

## Entrepreneurial Skills in Teachers of Regular Basic Education in Times of COVID-19: A Psychological Perspective

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### Abstract

**Objective:** To analyze the entrepreneurial competencies of four basic education teachers in the context of the COVID-19 pandemic. **Methods:** qualitative study, with phenomenological, hermeneutic methodology, an in-depth interview with 60 questions was applied to learn about entrepreneurial competences from the teachers' perspective. The analysis focused on the following categories: contextualization and meanings linked to COVID-19, experiences of entrepreneurship, remote work, parents in the context of distance education and evaluation of situations of being an entrepreneurial teacher through remote work. **Results:** Teachers have presented difficulties for the development of their activities in the virtual environment, they had to use their creativity to get the commitment of their students through technological means (synchronous and asynchronous education); also, they took advantage of this creativity to make some of their projects effective. **Conclusion:** The creativity developed by teachers to improve teaching has allowed them to promote entrepreneurship projects in their students and to take as an opportunity the continuous training in terms of mastering the use of virtual platforms to develop new knowledge and adapt to the conditions during the COVID-19 pandemic.

**Keywords:** Entrepreneurial competence, COVID-19, entrepreneurship, basic education, teachers.

### 1. Introduction

Competence is the ability of a person to develop a topic and relate attitudes, dispositions and cognitive, socio-affective and communicative skills that are related to each other to facilitate the flexible and meaningful performance of an activity in relatively new contexts (Dois et al., 2018). They are achieved by the combined and interrelated mobilization of knowledge, skills, values (Slišane et al., 2022) and will depend on the willingness of the person or group of people to learn and innovate solutions in order to solve problems (Escarrabill et al., 2015).

Competence is formed to solve real problems, where they strive to gain benefits for consumers, dimensioning integrated elements that give rise to the corresponding performance of each competence, as well as cognitive dimension that occurs through ideas and concepts; the instrumental dimension that is sustained by skills and aptitudes and the attitudinal dimension that is constituted by values, attitudes and ethics (Montoya et al., 2019), society requires competent people who can think creatively, use information technology in a positive way, communicate, investigate, question and undertake (Uaidullakzy et al., 2022).

Entrepreneurial competencies (EC) can be focused through cultural value, taking into account the concept of entrepreneurship as a new way of looking at the economic and social environment, training must be provided oriented to appropriation by those who exercise knowledge, skills, attitudes (Martínez & Carmona, n.d.) and above all propose the added value in their personal training that contributes to their life project as a transforming agent that will have an impact on people's personal and work lives (González-Tejerina & Vieira, 2021).

ECs can be viewed from different approaches. From the social approach is the set of interpersonal communication skills that facilitate and make possible the adaptation and integration to the social context to which it belongs, also identifies the objectives, interests and personal characteristics (Paz-Marciano et al., 2019). From the economic

approach it is the effort made by people, businesses or companies to win the preference of consumers. Thus they compete with higher quality products and services at better prices to increase the number of sellers and in such a way increase wealth and better distribute the economy (Cabero-Almenara et al., 2021) and from schools, entrepreneurial skills must be worked as a process to build specialized knowledge from a viable business model (Milliken et al., 2021).

The EC is based on the practice of initiative and proactivity in which they continuously look for business opportunities and think about how to get ahead of the competition, courage and the ability to take calculated risks, self-confidence and self-efficiency is to have confidence in one's own abilities to face challenges, being able to achieve goals, avoiding fear of taking risks, so the entrepreneurial mind will always have benefits from opportunities (Fernández-Salazar et al., 2021), whose fundamental purpose is the creation and development of entrepreneurship projects with high impact on the productive sector to enhance the generation of jobs (Armuña et al., 2022).

The EC in primary education aims to propose a set of programs (Paños-Castro et al., 2022), aimed at pedagogical agents for the formulation and construction of improvements in the educational field through the evaluation, training of different situations to act in the services provided in schools, allowing to transform opportunities, improve the process of risk tolerance and rewards (Gómez et al., 2017). In secondary education it occurs through autonomy and personal initiative for the educational and social interest taking into account the function of the identity and sex of the students (Khalid et al., 2022), improving the productive dimension of education and in this way the best entrepreneurial conditions will be achieved (Navarro et al., 2020)

There are certain theories related to the EC; one of them is the theory of the benefit of the entrepreneur in which it alludes to entrepreneurship, it is related to the subject since the competences will always focus on an initiative of change and entrepreneurship (Urdaneta et al., 2018). Another theory is that of transaction costs, in which it seeks to solve the structure that suits the company, this is involved with respect to hierarchy, market option and the stabilization of alliances (Urdaneta et al., 2018)

Schumpeter's theory of economic development goes hand in hand with the development of the entrepreneur and traditional productive factors, which moves capitalist production, causing continuous transformation processes and the process of technological innovation (Urdaneta et al., 2018).

The importance of carrying out a study such as the present one lies in the need to know entrepreneurial competences from an external perspective (experiences) to an internal one (consciousness) which would allow us to understand these competences a little more thoroughly in the context of the COVID-19 pandemic and all the variations that have arisen as a result of health measures.

It is for the reasons described above, that this study has formulated the objective of evaluating the entrepreneurial competencies of teachers belonging to regular basic education at the time of the COVID-19 pandemic (Rivera et al., 2022), who had to adapt and adapt learning activities with strategies focused on school entrepreneurship.

## **2. Methodology**

The study is qualitative and phenomenological method. The purpose of the study was to understand the entrepreneurial competencies of teachers of basic education. The technique used was the in-depth interview, the instrument being a questionnaire of 60 open questions focused on the contextualization of basic education (structured interview), meanings linked to COVID-19, meanings of entrepreneurship experiences, meanings linked to remote work, meanings linked to students in remote work in times of COVI-19, the meanings linked to parents during COVID-19 and the evaluation of situations of being an entrepreneurial teacher through remote work in times of pandemic.

The interview with four teachers of the secondary level was carried out after acceptance and signing of the informed consent through the virtual video call platform Zoom, which facilitated eye contact. Responses were recorded verbatim in an interview content analysis matrix (MACE). The interviews lasted approximately 4 hours, the interview was considered concluded when the 60 questions were answered. Regarding the discussion, the results of the in-depth interview were processed, the results obtained during the research stage were contrasted

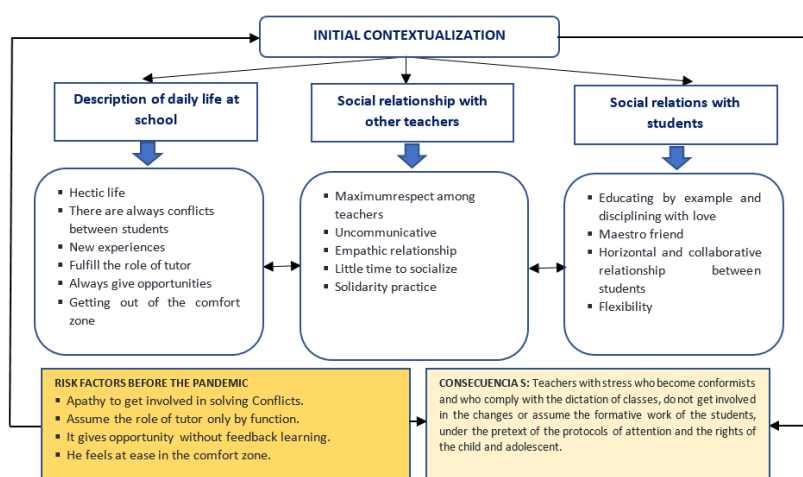
with the results, discussion or conclusions of other studies to find similarities for new studies (Garagatti et al., 2022).

Data analysis was performed through the following steps Bautista (2011): (1) Reduction of information, (2) identification of noteworthy information considering the dimension to which the question belongs, (3) comparison between teachers' answers. Regarding the discussion, the results of the in-depth interview were processed, the results obtained during the research stage were contrasted with the results, discussion or conclusions of other studies to find similarities for new studies (Garagatti et al., 2022).

### 3. Results

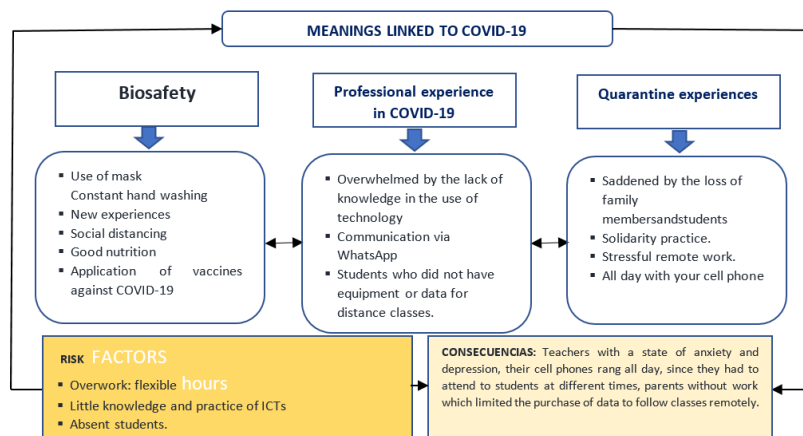
The entrepreneurial competences in times of COVID-19 in the basic education teachers who were part of this study, are shown in the following figures:

In Figure 1, teachers show their experiences at school before the pandemic, when work in some cases had become routine, but despite this, Relations with the environment were sustainable.



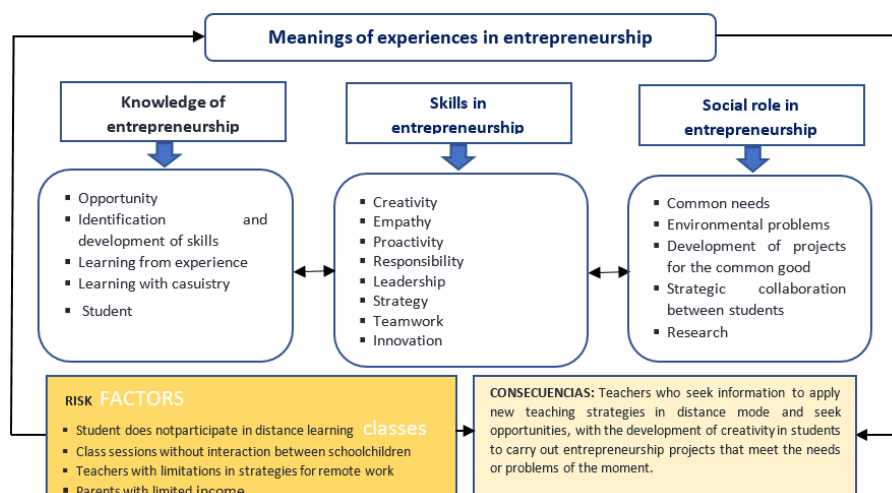
**Figure 1 – Initial contextualization: manifestation of teachers in situation before COVID-19.**

Figure 2 shows the results of the meanings regarding COVID 19 from the teacher's assessment.

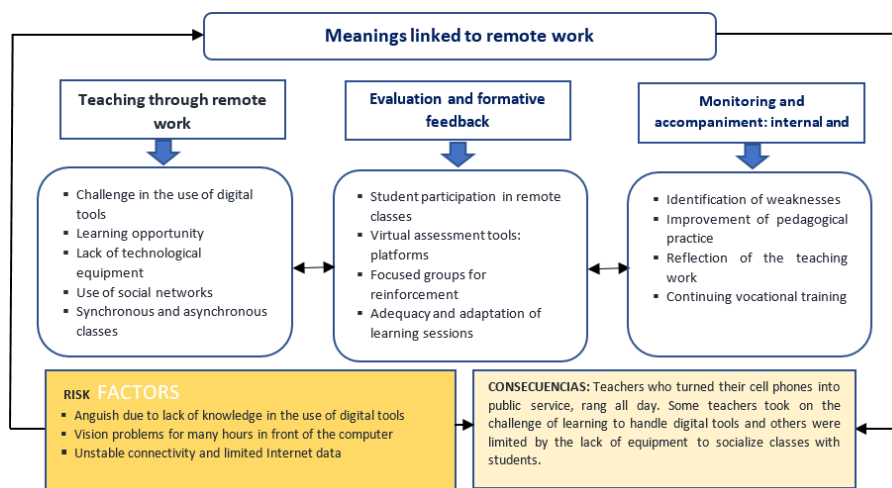


**Figure 2 – Teachers' manifestation of meanings linked to COVID-19**

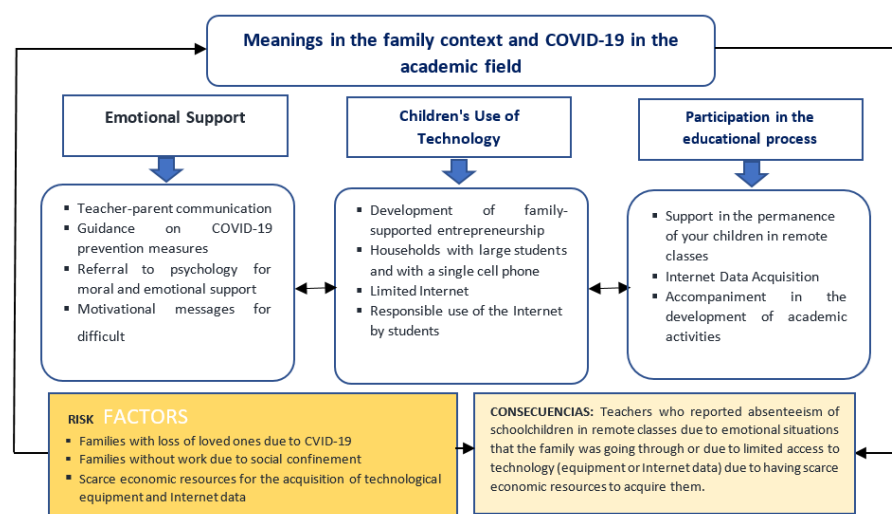
Figure 3 presents the results related to the experiences of entrepreneurship during the COVID-19 pandemic perceived by teachers.



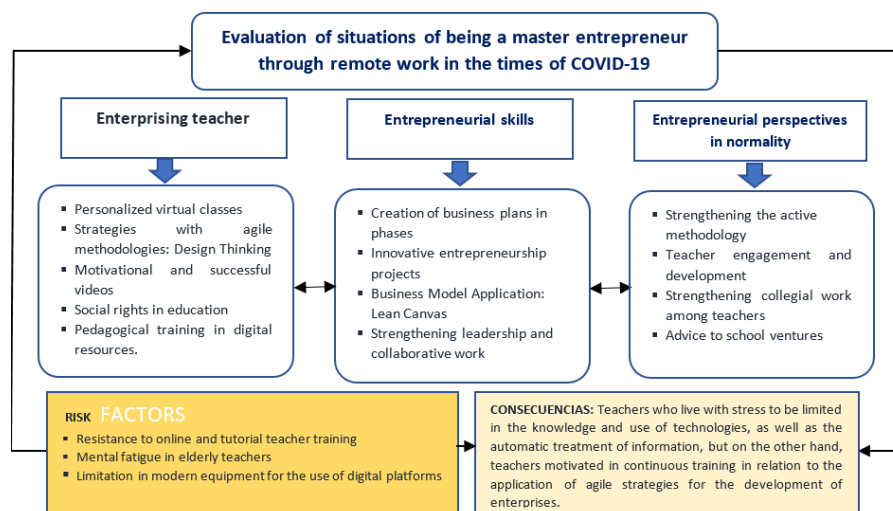
**Figure 3 – Teachers' manifestation in meanings of entrepreneurship experiences**



**Figure 4 shows teachers' experience with remote work during the COVID-19 pandemic.**



**Figure 5 shows the significance in the family context and COVID-19 during remote classes.**



**Figure 6 evaluates the situations of being a master entrepreneur from remote work in the times of COVID-19.**

#### 4. Discussions

During the initial contextualization it was observed that teachers perceive their school life both from a positive and negative perspective indicating some who enjoy the protocol and the order of the routine as well as find complications of the short time and conflicts that they have to resolve given the new scenario of distance education. Social relations focus on the teacher-student binomial as a functional unit of a school work team (confluence of respect, empathy and flexibility); always at the forefront of excessive attachment by the student leading to cases where the relationship is misinterpreted. Among teachers, empathy and solidarity are important as a support for pedagogical work by ensuring the quality of talent (Li & Wang, 2022).

#### Meanings linked to COVID-19

When analyzing the issue of COVID-19, some report thinking that it is "man-made" and that it is related to negative emotions mainly due to the loss of family members or close people; Others have seen this situation as an opportunity to discover humanity. The preventive measures used were barrier, chemical and social measures. Most have the 3 doses of the vaccine against COVID-19, the worrying thing was that there are teachers with one or no doses. When asked about their experience during the pandemic, they described themselves as "overwhelming, difficult, sad, uncomfortable, with a lot of anxiety" about the restrictions and everyone disliked the confinement (Ledesma et al., 2021). However, teachers saw the pandemic as a learning opportunity. Coordination by telephone was increased and for some teaching was what "gave them back life" in such a difficult situation. Similarly, they found that study participants used vaccination against COVID-19 as a preventive measure, on the other hand, 55.3% had doubts about vaccination being the fear of side effects the main reason, being a cause for alarm, since teachers are in charge of imparting knowledge and it would not be correct for them to impart fear and bad information to their students (Magadmi & Kamel, 2021).

#### Meanings of experiences in entrepreneurship

As for the experiences of entrepreneurship it was possible to understand that, the vision focuses on identifying needs and problems to generate opportunity, some had the motto of "you can be your own boss". They identified creativity, empathy, proactivity, responsibility and leadership as the characteristics of an entrepreneur (McCole et al., 2022). Teamwork and identifying the skills of the members allowed to promote strategic collaboration among their students. Stimulating reasoning or promoting students to investigate the needs or problems of their environment, made the teacher consolidate as a mediator of learning, in addition, which allowed the creation of a learning environment focused on cooperation and in a positive way, which allows the development of the entrepreneurial culture. Design Thinking was the most used methodology and with it, strategies developed in its

five stages, which allowed the elaboration of prototypes that were research proposals on solutions and elaboration of designs focused on the product (Latorre-Coscolluela et al., 2020). The main motivation of the students to undertake was to provide solutions to local problems, although there was a lot of frustration due to limited resources, with the application of Design Thinking they were able to find solutions in a creative way (Becerra & Osorio, 2020) to the problems or needs they identified., in addition to practicing empathy and questioning, express their ideas to strengthen social, emotional, linguistic and cognitive development (Yalçın, 2022).

The organization among professors was carried out among collegiate teachers in order to establish joint strategies. One of the ways to motivate learning related to entrepreneurship was using an approach to local casuistry and discussing it in classes. Group work and organizing goals allowed to establish cooperative relationships among teachers. Showing one's own project or using techniques such as Design Thinking encourage and enhance the development of entrepreneurial projects, in this context, it became necessary to apply active methodologies under the approach of socio-constructivism (Rocha, 2020).

A very highlighted aspect was empathy, which was considered a valuable virtue for teamwork (Fernandez Rivas & Husein, 2022) and teachers stimulated it through active listening and promoting phrases such as "How would you feel if ...?". Establishing rules of coexistence and showing that all opinions are valid enhances reaching agreements. When teachers were presented with ideas or proposals so creative that they themselves did not know, they considered that accepting ignorance was appropriate, this allowed them to give them time to investigate it and later share their results. Another way to facilitate learning and entrepreneurship is by doing, creating and cooperating under the aim of developing innovative projects. The analysis of the environment and reflection on it allowed their students to see the situation as a source of opportunities. Showing inspiring examples (Patrício & Ferreira, 2023), especially from Peruvians, allowed them to boost their entrepreneurial initiatives. Similarly, (Kim et al., 2021) found that the most important non-cognitive qualities are empathy and communication, organization and planning, resilience and adaptability, they emphasize empathy so that teachers understand the problems that students may have.s and together they help to overcome it as much as possible, it helps promote self-esteem and that students learn from this empathy and practice it in their day to day.

Creativity is a key piece in entrepreneurship (Rubilar-Torreálba et al., 2022); some teachers define it in "the physical, active or visible representation of the imagination as a response to solving a need." The use of sketches and prototypes very important as a response to the solution of a problem (Tiberius et al., 2023); and even techniques such as Scamper and Design Thinking, allowed them to better develop the creativity of their students. During the pandemic period, teachers innovated appropriately thanks to the use of technology, virtual platforms as a new teaching method opened doors to new learning to a new world to which they were not so accustomed, triggering in them new learning goals to be able to impart adequate knowledge to their students (Yusriadi & Tinggi, 2021).

### **Meanings linked to remote work**

The remote work is something new for many people, not being alien to the academic world. Some teachers took it as a learning opportunity, although they highlight the lack of technological equipment as one of the greatest limitations of this modality. From the psychosocial perspective, they indicated that remote work is usually very "cold" and "does not allow you to appreciate emotions"; In addition, a significant portion had not worked educating under this modality, which was very stressful. At the institutional level, it allowed administrative work to be ordered, in addition to reducing exposure to COVID-19 contagion; Some teachers expressed fear of being infected by the large number of students inside a closed environment. Instruction on the use of digital tools was challenging; However, at present the vast majority has become accustomed to using social networks as a means of communication, mainly WhatsApp and the realization of classes through Google Meet, Zoom, Moodle, Classroom, among others.

One of the aspects that most concerned was the evaluation of academic progress. Teachers had to use forms, presentations or checklists to assess knowledge, as well as corroborating compliance and participation in classes. In cases they deemed necessary, they held personal meetings or in small groups for feedback. Teachers mention that the pandemic forced classes and evaluation method to be purely through virtual platforms, this has probably generated some kind of impact on students (Iglesias-Pradas et al., 2021), however, in the results of the cited study

it was shown that academic performance increased during this pandemic period, The grades were shown to be high in the students, where it can be inferred that remote teaching is a good learning method that does not affect the cognition of the students.

The internal (managerial) and external (MINEDU and UGEL) monitor was seen as a useful opportunity to improve and identify their weaknesses. Some indicated that they felt a little more important when they saw that some managers entered their virtual classes to be able to evaluate the development and make a respective feedback. Although some indicated that "we looked like old cars because we stopped from workshop to workshop", they said that these trainings allowed them to improve their pedagogical knowledge and even open an entrepreneurial vision (Bautista, 2020). Most indicated that they participated in training at PERUEDUCA.

Remote work had a great impact on the academic environment. Teachers noted that by 2020 there was a considerable attendance, around 80%, as time went by a significant dropout of the student body was noted. While they indicated that by 2021 attendance increased, participation continued or had worsened compared to the previous year. Many mention that remote education does not allow observing non-verbal language. They also noticed that the desire to write decreased markedly, the students began to prefer only photocopies. (Clark et al., 2021) observed that those students who received classes from teachers with mastery in digital tools were more likely to obtain high grades or participate in class compared to those students who received classes by their teachers from WhatsApp, where it can be inferred that student participation and performance will depend on the motivation that students have.

#### **Meanings in the family context and COVID-19 in the academic field**

Regarding the interaction with parents, it was sought that they felt heard, trying to give them both emotional support and related to the teaching of their children (Gamarra Choque et al., 2022). Teachers played an important part in disseminating knowledge about preventive measures against COVID-19; It should be noted that, if a family member got sick at home, it used to influence the student's attendance and permanence in virtual classes. In addition, cases of students with technological deficiencies were identified, they had to emphasize the importance of the internet and the value of their participation, therefore, involving them in the development of their children's projects was a key piece to motivate them "for a better tomorrow" (Ge et al., 2022). Teacher emphasized preventive measures against COVID-19 and if any student or family member of the student was infected during the period of face-to-face attendance at classes, it was best not to attend classes until they ruled out illness or at least that they spent a considerable time where they were not able to infect their other classmates (Walger et al., 2020).

#### **Evaluation of situations of being a master entrepreneur through remote work in times of COVID-19**

Finally, being an entrepreneurial teacher (Nikou et al., 2022) turns out to be somewhat complex, it requires a direct connection with the student (Durnali et al., 2023), those who already had experience in digital tools had greater ease and were facilitated to see the opportunities during the COVID-19 pandemic. Digital tools allowed them to venture into providing particular services of different kinds; In some cases closely related to teaching, such as personalized virtual classes. Some of the ways to motivate themselves were reading topics related to entrepreneurship, meditation, motivational videos or slogans such as "if someone else can, I can do better". Maru et al., (2022) observed that teachers had experience in virtual platforms due to the time they already have teaching through the more than the most, in addition, they reported that at the beginning it was a complete process, but that with practice they were developing skills for a better management of these platforms to guarantee an adequate transmission of knowledge for their students, there are studies that show that teacher innovation has an effect on the constructivist teaching approach through activities that take place in the classroom that serve as a basis for an understanding of business education (Joensuu-Salo et al., 2021), with student-centered learning environments (Toding et al., 2023).

### **5. Conclusions**

Entrepreneurship within the academic field has been a challenge for teachers; Not only to promote entrepreneurial enthusiasm in their students but also to motivate themselves to develop their own projects. For teachers, the negative impact of the COVID-19 pandemic was not alien, however, their ability to develop knowledge was useful

so that they themselves can develop new knowledge and adapt to conditions, mainly based on digital pedagogy, which is more innovative since students learn more effectively, which allows sustainable learning because it facilitates the use of effective pedagogical tools and equipment with the use of ICT platforms which guarantees student teacher interaction from another scenario (Nanjundaswamy et al., 2021), in addition to that, by creating student-centered learning environments, teachers positively promote business learning from digital academic entrepreneurship (Garcez et al., 2022), while applying agile methodologies such as Design Thinking which develops cooperation, communication, curiosity, questioning, empathy, among others (Yalçın, 2022). Something that all teachers agree on is that to undertake there are necessary skills where creativity is highlighted (Miller & Alvarez Huerta, 2022) and the ability to find opportunities where others only see problems; just at this point is where teachers promote play an important role in the identification and promotion of new entrepreneurs (Valle et al., 2022), referring to their students or where they themselves can start a new venture, in addition to enhancing their continuous training by applying new strategies based on digital skills to build a solid educational process (Toto & Limone, 2021).

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