Creativity, pedagogical, and educational innovation: analysis of the perception of a group of Chilean teachers

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Abstract

This study is circumscribed to the scope of education, didactics, and classroom methodology. The results of an investigation with a quantitative approach will be analyzed, whose aim was to identify the perception and experiences related to creativity, as well as to pedagogical and educational innovation - the two latter concepts not always clear and distinguishable in theory and empirical studies. The research was done in a group of teachers who were just beginning their training process in a Graduate Degree in Didactics, taught in the School of Education at the Los Angeles Campus of the Universidad de Concepción, in the region of Biobío, Chile. The investigation had a descriptive approach and the main method for data collection was an opinion questionnaire with open questions. The main findings show that teachers in general and in a high percentage appreciate creativity, understand the concept of pedagogical innovation, but have difficulties to identify the difference between the latter and educational innovation due to its conceptual breadth. Furthermore, the results show that while teachers believe that innovation is necessary and that they are willing to do it in their pedagogical teaching activity, favorable conditions to implement it in schools are not always generated.

Keywords

Education – Creativity – Educational and pedagogical innovation – Didactics and methodology.

***** The author take full responsibility for the translation of the text, including titles of books/articles and the quotations originally published in Portuguese.

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https://doi.org/10.1590/S1678-4634202248238562eng

Background

Initial pedagogical training in college degrees in Chile in recent years has been marked by new demands and challenges, focusing with special emphasis the development of the learning process in the classroom and the attention to its diversity, which requires permanent updating. This, due to the ever-faster and marked advancements that are evident in the knowledge itself, in the scope of sciences, technology and communications, along with inclusion. These aspects have a direct impact in the educational system, both in human relationships and the classes taught. Employability of each teacher who has just graduated and entered Chilean educational system conveys a certain degree of difficulty due to the heterogeneous characteristics of schools, considering the country's geographic extension or the racial and social factor; but also homogeneous in its inner structure, caused by socioeconomic segmentation prevailing in society, replicated in every educational institution categorized by IVE[2]. This is why, according to the particular experience in that system and the pregraduate training, he/she may have different perceptions about creativity, educational and pedagogical innovation.

The information analyzed in this study was obtained from a professional postgraduate training program, whose students are teachers interested in improving their methodology working capacities in the classroom. The higher percentage of this group work in primary and high schools – although also in higher education institutes and universities – belonging to highly-vulnerable educational institutions with extremely low economic indicators. This academic program intends to carry out an academic update for teachers in the province of Biobío and Ñuble in specific problems of the teaching, such as the innovation in pedagogical practices in the scope of didactics and methodology in the classroom, in order to improve and refine their initial training. In that context, they were asked to answer a questionnaire with open questions about their perception and experience with respect to creativity, pedagogical innovation and educational innovation, as not being new concepts, they become increasingly important, given the aforementioned.

Referential frame

Creativity

Creativity is defined as the faculty to create or the creating capacity; produce something from scratch, or establishing, founding, introducing something for the first time, doing it or give life to it, according to the Spanish Royal Academy Dictionary (Diccionario de la Real Academia Española, RAE, 2014). These meanings permit to understand this quality as intrinsic to human species, which can be practiced in any of its multiple activities and dimensions of life. Additionally, this attribute has allowed humankind, along history, to evolve cognitively, to develop and progress in the complex

2- IVE is a Chilean acronym which stands for Índice de Vulnerabilidad Escolar (School Vulnerability Rate), through which Chilean Ministry of Education categorizes the different types of education facilities, and whose classification is broken down in municipal (public), private subsidized and private paid.

sociocultural and technological system that has been built in our time, in a diachronic process, which continues its evolution at an accelerated pace, with unimagined limits, and whose consequences are still unpredictable. All this has been established under the principles of creativity and cooperation as fundamental factors so that humankind could survive, and, afterwards, to go up and position as the dominant species[3] on earth (HARARI, 2015). Precisely, as each individual human being is a creative entity (COLOM; TOURIÑÁN, 2012), such capacity has been defined according to a great variety of notions in which reflection, philosophy or psychology and science can be circumscribed, as well as technology, economy – whose speech and lexicon are currently dominating *de facto* every area, including education, arts and culture.

Amabile (1996, *apud* FERNÁNDEZ *et al*., 2012), indicates that innovation arises from creative ideas, so the engine in people and human teams of all creativity "[...] is the starting point of any innovative process, although [...]creativity is necessary but not enough for innovation to be accomplished" (p. 25). Creating, in the opinion of Marina and Marina (2013) is intentionally producing valuable news, from imagination[4], which is the genesis of this process.

Creativity then, as posed by De la Torre (1991), has changed from being a more psychological phenomenon, an individual attribute, to being a fact and social asset. It seems that, in every organization, for its validation and success, it is needed as an undeniable and central element, with the contribution everyone can make; such idea has been installed even as if it were a mantra (FERNÁNDEZ *et al*., 2012). Undoubtedly, to make this creativity effective, it is indispensable to count with the conditions to propitiate it. Marina and Marina (2013) indicate that, in practice, there are two fundamental environments for creativity to be stimulated so it eventually flows: home and school.

In education, which is the base of the immersion and social consolidation of human beings, today it is normal to talk about creativity as an element necessary to innovate and, consequently, to succeed in the teaching-learning process. That is why the true creative capacity, to be effective, needs several stakeholders in that synergic objective which implies not only in a technical concept, but also praxis, which can involve a community and its educational center. That is what Casado, Llamas and López (2015) pose, when they mention that such process must be encouraged and worked from early age.

Another essential factor, which influences creativity and the possibility of being put into practice, is that ideal conditions for it are generated. These happen not only for a determined space which has environmental conditions, but rather by the social climate, guided by the affection and trust. Adaptability of the educational process to social changes, which are today marked by the digital irruption in every field – along with automation and robotization and, as the background, globalization – represents

3- In ancient times, such quality was exclusive for Gods and remarkable and extraordinary entities (CSIKSZENTMIHALYI, 1998). Slowly, that belief mutated in the process of individualization which characterizes current society, whose main trait is individualistic anthropocentrism.

4- Greene (2005) claims that imagination is an element which decisively impacts in the community, so it stop prioritizing the results of performance in the school, both in teachers and students, in order to get a more reflective an inclusive education.

the biggest challenge for educational institutions and for teachers in this critical topic in the so called knowledge-based society (COLOM; TOURIÑÁN, 2012).

While many creative processes are implemented in the classroom, not all survive in time, as many times they depend on the effort of a teacher in particular (ACOSTA, 2018). Bauman (2017), when analyzing the current status of education in postmodern society, explains that, despite the restless spirit of the majority of teachers, students are seen and deemed as "[...] human resource, raw material in function of the demands of the market" (GREENE, 2005, p. 57). People are not always completely educated or protected, due to the barriers and artificial divisions created by human beings, which inevitably ends up in their exclusion with the consequential social inequities (BAUMAN, 2017).

If creativity, then, transformed into educational and pedagogical innovation, reaches structures, systems and upper tiers, it will be an important and concrete contribution to the different realities that comprise the social fabric of a society complete with the complexities we face today, as it occurs in the countries which have outstanding educational systems. In Chile, indeed, creativity is present in the spirit of the General Education Act (Ley General de Educación)[5] (CHILE, 2009), both in general objectives as well in the specific purposes of each level. Thus, this task already implies, for Marín and De la Torre (1991), systematizing the creative stimulation in education starting in three dimensions: the school curriculum, the student and the teacher with different capacities to be developed in the disciplines, through strategies implemented by the latter, in order to respond to the world's current challenges.

Educational and pedagogical innovation

Chilean Ministry of Education's Innovation Center points out that innovation is a planned process that is to be systematically promoted and developed, as a social and collaborative expression of creativity, as education has today should not only aim to forming new generations, but also enhance new vision, changes, and the acceptance of risks (KLIMENCO, 2008). Thus, the notion of innovation is related to three uses: creating something unknown, the idea that what has been created is perceived as new and, in the third place, the assimilation of that as something novel (MARGALEF; ARENAS, 2006).

According to Margalef and Arenas (2006), innovation is characterized because (1) it is an idea which is perceived and accepted as new by someone, which also implies a change that seeks the improvement of an educational practice; (2) it is a deliberate effort planned and seeking qualitative improvement of the educational processes; (3) it involves learning for those who participate actively in the process of innovation; and (4) it is related with economic, social and ideological interests, which influence in every innovation process.

5 - Casas Carbajo (2000) mentions the legal organic presence of creativity in Spain, starting in the 70's in 20th century. In Chile, General Education Act (CHILE, 2009) embodies creativity in many of its paragraphs, generically in Art. 5, up to objectives at all levels: preschool, primary, high school and higher education.

For Barraza (2005), innovation must be measured by three conditions that supported the above:

1. Change must be conscious and wanted, so it becomes the result of a decided and deliberate will.

2. Change is the result of a process, with established phases and variable times.

3. Change does not modify substantially the professional practice, this is, change is within the boundaries admitted by law and the established *status quo*.

Meanwhile, Blanco and Messina (2000) claim that one of the most important problems with respect to innovation is the lack of a well-developed theoretical framework which allows to identify what innovating is or not in the educational scope. In other words, innovation is installed in the discourse, lacking of clear guidelines about how to face it and how is sustained. Marcelo, Mayor and Gallego (2010) highlight the plurality of cases in which innovation is established, indicating, in the first place, that schools, are in general very little innovative institutions.

Further than this, Mayorga and Pascual (2019) indicate that "[...] an educational innovation can influence in the practice of educational stakeholders and in their value-based, symbolic structures" (p. 3). These authors indicate that these innovations have important effects in the educational community, "[...] transforming practices, beliefs and values, producing many times unexpected impacts" (p. 15).

> When I refer to innovation, I do it associating it to teaching practices that alter, in a way the system of unidirectional relations which typifies a traditional class: this is, that centered exclusively in the transmission of information, issued by the teacher, a handout, or through a more sophisticated technologic medium as the one produced during virtual communication. I n n o vation in the classroom always involves a break with the didactic style imposed by positivist epistemology, one which speaks about finished knowledge, leading to a transference-based didactics that, ruled by technical rationality, minimizes the student to a subject destined to receive it passively. (LUCARELLI, 2004, p. 512).

But independent to the characteristics attributed to educational innovation, a problem detected was the lack of precision for the term. In fact, "[...] some authors simply use innovation, while others use terms such as educational innovations, innovation in education, educational innovation or innovations with educational impact, educational innovation being the most commonly used" (BLANCO, 2000, p. 43).

Likewise, it has been observed the use of terms educational innovation and pedagogical innovation indistinctly. Thesaurus by UNESCO (2019) indicates in a very general way that there are distinctions between these two terms: educational innovation is referred to as changes in objectives, contents or methods, starting from an experimental situation; whereas pedagogical innovation refers to the teaching methods.

In summary, it is important to point out that innovation is associated to a historical moment, to the social and cultural characteristics of a place; since "[...] innovation is not aseptic nor neutral, as it is conditioned by political, social, cultural as well

as epistemological positions; in such a way that what innovating is for a person or group, is not for others" (BLANCO, 2000, p. 45).

Empirical results

Walder (2017) is who deepens in the importance of perception of higher education teachers about the impact pedagogical innovation has on learning, concluding that this reinvents the teaching practices and satisfies the teacher. In a recent study done by Mayorga and Pascual (2019), from an innovation project called Programa Interdisciplinario de Investigación Escolar, it is established that the main impact, beyond the learning of contents, is related to the opportunity that teachers and students find to create new identities and a positive impact el self-knowledge of students, as well as a better professional development from teachers. In addition, authors highlight the strengthening of the sense of community among its members. In spite of the positive results, it is possible to affirm that innovating pedagogically is not easy, as "[...] there is not a unique model, but multiple innovations which are culturally determined" (BLANCO; MESSINA, 2000, p. 12).

Li and Li (2019), on their part, explored the perception preschool teachers have in China about four dimensions of pedagogical creativity: "1. Namely Possibility Thinking; 2. Interpersonal exchange; 3. Self-initiated Pursuit and 4. Teacher-oriented Pursuit"[6] (p.17). All of them are considered very important. However, there is a divergence between what teachers believe and what they report in their pedagogical practice, being the size of the class factor the most influential in this difference. Finally, the authors of the investigation underline that this would become important when facing creative educational reforms. In turn, Altopelli and Murillo (2010) claim that the difficulties of the environment can obstruct the way to improvement in the teaching practices of many schools, but can work as the engine for sustainable organizational changes.

When asked to indicate what types of schools are more prone to educational innovation, it can be inferred from some studies that the most innovative centers are characterized by reflecting collaboratively, they have clear rules and guidelines for group functioning and they manage time in a better way (ARAMENDI, 2010a; 2010b). On the other hand, García, Mayor and Gallego (2010) conclude that the public schools are more enthusiastic at making profound changes in their teaching-learning methodologies, mainly at child, primary and secondary levels. Also, they emphasize that teachers' ages influence in their willingness to innovate; where schools that innovate the most have teachers whose average working time ranges from 6 to 10 years, from which we can say that they are an experienced academic group. Authors also mention that teachers of these schools are willing to take risks and carry out their initiatives. Another characteristic of these educational centers is leadership seen by the managing team, authorities that are totally involved in the new initiatives, all which allow for a good working and cooperative environment. Meanwhile, Marcelo, Mayor and Gallego (2010) mention the

6- In the original: "1. Namely possibility thinking, 2. Interpersonal exchange, 3. Self-initiated pursuit and 4. Teacher- oriented pursuit". The translation was made by the authors of this article.

heterogeneity of educational innovative projects in Spain, where 14.8% is focused on Language and Literature projects, a 10.7% to improve school co-existance, a 9.3% to updates in the use of new technologies and a 9.8% to strengthening values aimed to care for and respect the environment. Regarding Latin America, within the scope of the kinds of educational innovations, a study made by Blanco and Messina (2000) groups them in two areas: technical-pedagogical (school program, methodology, materials) and political-administrative. Starting on the foregoing, innovations can be classified in governmental and non-governmental. In the case of Andes countries, 107 innovative plans were applied, which corresponds to 55% of the total; in countries of the Southern Cone, 52 projects, i.e., 27%; and finally, Mexico and the Caribbean, with 34 programs, which represent 18%.

Materials and methods

The investigation had the purpose of identifying the perceptions and experiences about creativity, educational and pedagogical innovation, as well as the experiences teachers have in the Didactics for the Methodological Work in the Classroom Master's Degree Program, in the context of the first subject called *Pedagogical Innovation: Didactic Models and Teaching Updating* of the Education School – Campus Los Ángeles of Universidad de Concepción.

The investigation had a quantitative approach with a non-experimental cross-sectional with a descriptive approach. For the data collection, a structured open-question questionnaire was used (VIEYTES, 2004). Each participant delivered their consent at the time of answering it.

Participants

The group of participants in this investigation are all professionals enrolled in the Master's Degree Program: first cohort corresponding to 2018, and second cohort, 2019. The total group was comprised of 25 professionals who work as teachers in the educational field.

Regarding both cohorts, the origin of the participants variable corresponds to Ñuble and Biobío regions. With respect to the academic training, 4 of them are high-school teachers, 11 work in primary education, 6 are from special education, 2 are from preschool education, 1 is an Engineering teacher and 1 is a psychologist.

As for their specialization or majors, they are the following: 6 have a major in Language And Communication; 3 have a major in Social Sciences and History; 4 have majors in Mental Deficiency; 2 have a major in English; 2 in Natural Science and Biology; 1 has a major in the First Cycle; 1 has a major in Business Administration; 1 has a major in Physical Education; 1 with a major in Music and 4 have no major. The average years of experience for both cohorts is 7.85 years; therefore, it is a relatively young group with respect to their work experience.

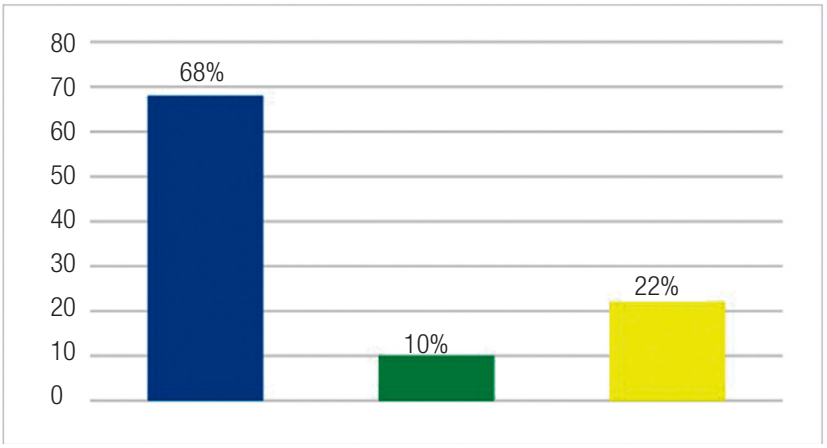
Data collection instrument and analysis procedures

For the data collection, a questionnaire with open questions was used, which was validated by an expert committee. The instrument was comprised by eleven questions related to creativity, pedagogical innovation and educational innovation, and their experiences in the classroom with respect to these topics. For the sociodemographic data, the program files were consulted. Regarding the data obtained, the percent analysis was done related to the obtained answers to the most important questions, coherent with the purposes of the study.

Description and analysis of the data

The collected data are described and analyzed below, considering the order of the concepts reviewed: creativity, pedagogical innovation and educational innovation.

Graph 1- Presence of Creativity in School Activities



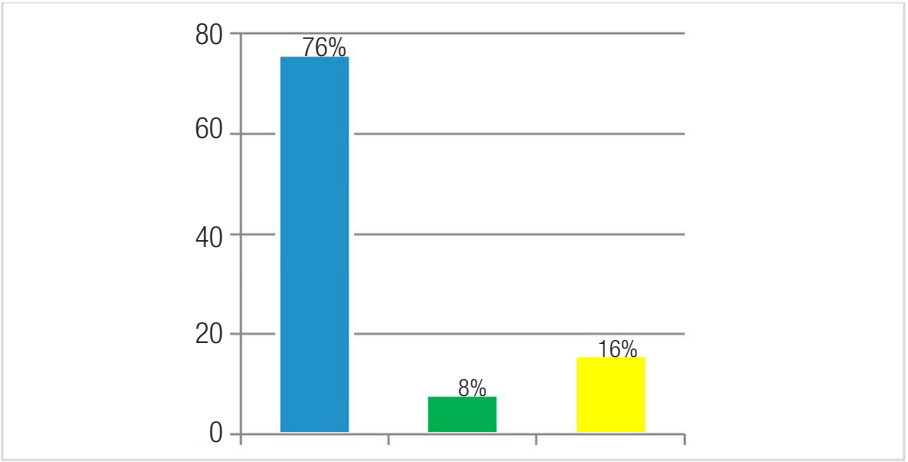
Source: Data from the research.

In Graph 1, with respect to the relative question if there are currently signs of creativity and new ways to do educational activities, the results obtained show that 68% of teachers expressed that they observe a high rate of creativity and new ways to develop activities in their educational contexts. However, 22 % of teachers did not answer this question, which implies that a significant percent of participants is not aware or does not even have an opinion about this trait. In turn, 10 % expresses that they have no evidence about creative work in the education centers. Both percentages allow us to infer that creativity is not a totally visible for teachers in educational centers. The percent that represents 68 % of those who observe and practice creativity match what Casado (2015).

Regarding the meaning of the term Pedagogical Innovation, 100 % of participating teachers have clarity about the concept, stating it refers to a significant in the teaching work,

transcending in time. This relates to the transforming processes in the classroom, focused on the improvement of educational processes developed there, and at the same time with the methodological change in the teaching-learning process, emphasizing the importance this dimension has in the teaching practice. Pedagogical innovation, then, implies the change in the habitual practices by more flexible dynamics, where students are the genuine protagonists and the teachers are basically guides in the learning. It also implies considering the interest of students, their histories and particularities (EDUCACIÓN 2020, 2018).

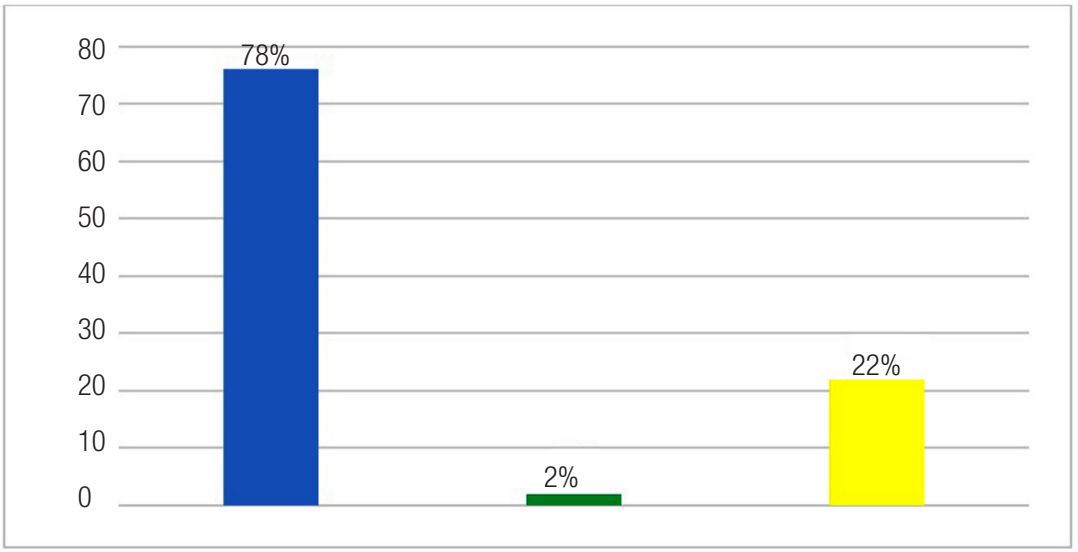
Graph 2 - Autonomy for Innovative Work



Source: Data from the research.

With respect to the question about the autonomy for the development of innovative work, Graph 2 shows that 76% of teachers affirm to have autonomy to develop methodological innovation in the classroom, because managing teams have been visionary, allowing them to act with a certain degree of flexibility. On the other hand, 8% of teachers answers that they have no autonomy to develop methodological innovation in the classroom. 16 % does not respond nor justifies about this question. Both percentages presuppose the absence of this trait to introduce changes in the pedagogical practices. In this respect, it must be noted that the Ministry of Education proposes to schools a guide which allows, from the managing teams, to help pedagogical innovation through the Design Thinking methodology (CHILE, 2009), in order to identify the possibilities for pedagogical innovation which normally arise not from brilliant ideas under optimal conditions, but through the identification of unsolved problems which require solutions not seen before. In this field, for example, it is outstanding the experience of San Nicolás High School in Ñuble region, Chile, which has raised as a paradigm of good academic results, despite its extremely vulnerable condition and low previous performance results, after educational curricular redesign which allowed pedagogical innovation to make it outstanding and become a reference with an important presence of arts in the classroom (CHILE, 2015).

Graph 3 - Positive Attitude towards Innovative Work



Source: Data from the research.

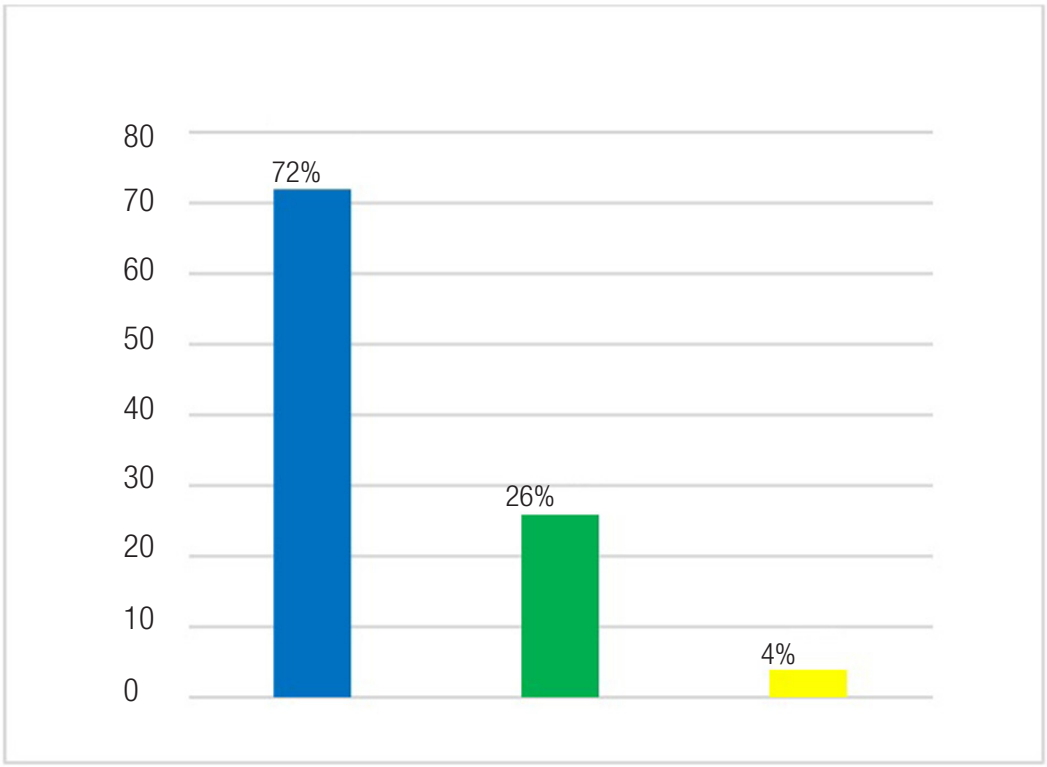
With respect to the question about what positive aspects are present in the educational institution where they work in terms of methodology, Graph 3 shows in the first place that 76% answers that in their institution there are positive aspects regarding methodological innovation in the classroom work. This percentage implies that teachers perceive that in their institution there are adequate conditions to develop innovation in their diverse school activities as a support to managing administration, freedom to innovate, independent to the school curriculum, support with concrete and technological material (laboratories), among others. Only el 2% of teachers answer that there are no positive aspects regarding methodological innovation. Finally, a not minor percentage (22 %) does not answer the question.

In this topic, it must be noted the study by Díaz-Barriga (2010), who points out in a critical way how responsibility of innovation in many cases is endorsed to the teacher, not always considering the conditions of the environment – socioeconomic and cultural – in which he/she works; consequently, having the willingness for methodological innovation appears as a positive element, as long as it also exists the possibility to carry them out, and above all, the willingness of the managing team.

Regarding the question if they perceive a commitment by change in the pedagogical innovation by teachers, graph n° 4 shows that 72 % of teachers showed a high commitment with change to innovate in the school, which is demonstrated with the incorporation of collaborative work, reflecting processes, attendance to training courses, new strategies as games and the implementation of new IT. In this case, the responsibility and predisposition to innovation falls in each teacher, as he/she can promote and propagate the enthusiasm among his/her colleagues. Tejada (1995) points out certain characteristics that each teacher

should have in this respect, starting precisely with the innovative spirit, along with other capacities such as flexibility, teamwork capabilities, technological knowledge, believing in his/her profession and having a sense of responsibility and commitment.

Graph 4 - Commitment with Innovative Change



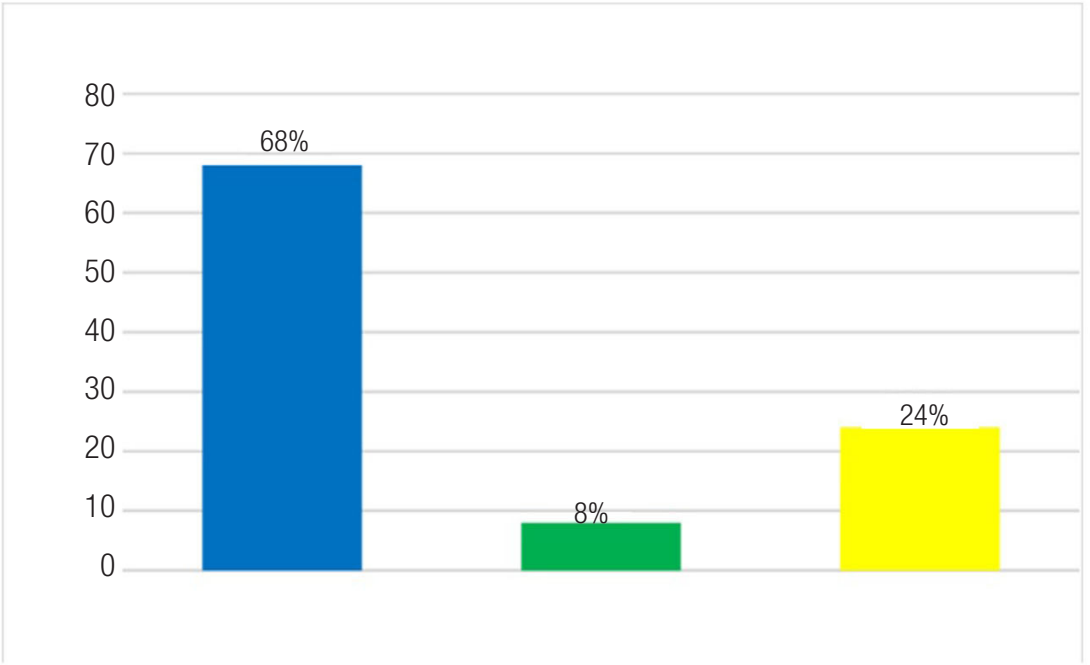
Source: Data from the research.

26 % expressed that they don't perceive commitment in certain teachers. When asked about reasons, they claim resistance to change, the effort transformations imply, teachers' age, successful results with traditional methodologies and reluctance (by unawareness or mistrust) to the use of IT. 4% does not answer the question.

With respect to the question if he/she knows any level of participation of other actors: parents and community in terms of pedagogical innovation, Graph 5 shows that 68% of teachers considers to be aware there are other actors contributing to pedagogical innovation in their educational institution, such as Parent Centers (CGPA), student councils, learning communities, extracurricular workshops and student committees. This percent is consistent with studies such as that by Sánchez (2016), which reveals that learning communities can influence in pedagogical innovation with elements such as reflection, deprivatization of the class, a focus on the students' learning, collaboration and guidelines

and values shared which impact if they establish in a good way an improvement in the learning processes, from these experiences. An important percent of teachers participating in this study understand and values this bond between innovation and the incorporation of other actors that can participate of the teaching-learning process, including students and their environment, the school community, as well as openness of the classroom – which had previously been an intimate and hermetic space – which indicates a good prospect respect to the deepening of pedagogical innovation. Notwithstanding this answer, the levels of participation of these instances are varied, as they depend on the characteristics and policies of the educational center and their holders, which in many cases respond to religious guidelines of different orientations or to corporate, business, ideological spheres, which expand this dimension.

Graph 5 - Participation of Community in Pedagogical Innovations



Source: Data from the research.

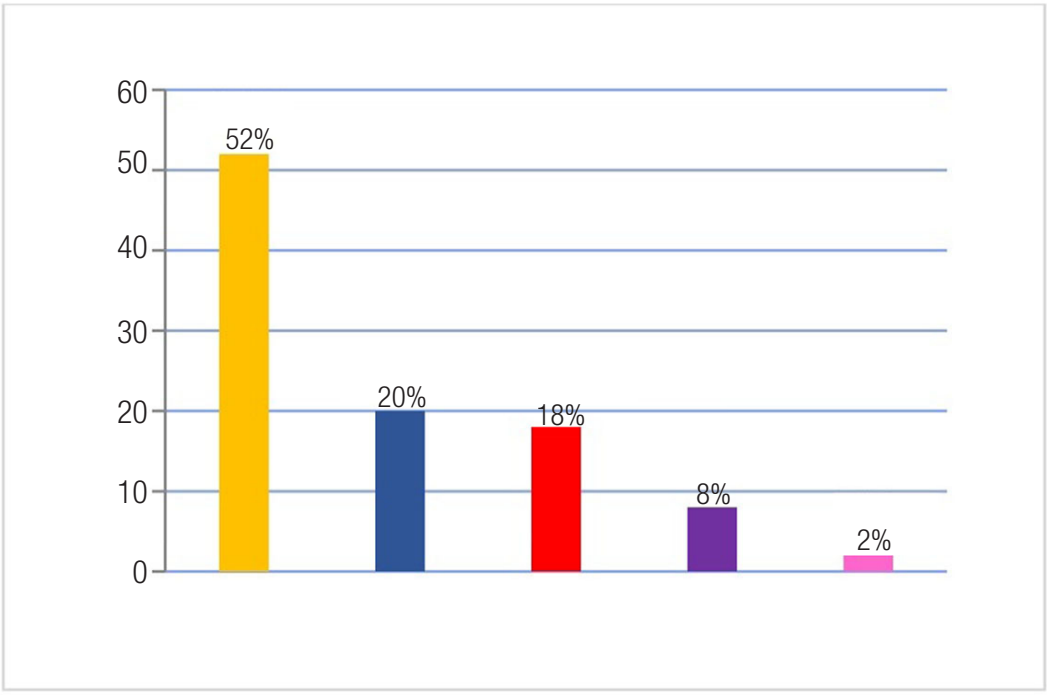
On their part, 8% of teachers claimed that they didn't know the different external stakeholders who support the innovation activities in the school process and 24% – quite considerable – did not answer the question, which can be understood as this factor simply not being visible or deemed insignificant.

Relating to the identification of two school situations which are associated to educational innovation, there is a great variety of answers in which the methodological and didactic aspects predominate over who actually understand educational innovation

correctly, which is established at institutional, educational community or system level. Indeed, educational innovation must be worked to be incorporated to the degree programs of the institution. However, in most cases, as it appears in the answers of the surveyed, they are isolated activities, which are not part of a planning in order to fulfill formative objectives (ZABALZA, 2003-2004). UNESCO states that

> [...] structures and micropolitical processes are critical for change and innovation, as well as stability and preservation of school centers. Educational research shows that both the converging and divergent processes, as well as the structures shape the political 'state' of a school organization". (2016, p. 24.).

Graph 6 - Innovations and Educational Improvement

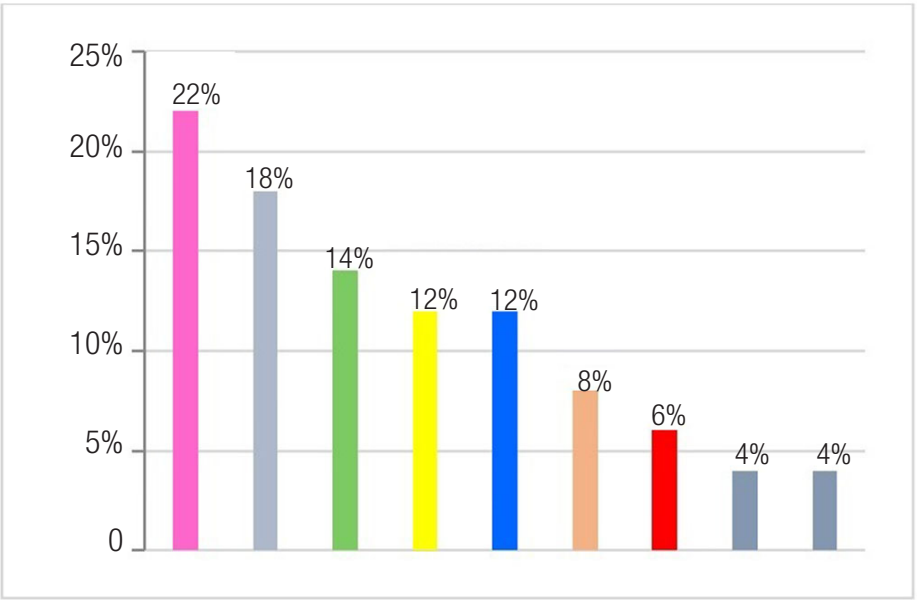


Source: Data from the research.

With respect to the question "what difference do you see between a simple methodological improvement and an educational improvement?", graph n° 6 shows that – in opinion of the participants – innovations contribute to the quality improvement, whereas simple methodological improvement is just a temporary modification. 52% argues that innovation includes new activities with new strategies characterized by being profound and sustainable in time, which implies that teachers are aware that one of the characteristics of innovation is its permanence, as it should be the result of a way to work adopted by the educational institution. Del Moral, Villalustre and Neira (2014) point this out in a study that evaluates the incorporation of IT as educational innovation,

emphasizing that this is not about solely incorporating technologies in the classroom, but in its didactic use to improve learning y, hence, its insertion in the school curriculum. Similarly, the results shown demonstrate that teachers are concerned about including in their school job educational situations that are both motivating and attractive for students. 20% claims that reflection is a distinctive trait in innovation, which is also indicated by Ortega (2014), who states that in an era of permanent changes, specialists in education are required, having the capacity to reflect on innovation, and innovating. Other 18% adds that innovating reinforces significant learnings. Finally, 8% of teachers argue that innovations are only transformations, without valuing them.

Graph 7- Professional Participation in Educational Innovation



Source: Data from the research

With respect to the participation as a professional teacher in educational innovation instances, graph nº 7 shows that the sum of the first eight categories (96%) indicates that the participation is heterogeneous in activities of this nature. These activities are: supporting activities with individual resources, talent shows for children with special needs (NEE in its Spanish acronym), reading-improving programs, theater in the classroom, story-telling, project methodologies, activities with the use of IT, participation in the organization of educational activities with the community, activities to foster collaborative and participative work, as well as school work supporting programs. This is important, as in this percent aspect many initiatives stand out, such as co-teaching, the support from guide teachers and the exchange of teachers in different grades, the creation of models of small and medium-size businesses (PYMEs), a small science laboratory, different ways for entrepreneurship and the application of new school evaluation systems. While all these

examples given by each surveyed teacher are remarkable, once again, it is necessary to emphasize that they must be incorporated as an permanent working strategy, since they are frequently left unfinished, without a reflection and/or following stage, whether it is of the strategy implemented, or the capacity of the institution to incorporate such changes, ending up with innovation interrupted and demotivated teachers (LÓPEZ et al., 2019). 4%, of teachers did not answer this question. On this point, Marcelo, Mayor and Gallego (2010), in their study of educational innovations in Spain, point out that the origin of changes in this topic is encouraged in a 42.6% by teachers, a 42.9% by needs shared by group and only in a 26.6% by the managing team, confirming their previously stated claim about how hardly innovative schools are.

With respect to the question that mentions the differences existing between an improvement in pedagogical innovation and an advancement in educational innovation, the results show a wide range of answers, indicating a certain difficulty to distinguish both concepts. There is no clarity in the similitudes and differences between both definitions. Some say that the distinction between both is temporary, others mention a difference related to methodological aspects. Only a minimum percentage can correctly distinguish both phenomena. Perhaps this confusion is explained, as it was previously mentioned, because studies take for granted that the concepts must be clearly differentiated per se, as terminology uses them indistinctly. It is emphasized, on the other hand, the research made by Mykhailyshyn and Kondur (2018), who begin their study by making this concept distinction:

> Es necesario distinguir entre los conceptos "innovaciones educativas" e "innovaciones en educación". La innovación en educación es un concepto más amplio que la innovación educativa. Incluyen innovaciones educativas, científicas y tecnológicas, infraestructurales, económicas, sociales, legales, administrativas y otras. Las innovaciones educativas se entienden como un procedimiento o método de actividad educativa que difiere significativamente de la práctica establecida y se utiliza para aumentar el nivel de eficiencia en un entorno competitivo. Las innovaciones educativas incluyen la innovación pedagógica, la innovación científica y metodológica, la innovación educativa y tecnológica[7]. (p. 9).

Referring to what the authors suggest, it is emphasized the need to establish a clear distinction between both concepts, as it becomes evident that, according to this study, teachers and educational centers ignore it.

Conclusions

The first concept analyzed in this study is creativity, from an educational point of view. It can be said, through the results obtained from the instrument applied in this study,

7- In the original: "It is necessary to distinguish between the concepts "educational innovations" and "innovations in education". Innovation in education is a broader concept than educational innovation. They include educational, scientific and technological, infrastructural, economic, social, legal, administrative and other innovations. Educational innovations are understood as a procedure or method of educational activity that differs significantly from established practice and is used to increase the level of efficiency in a competitive environment. Educational innovations include pedagogical innovation, scientific and methodological innovation, educational and technological innovation". Translated by the authors

that teachers expressed to have a high percentage of clarity with respect to this quality, of how it can be developed in school activities in the classroom and its impact on the teaching work and on the students.

With respect to autonomy and creativity, while they are recognized as necessary elements for work and innovation, and teachers claim to have both conditions to carry it out in the classroom, creativity is not perceived as a visible trait nor is completely rooted in school work in school centers. Creativity boosts innovation, but if it is not a systematically present element, the latter can be more an ideal discourse than a reality in the classrooms.

Another concept addressed is innovation, which according to the Ministry of Education in Chile, is defined as a planned process which seeks to promote and systematically develop social and collaborative expression in students, which is tremendously important in the current context, and highly encouraged for all the educational system. On the other hand, teachers who participated in this study also claim to have a clear notion of it, as well as having autonomy in the classroom to develop innovative activities with the application of especially creative methodologies.

In the study results, it is possible to establish that there is no clarity – among those who were consulted – about the differences between pedagogical innovation and educational innovation. It was possible to observe the indistinct use of both concepts, even though its importance is perceived in the classroom. Perhaps, this difficulty when making the difference between the two phenomena becomes complex because there isn't usually a relevant distinction in all the teachers' training process nor in educational institutions with respect to the definitions of pedagogy and education, as the former focuses its attention in the theory, and education centers in the practical aspects.

In the revision process of the knowledge corpus, it was possible to verify that right notion of what educational innovation is doesn't exist either, and that the boundaries between that one and pedagogical innovation are diffuse. Furthermore, in the bibliographical review indicates that there both terms are mentioned indistinctly. Hence, it becomes necessary to distinguish more accuracy and clarity these two concepts, due to their complexity and the extent of criteria with which is addressed, with the help of theoretical and empirical examples, but above all, of the educational institutions.

With respect to this point, the study claims that there must be a balance between the educational innovation, autonomy and creativity, as in our opinion they are not separate elements, but intrinsic to each other. Educational innovation will be the application of an idea and structural policy which produces changes and generates a better school training for students, which in turn will allow to reach pedagogical innovation conceived as a strategy that school seeks in the transformation of educational practices in the classroom starting from intentional and explicit reorganization in order to reach creativity. It can be concluded that the lack of innovation in the educational system can partially be, among multiple factors, due to this difficulty which exists when distinguishing these fundamental meanings, as in them can be seen and are established the responsibilities concerning different structures of the system, from the broadest and highest to those related to teaching and pedagogical work in the classroom.

Finally, it must be said that innovation with respect to school centers could be influence by religious, political and business ideologies of its authorities, which can encourage, incentivize or restrict teachers' innovating initiatives. That's why innovation should continue to be boosted in concrete ways in classrooms, together with creativity.

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Received on May 23, 2020
Reviewed on: October 05, 2020
Approved on: November 12, 2020

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