciertos criterios de búsqueda desde el inicio hasta el final, los seleccionados identifican las contribuciones de sus autores presentados en sus resultados; el crowdfunding afín a una de las fases de un Plan de negocios es un tema de interés para el desarrollo del proyecto práctico de Maestría

Palabras clave: crowdfunding, emprendimiento, financiación de proyectos, mapeo sistemático, plataformas.

Introduction

Currently, society is in constant changes and dynamics that generally cannot be predicted and at the same time are very complex, influencing its present and tomorrow. Phenomena that transcend borders such as Globalization [1]; a transformation in communication, business, and education as part of the information society [2], and with the knowledge society [3], [4] have generated significant changes in economic, cultural, educational, political, and social contexts in recent years [5], new characteristics are identified in individuals and at the same time transform their social experiences as their interpersonal relationships, their way of working, their way of doing business, their basic needs, etc., that is, regardless of the literature that is reviewed and adopted, these phenomena will always influence all aspects of life, either as an individual or as part of society generating positive or negative impacts according to the interpretation and perspective that is had.

Inhumanity, there has always been technology that supports all the activities of the individual and has also had an impact on the development of each society [6], that is why the development and implementation of new ICT information technologies [7], [8], have a great impact on society as they break those invisible borders between countries [9], [10], generating with this transformation in its structure from the social, political, judicial, labor and not only in the communication and information allowing that the great majority of people can establish better interpersonal [11], and commercial relationships with one or more in their environment and who are in different places or places in the world, responding through new products and/or services [12] to the different challenges that arise in society, in an innovative way and areas of knowledge.

The challenges give rise to the improvement in the design or functions of existing products and/or services [13] or to create new and more innovative [14], with this the appearance and increase of entrepreneurs [15] presenting their ideas significantly influences To carry them out, but to execute them they require capital to finance it, which is why, along with this growth, the issue of financing is triggered in equal measure [16], to achieve the execution of all these projects. To opt for a type of financial aid, it is required in the first instance that the projects are structured with clear strategies and goals [17], [18].

Nowadays, through the use of new information technologies, different ways of obtaining financing can be found, in the first instance, support is sought directly to the family and friends circle [19], another way is the different bank loans in different modalities all they are generally through banks [20]; another way to obtain capital
are incubators [21], and investors [22], from the Government through government financing programs such as the Emprender Fund [23], INNpulsa [24], Fondo Nacional de Garantías S.A o FNG [25], through capital seed, options such as governments or international organizations that open calls for support for projects of different kinds and finally there is collective financing or Crowdfunding [26], [27], which is a new option for financial aid making use of technological tools. To access any of them [28] and due to the few commitments that he has been able to acquire with different banking entities, the entrepreneur, a situation that occurs in the entrepreneur’s profile is the low credit life, and with this, it presents a situation of little credit life, which leads to the low approval of different economic support generally by these companies.

Crowdfunding or collective financing is an option that entrepreneurs have to finance their projects and lines of work such as the environmental [29], social [30], the industrial sector, others, it is a phenomenon where the support of small contributions is generated from a large number of contributors. For Ménez, Fernández and Reyes [31] it is:

An innovative model of capital formation and accumulation and of market participation in which the financing requirements and the objectives are made known through open calls, widely disseminated through the internet, specifically by dedicated platforms that attract individual support from various audiences (p. 2)

Contextualizing the definition of Crowdfunding it can be related that it generates new expectations in the development of a region through support for projects [32], [33], unfortunately, the term is very little known by entrepreneurs and businessmen [34], since it is not very close to hand or with clarity the related literature, Figure 1 shows a proposed historical development of the phenomenon; in addition, there is no evidence that legal support is found that leads to identify and standardize the use of this type of platforms.

With the development of the master's thesis by one of the authors of the article, which consists of the design of a business plan [36] - [38] for an academic advisory company using LEGO Education, the analysis of different financing options for the execution of this project and achieve its operation; in addition to identifying within this type of financing its characteristics, types, and feasibility of implementation. To broaden everything related to this issue, a literature review was carried out in
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To achieve this, this literature review has been carried out by applying the systematic mapping proposed by Petersen, Feldt, Mujtaba, and Mattsson [40], which is a method where different phases are detailed such as the identification, selection, and synthesis of the information present in each of the articles reviewed. The article is organized as follows: In the first instance an introduction, followed by a methodology, there is an item of results and discussion to end with the respective conclusions and bibliographic references.

**Methodology**

According to Petersen et al [40], the systematic mapping method establishes a guide to help the researcher to carry out literature reviews, according to a series of phases from the search to the respective analysis of published articles so that the information found in they are related to the subject of study, with the above it converges to a better review thus eliminating possible errors to reach precise conclusions. The objective of implementing this type of literature review is to have a current look at the Crowdfunding issue and obtain the necessary information on this term through the definition of questions and search criteria, inclusion criteria, exclusion, and classification to arrive at the final information as can be seen in Table I. Systemic Mapping and the flow diagram of the literature collection Figure 2.

<table>
<thead>
<tr>
<th>Phases contemplated</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td><strong>Research questions</strong></td>
<td>Q1. What are the definitions found against Crowdfunding?</td>
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<tr>
<td></td>
<td>Q2. What are the main Crowdfunding platforms available in Colombia?</td>
</tr>
<tr>
<td></td>
<td>Q3. Can it be determined from the literature that Crowdfunding can support educational projects?</td>
</tr>
<tr>
<td><strong>Definition of search criteria</strong></td>
<td>a. A search equation [41], [42] is defined with keywords related to the subject of study.</td>
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<tr>
<td></td>
<td>Keywords were defined as &quot;Crowdfunding&quot;, &quot;collective financing&quot;, &quot;financing platforms&quot;, &quot;financing alternatives&quot;, &quot;project financing&quot; (&quot;Crowdfunding&quot;, &quot;collective financing&quot;, &quot;financing platforms&quot;, &quot;financing alternatives&quot;, &quot;project financing&quot;)</td>
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<tr>
<td></td>
<td>b. Scopus [43] and Science Direct were selected as the databases [44], since they have wide coverage of publications, the keywords were used according to the search engine of each database giving the first group of articles, as shown in Table 2.</td>
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<tr>
<td><strong>Inclusion</strong></td>
<td>Both Inclusion and Exclusion criteria [45], were defined to reach the final articles for analysis:</td>
</tr>
<tr>
<td></td>
<td>Only documents type articles were selected</td>
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<tr>
<td></td>
<td>Articles published in the last ten years: 2010 to 2020</td>
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<tr>
<td></td>
<td>Articles related to Crowdfunding to educational projects</td>
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<tr>
<td></td>
<td>Articles that are not in Spanish, English, or Portuguese</td>
</tr>
<tr>
<td></td>
<td>Documents that do not comply with any of the included items</td>
</tr>
<tr>
<td><strong>Exclusion</strong></td>
<td>Duplicate documents</td>
</tr>
<tr>
<td></td>
<td>If the complete digital document cannot be accessed</td>
</tr>
<tr>
<td></td>
<td>Articles that do not present studies related to educational projects</td>
</tr>
<tr>
<td><strong>Data extraction and study mapping</strong></td>
<td>With these criteria, a review of titles and abstracts is given in a general way to select the documents for their complete reading of these articles for their detailed analysis.</td>
</tr>
<tr>
<td></td>
<td>To provide an answer to the questions posed, the selected articles were read in full and those directly related to supporting educational projects were identified. Datasheets are made with the identified articles from the Scopus and Science Direct databases using Excel to record some important information that serves as support to comply with the phase of the Business Plan of the master's work that involves in the search for the financing of projects.</td>
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</table>
Table II. Database and number of publications

<table>
<thead>
<tr>
<th>Database</th>
<th>Keywords</th>
<th>Number of Publications</th>
</tr>
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<tbody>
<tr>
<td>Scopus</td>
<td>“crowdfunding”</td>
<td>624 Initial, 80 Criteria</td>
</tr>
<tr>
<td>Science Direct</td>
<td>crowdfunding</td>
<td>867 Initial, 24 Criteria</td>
</tr>
</tbody>
</table>

**Results**

The literature review began with approximately 1500 references from the two databases, then the respective criteria of the methodology were applied, which significantly filtered our search, reaching approximately 110 documents last, and after applying these criteria analysis is made, more detailed reading not only the title and summary of each document but also an introductory reading and conclusions of the vast majority of documents to present the literature that responds to the research questions posed.

Answering the first question, the following most important references can be found:

For Burtch, Ghose, and Wattal [46], crowdfunding is the financial support received by a group of people outside the entrepreneur or his venture. Crowdfunding for Roig, Sanchez, and Leibovitz [47] is the acquisition of money that is acquired through calls on different platforms where the expected money is achieved with few contributions.

Rodríguez [46], defines the term as collective financing through an electronic medium where innovation, resources, and funds are created in an environment generally a platform to jointly support the initiatives of different projects.

It can be found that crowdfunding is seen as an instrument as mentioned by Cejudo and Ramil [48], Garcia y Garibay [49], where it is possible to have a direct relationship between society and the enterprises that are presented through economic support and an opportunity or how Gerber and Hui [50] interpret it, is a way of relating entrepreneurs and investors producing a profit for both parties.

Cai Polzim and Stam [51], determine that Crowdfunding is built from society through digital platforms based on common interests and goals where different types of social capital such as cognitive, structural, and relational are related.

Initial negotiations or investments involving different stakeholders are more effective if they are located in a close geographic area because it generates more trust [52]; On the other hand, Kromidha and Robson [53], mention that Crowdfunding is related to social identity as it is present in different disciplines and that it is developed through different technological mechanisms that facilitate the interactions of projects and people from different geographical areas.

For Mollick Crowdfunding is small contributions from a large number of people using the internet without intermediaries to finance ventures of individuals and business groups - cultural, social, and for-profit - to finance their businesses [54].

For the development of the presented Business Plan, it is important to know which are the different spaces on the internet or platforms with which the project that is being carried out can have financial support to be able to execute it, that is why after reviewing the literature they can be found the following platforms as the most important the following Table III Crowdfunding Platforms for Colombia.
Table III. Crowdfunding platforms for Colombia

<table>
<thead>
<tr>
<th>Platform</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Fondeadora</td>
<td>With a capital raising time of 3 months, it does not have support or advice for the entrepreneur and a commission of around 7% is charged</td>
</tr>
<tr>
<td>Help</td>
<td>Collection time of three months supports students to finish their studies and charges 5%</td>
</tr>
<tr>
<td>La Vaquinha</td>
<td>It does not have a collection time limit and without advisory support, your charge for use is at 14%</td>
</tr>
<tr>
<td>Unset</td>
<td>Four months to raise the money, there is no advice, charges 15% on the capital received</td>
</tr>
<tr>
<td>Súmame</td>
<td>The entrepreneur has between 2 to 3 months to raise the money if he generates support and advice to support any type of project and charges 15%</td>
</tr>
</tbody>
</table>

Conclusions

The Crowdfunding phenomenon according to the reviewed literature was a consequence of the arrival and implementation of new information technologies that gave way to a financing door that was not contemplated in previous times, which is to find financing through virtual platforms.

It is essential to relate that to formally analyze a business plan, the financing system must be taken into account when making the respective financial analysis and therefore the use of different types and ways of accessing these resources is a way to formalize new companies, means entrepreneurship development, support and/or rebirth of these new products and that is where Crowdfunding takes on an important value in any project.

Being able to find different forms of financing implicitly means identifying and playing with the respective advantages and disadvantages that can be found, in the case of Crowdfunding it is to formally know every one of the existing platforms and their different characteristics, becoming in a certain way an important means to increase creativity, innovation not only of the entrepreneur and his company but also of the regional economy and the country.

After conducting the respective review of the literature regarding Crowdfunding in our country, it is a new phenomenon that has begun to arouse interest, a topic of interest for the development of the Master’s work since it is related to one of the phases to be determined in the respective Business plan and therefore a way to acquire the resources to be able to carry it out.

As it is a subject of apogee in Colombia in front of the knowledge of the different platforms, it is a space in which every one of them has advertising spaces towards society, especially in the educational environment so that the vast majority of people learn about the great benefits of this type of financing system for projects.

A supremely important issue for any country, especially Colombia, is to determine in the first instance some regulations that standardize the management of these platforms and from the Government generate programs to open spaces to support entrepreneurship projects to different sectors of society, In addition, this type of financing mechanisms is interesting that it does not reach a certain region but does not have barriers to its knowledge and application.

For the development of a Business Plan it is essential to have different financing alternatives since after analyzing the financial statements that are projected, it is already known how much money is required so that all its activities can be carried out and also determine when it will require the use of these resources.

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