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Artículos científicos

La formación de investigadores para el desarrollo económico de México

Training of Researchers for the Economic Development of Mexico

A formação de pesquisadores para o desenvolvimento econômico do México

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Resumen

Este trabajo de investigación estudia la evolución del fenómeno educativo en México con el propósito de encontrar caminos para el desarrollo. Durante la primera parte del siglo XX, la educación se estableció fundamentalmente para formar a las generaciones jóvenes, darles herramientas para ejercer profesiones liberales como la contabilidad, la ingeniería civil y la medicina, entre otras. El problema es que el sector educativo, desde esos primeros años, no mostró esfuerzos en la formación de investigadores. Fue hasta los años 70 cuando la reforma educativa mostró impulso en la educación, pero solo en la parte de la docencia; se olvidó de la preparación de investigadores para atender los progresos del mundo en materia de tecnología e innovación. Al final de este texto se propone hacer una modificación a los programas de estudio, desde la primaria hasta la licenciatura, para integrar la investigación como un medio que impulse el progreso de la sociedad mexicana. Con base en los trabajos de Benjamín Bloom y Jean Piaget, se formula una propuesta taxonómica que destaca las



funciones cognitivas convenientes a desarrollar entre los estudiantes de todos los niveles de la educación institucionalizada para formar a los investigadores que se encuentren vocacionalmente orientados a esta actividad.

Palabras clave: conocimiento, desarrollo, educación, formación profesional.

Abstract

This research work studies the evolution of the educational phenomenon in Mexico with the purpose of finding paths for development. During the first part of the 20th century, education was established fundamentally to train the younger generations, giving them tools to exercise liberal professions such as accounting, civil engineering, and medicine, among others. The problem is that the education sector, since those early years, did not make any effort to train researchers. It was not until the 70's when the educational reform showed impulse in education, but only in the teaching part; it forgot about the preparation of researchers to meet the world's progress in technology and innovation. At the end of this text, it is proposed to modify the study programs, from elementary school to bachelor's degree, to integrate research to promote the progress of Mexican society. Based on the works of Benjamin Bloom and Jean Piaget, a taxonomic proposal is formulated that highlights the cognitive functions that should be developed among students at all levels of institutionalized education to train researchers who are vocationally oriented to this activity.

Keywords: knowledge, development, education, vocational training.

Resumo

Este trabalho de pesquisa estuda a evolução do fenômeno educacional no México com o objetivo de encontrar caminhos para o desenvolvimento. Durante a primeira parte do século XX, a educação foi estabelecida fundamentalmente para formar as novas gerações, dotá-las de ferramentas para o exercício de profissões liberais como contabilidade, engenharia civil e medicina, entre outras. O problema é que o setor educacional, desde aqueles primeiros anos, não mostrava esforços na formação de pesquisadores. Não foi até os anos 70 quando a reforma educacional mostrou impulso na educação, mas apenas na parte de ensino; esqueceu-se da preparação dos pesquisadores para atender ao progresso mundial em termos de tecnologia e inovação. No final deste texto, propõe-se fazer uma modificação nos programas de estudo, desde o ensino fundamental até a graduação, para integrar a pesquisa como meio

que promove o progresso da sociedade mexicana. Com base nos trabalhos de Benjamin Bloom e Jean Piaget, formula-se uma proposta taxonômica que destaca as funções cognitivas convenientes a serem desenvolvidas entre estudantes de todos os níveis de ensino institucionalizado para formar pesquisadores vocacionalmente orientados para esta atividade.

Palavras-chave: conhecimento, desenvolvimento, educação, formação profissional.

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Introduction

Education is fundamental and transcendental for social evolution, and in particular it is the indispensable and corresponding companion of all modes of production for development, since it is an element set in motion by social dynamics. Therefore, this social function requires updating its relationships with the rest of the complementary functions, as well as its objectives, instruments and the design of goals to build the educational process towards the imagined future.

The case studied here presents a deficiency observed in sclerosis¹ of the educational function. The problem requires a great effort of analysis to propose ways and aspects of support for the transformation of the educational sector based on the philosophy of education, considering the interrelation of this discipline and its importance in the totality of social evolution, in order to recover the opportunities lost during the period of the 20th century. In the Mexican Constitution promulgated on February 5, 1917, education was decreed as official, secular and free, specifically stipulated in article 3. In 1920, with José Vasconcelos as rector of the National University of Mexico, the establishment of education with volunteers and “Cultural missions” were established, whose goal was to teach, in addition to arts, trades, agriculture and hygiene to children and adults in the communities, to read and write. At that time, it is estimated that 70% of the population was illiterate (Guerrero, 2018). At that time, it did not lay the foundations of education for research. This circumstance was not considered, or at least not identified, in the elaboration and application of the educational reform of the 70s. Nor has it been considered in the proposals for education in later stages.

¹ Dificultad que presenta un colectivo o grupo de personas para evolucionar o adaptarse a una situación nueva.

Currently, strategies recently proposed by the National Council of Science and Technology (Conacyt) that promote research processes for the solution of national problems are recognized, where the intention to find ways to support the education sector in this 21st century is manifested. In particular, and of great importance, is the capacity to generate research, which was not developed under specific programs or initiatives. Only historical and descriptive knowledge was available, but without the development of skills to understand the causes of the phenomena or to generate alternatives for their use. Instead, what we had was the copying or adoption of technologies developed outside of the target society, without technology transfer: only the adoption of instruments and equipment for its use, without understanding its operation or having the skills to maintain or improve them; and even with the prohibition, by international agreements, for the creation of these products or equipment.

Given the above, this research reviews the link between the training of researchers and teaching-learning from basic education, as well as the relevance of training in methods to determine how and what to investigate, and finally how to transmit that knowledge in the classroom.

In a literature review for the construction of the state of the art, the research that has been done in Mexico during the period from 2012 to 2021 was searched in the following databases: Springer Open, Redalyc, Scielo México, Scopus, Scimedirect, Google Academic.

The first database where it was searched was Google Scholar. The keywords can be seen in Table 1.

Table 1. Literature review for the construction of the state of the art

Base de datos: Google Académico	
Intervalo: 2012 -2021	
Palabras clave: formación de investigadores	Número de artículos
Año 2022	15 700
Año 2021	15 300
Año 2018	25 500
2012-2017	28 700

Source: Own elaboration based on the Google Scholar digital platform

It is noteworthy that, as a result of this research, it was found that Lozoya and Cortés (2022) carried out their own exhaustive review of articles published between 2012-2021 that addressed the training of researchers, specifically in the educational area. Unlike those who subscribe to this article, the search was based on the training of researchers in any area for the economic development of the country.

However, a search was also carried out with the keywords in English investigator and training in higher education. The results are observed in table 2.

Table 2. Literature review for the construction of the state of the art

Intervalo: 2015 -2021	
Palabras clave: <i>investigator, training in higher education</i>	
Base de datos	Número de artículos
Science Direct	19 762
Springer Open	528
Scopus	10
Redalyc	503 652
Scielo México	632

Source: Own elaboration based on the Elsevier digital platforms and the digital library of the National Polytechnic Institute (IPN)

All the articles that dealt with the training of researchers from topics far from the one addressed here were discarded. In the works that were considered, and that are cited in this article, on the contrary, coincidences were found both regarding positions and approaches.

Among these studies is that of Izquierdo (2006), who carried out research at the Autonomous University of the State of Mexico (UAEM) and found that the majority of

students who ventured into research did so mainly due to the support economic grants by institutions such as Conacyt; this in the absence of employment, since obtaining a scholarship in postgraduate studies was the most viable option to sustain themselves.

Precisely because of the above, the problem addressed by this research work is associated with the absence of research processes for the production of goods and services that improve the living conditions of society in the national environment.

Regarding the importance of training researchers at the beginning of their education, Moreno argues:

What happens in the training processes of the students of a doctoral program cannot be explained only as a consequence of the timely completion of the tasks that correspond to each one of the participants; nor as a mere reflection of the relevance of the curricular design or the characteristics of the academic staff and the support infrastructure. What configures the training process of each student and explains, where appropriate, the level of quality of the achievements that he achieves in it, is to a large extent the way in which he lives and articulates the conditions in which he participates in the doctoral program. , as well as the conditions of the institution that offers it (2011, p. 62).

When reviewing the bibliography used in schools of all levels, which coincides to a large extent with that used since the formation of the large higher-level educational institutions, installed during the immediate period after the Mexican Revolution, including the nationalization of the oil industry, with the exception of various new textbooks that were incorporated into the libraries of the main educational institutions, it is possible to observe that the analysis of scientific elements continued based on interpretations about the usefulness of the study programs of the original disciplines.

From its formation to this day, the National Autonomous University of Mexico (UNAM) and the IPN have maintained the development pattern with which they began, following the teachings of graduates incorporated into the faculty itself, subject this process to inbreeding. education, incorporating graduates as rectors of the labor process, as a process of employees for the education of their own graduates, preserving the transmitted trends, whose bibliographic bases and administrative trends were first established in the so-called liberal careers, of which accounting, law, civil engineering and medicine stand out, which allowed graduates to promote the installation of offices or clinics for community care, in a

dispersed, individualized way, without new actions. The prevailing premise was that having a degree would guarantee jobs and the opportunity to start your own business to live better.

That was the model that was installed during the period between the world wars and the end of the so-called Mexican miracle, where economic growth reached an annual average of 6.5%, while the population grew 3% annually, for which reason observed real annual growth equal to that difference. This model was surpassed by the advancement of education in other countries, which is why society has sought to update itself by copying procedures and innovations in other latitudes, whose philosophy is not that of the national culture. On the other hand, some individuals with economic privileges have emigrated in search of better jobs and opportunities for their professional training, as well as educational institutions that, being more related to the receiving country's own system, are unrelated to the training needed by the population of the country of origin. "The training of researchers in the contemporary world has historically been conditioned by two variables: the traditions of university education, and the type of science, research and development (R&D) policy promoted by the Government" (Rivas, 2004, p. 90).

The result in sight is that these emigrants for education prepare and finally acquire the skills required by the receiving country and, therefore, stay there, becoming a labor force in favor of the place that received them and that provided them with education, thanks to which they obtain a better standard of living. An exemplary case is that of Mario Molina, an engineer who won the Nobel Prize for having contributed to identifying the gases that destroy the ozone layer, who could be useful for science in other latitudes, but useless in Mexico, except as descriptive information. As already argued (Ferry, 1997, as cited in Dondo, 2004): "Training is different from teaching and learning. Teaching and learning can enter into training, but training consists of finding ways to fulfill certain tasks to exercise a trade or profession" (p. 1). Students do not always have experience in the academic construction of a thesis; in many cases they learn to investigate while building it.

Therefore, the objective of this research is to make a critical analysis of the training of researchers and the teaching activity of those who have in their hands the future of Mexican society, the training of young people.

Training goes beyond carrying out an activity:

There are three conditions to carry out this work on oneself: conditions of place, time and relationship with reality. This training can only be done in the places provided for that purpose. The teacher who teaches classes works for the students. It is not formed. The experience of professional work cannot be formative for the one who carries it out, unless he finds the means to go back, to review what he has done, to make a reflective balance" (Ferry, 1997, como se citó en Dondo, 2004, p. 1).

Materials and methods

The logical and historical method allows to explain the real trajectory of the phenomena and events of the educational system under an analysis of logic, the general laws of operation and the development of the phenomenon. One of the biggest problems that national education faces, observed in its entirety, is the knowledge acquired by the youth population and its lack of connection with the objectives of future education: creativity, entrepreneurship and sociocultural development.

This problem finds its main obstacle in that the educational system has not resolved the link between the dissemination and diffusion of knowledge with the production processes and the creation of goods and services. On the contrary, what is observed is little economic growth, particularly since the end of the 1970s and throughout the neoliberal period, from the 1980s to the first decades of the 21st century, compared to the period postwar. According to Lloyd, with the intention of improving the academic productivity of teachers, the new public management approach was launched, which is characterized by having an emphasis on accountability. "The approach goes hand in hand with the neoliberal policies promoted by the United States and international organizations, such as the World Bank and the International Monetary Fund" (2018, p. 4).

The logic of new public management is a trend in public administration that first emerged in Anglo-Saxon countries in the 1980s and later spread to much of the world. As already said, it is characterized by estimating to a great extent the evaluation schemes.

In the educational sector, attempts were made to adapt the creation and production process based on the knowledge of the educational sector. The closest thing to this objective was the creation of technical secondary schools, the National College of Technical Professional Education (Conalep) and the attempts of some universities to include the school-industry system, through which students spent a period internships in the companies

that accommodated them, in addition to building new facilities for student care, whose demand in terms of enrollment was increasingly higher, in such a way that the universities were overwhelmed and more spaces had to be created, but without having more teachers and without training programs for them, and if they did, there was a need to serve more groups per educational unit, the which was greater in its administrative aspect than in its educational need.

In this briefly stated environment, the main problem that was being forgotten was that of research as the only instrument for creativity and the productivity of goods and services to improve the living conditions of society and the socio-cultural aspects of well-being.

The Strategic National Programs (Pronaces) were the spearhead of the initiative for research on specific national problems that require urgent attention, as well as comprehensive solutions from a scientific analysis that explains the origin of the problem and includes alternatives that involve the integral social sector, the State, society, the educational sector, the research community, both from the factual and social sciences, in the short, medium and long term, always considering that any impulse for social change is oriented towards creation of capacities for national development that remains valid in the long term.

It is necessary to propose the National Problems learning units in the enrollment of undergraduate level programs and Research Methodology to boost the capacity of students from high school to doctorates. In the doctorate, it is necessary to start with a holistic subject that includes national problems for their analysis and attention.

As mentioned above, young people with a higher educational level tend to migrate to states or countries that do correspond monetarily to that level of training, and they tend to go on to attend to the problems of that country, in the case of those who decide to emigrate. and stay in another nation, while those who reintegrate after a training migration return to Mexican society enjoying a prestige formed by their gallantry and audacity, some improving their income in the teaching community and receiving scholarships, for the belief that this acquired training is better for solving the problems of Mexican society. Ortiz argues the following:

If the practices and experiences acquired in the training processes as researchers help to acquire skills, competencies and abilities to know how to problematize, select the most appropriate methods, the management capacity, the administration of scientific resources and obtain a greater impact on the results, all this will contribute globally to improving the scientific competitiveness of researchers and research teams (2010, p. 14).

This disquisition is not a reason for criticism or longing, but only a description of a fact that makes migrants return with knowledge and ideologies alien to national conditions, capacities and needs. These migrants, upon their return, have personal successes, but, in general, there are no known contributions to the training of researchers in Mexico. It is even known of researchers trained outside of Mexico, even more, of some former presidents of Mexico, former secretaries and former undersecretaries who have left the country to become employees of transnational companies, where they provide useful knowledge for foreign investment, but their capacities are scarcely recognized to contribute to national growth and development after their period as officials.

This has meant that at present more than 15% of the world's population lives outside their country of origin, particularly the population of nations with less educational training than that of the countries visited.

Discussion

There is no clarity about the activities of a teacher compared to the activities of a researcher in the founding documents of institutions such as UNAM, IPN or the Universidad Autónoma Metropolitana (UAM), that is, it is not clear that the hired professor will dedicate himself to the chair and also to research. A review of the study programs of the main institutions was carried out, and although the functions of the teacher are explained in the organic laws, the same does not happen with those of the researcher; while, conversely, in those of the research centers the functions as a researcher are explained, but not those of a teacher and none uses the term teacher-researcher.

In the experience as teachers of those who write this, it has been observed that teachers know learning topics about the disciplines in which they have been trained and attend to the programs that the institutions propose so that young people learn what is considered useful for the exercise of your profession.

A researcher works based on topics and disciplines of interest to society, investigates the reasons for their usefulness (or inconvenience), argues that they are true or false, and makes improvements in the basic science or practical or technological part.

The contribution made in this paper is the definition of the research teacher. While a researcher knows basic science topics in practice and, therefore, can better explain them in the classroom, a research teacher is the one who teaches more effectively, due to his experience in the classroom and demonstrative capacity, due to his experience in the research environment, to validate the assumptions that have been raised to respond to a social problem and is capable of making experiential examples available to students.

What society needs are active connoisseurs, with the capacity to do things, not only superficially conversant with the principles of science and disciplines, connoisseurs of their history, but without the capacity to transform and adapt their circumstances for the good of society. In this case, the training of researchers becomes an urgent need in the construction of a more equitable society and for the elimination of poverty.

Ortiz argued: "It is considered that the training of high-level human resources is a long-term investment that produces tangible results that are later translated into goods and services for society" (2010, p. 12).

Therefore, a change in the educational paradigm is required. As Ocampo-Eyzaguirre, Sucari, Anaya, Medina and Zúñiga-Sánchez, H. (2022) argue, from the pandemic it became evident that a disruptive education can be given, among other things, including information and communication technologies (ICT) in the learning-teaching processes. This is strengthened by authors such as Uribe, Florez, Lozano and Malagón (2022), who recently published that millennials are a generation that has taken over cultural aspects thanks to technology. Or in the exact words of Rodríguez:

The 21st century is characterized by the knowledge society, the incorporation of social networks into educational processes, the expansion of information to obtain knowledge, access to education, ownership of knowledge and regulation of training, which until now had anchored the research processes in a local world and closed the doors to globality (2016, p. 123).

Those who write consider that within 40-50 years education will be different, since young teachers will aim to transmit knowledge to create research capacities for the production of goods.

For all of the above, a proposal is presented below based on Benjamin Bloom's taxonomy and the contributions of six psychology studies by Jean Piaget (1991), which are based on a hierarchical classification of educational objectives built by Bloom and take into account consideration the complexity of the cognitive process. Bloom developed a hierarchy of educational objectives that were to be achieved with the students from three areas: cognitive, affective and psychomotor, but it is in the first area where Bloom's taxonomy arises, since it is used to assess the level of knowledge acquired in an area or subject, created in 1956 (Bloom como se citó en Churches, 2009).

Results

The authors of this document consider these cognitive functions as the basis for the training of individuals in research. These results are based on years of experience in directing theses and from research carried out throughout the exercise as a research teacher, the above is considered a strength to talk about and address the subject.

Carrera, Madrigal and Lara (2017) argue that in Latin America the development of research is directly connected to the development of postgraduate studies; Perhaps this is one of the causes of the lack of training for researchers, that is, of those cognitive levels that are required in the early stages of individual development, which are discussed in detail below.

Know

Knowledge is the intellectual capacity to understand, to realize the nature, qualities and relationships that exist between the elements of reality or, at least, of a part of reality. According to studies by Jean Piaget, it is the first cognitive function that is appreciated in human beings from birth, which appears during the first two years of life.

The cognitive function is knowledge, that is, the capture of data thanks to the neurocerebral faculties of the human being, so that such a set of data can be used to find its relationships with the other functions and thus achieve the most useful for himself, which is the creation of valuable elements for the improvement of his living conditions.

This capacity utilizes the specialized organs of the human body to actuate and adapt to its environment, and to realize, understand and appreciate the value of the elements of its surrounding environment, through his eyes, ears, nose, tongue, and skin, that allow him to decide or choose what avoids discomfort or provides greater benefit and improvement in

their living conditions. Even more, they allow him to act on the environment and take advantage of the elements available at his fingertips.

In the research process, the cognitive function of knowing is essential for the entire process. Knowing begins at different points of contact with reality: either only in an exploratory way or through a description of the problem, in the event that this already has a place in the concerns of society, but there are few advances or insufficient work aimed at to its solution.

Analyze

For the authors of this work, the type of research that interests academic education is scientific research, that which tries not only to see what is there in an ecological or social environment for which no data is available, but whose fundamental interest is centered, mainly, in problems associated with phenomena that present a problem and that demand a solution in favor of society.

For this case, the analysis is built when there is a problem or phenomenon that needs to be explained. For this, it is necessary to apply the necessary methodological steps: observation, classification, relation/correlation and the generation of hypotheses. Observation can be applied from the researcher's curiosity about some phenomenon that requires treatment to adapt it to the needs of society. This observation can come from several circumstances: that the researcher is present in the place and moment where the phenomenon to be solved occurs; It can also be generated by reading articles or chapters where the phenomenon that requires explanation is shown.

The analysis is a fundamental stage of the investigation since it allows to understand the constitutive elements independently and to establish the reasons that generate the changes both in each of the elements and in the whole at the same time, in its totality.

Synthesize

From the analysis it is possible to form the synthesis in the research process. The synthesis is a brief text that develops the main ideas of a research paper, which are presented once the characteristic relationships between the elements have been established, through the contact points identified in the previous processes. This combination of elements makes the content of the general idea that is synthesized evident, which allows adding meaning and justification to the investigation. This synthesis is generally part of the conclusion, in which



the fundamental parts are summarized and highlighted at the same time, as well as those that will remain pending further investigation. Therefore, at the conclusion of the research work, it is convenient to indicate the general result on the totality of the elements as a whole, as well as its constituent parts, each one independently, to clarify its function in the problem that was proposed to be solved.

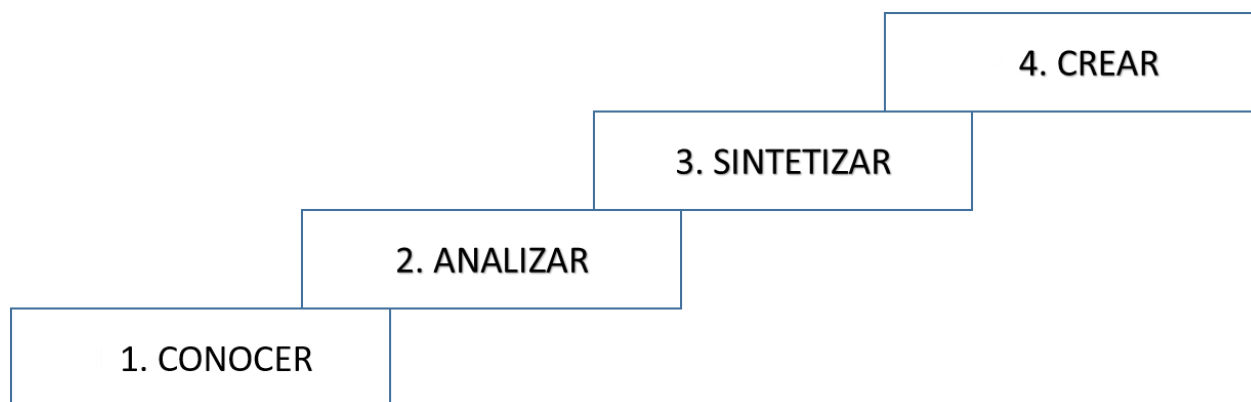
At the end of the research work, a proposition that synthesizes the results of the research work will have been built.

Create

The cognitive function that is alluded to with the concept of creating refers to producing, building, organizing what is necessary to achieve something for the benefit of society. In the field of the academic community, creativity is manifested in the construction of all possible paths to achieve the desired ends.

A research paper is basically built with the application of the corresponding cognitive functions: knowledge, analysis, synthesis and creation. These functions are interdependent, that is, to reach the next one in the order it is required to have fulfilled the previous one, this to fulfill its purposes, as shown in figure 1, where there are steps or steps that must be climbed one by one and in order to reach the highest level.

Figure 1. Cognitive functions associated with the research process



Source: Own elaboration based on Jean Piaget and the taxonomy of B. Bloom

Conclusions

At the end of this research work, it has been possible to analyze the problem of incomplete public education that has characterized Mexico during the 20th century and the first decades of the 21st century. It highlights the need to apply a strategy that allows the advancement of scientific research in the national educational system to underpin the development of Mexico in the socioeconomic environment of the world, with perspectives for the future.

Therefore, the necessary path is the preparation of students to do scientific research in favor of all the disciplines that society chooses. Those who subscribe consider that the adaptation of the educational system is required to develop scientific research capacities, and with this to establish a new generation of research scientists, creators of new paths and technologies adapted to the conditions of this society, combining knowledge with creativity, adapting the knowledge acquired with the needs already identified as national problems, which may be addressed with research programs ordered at the levels of secondary, higher and postgraduate education, research programs duly organized to increase that knowledge and the specific actions according to the science that applied at the educational level.

It is proposed to promote a strategy based on the use of cognitive functions applicable to scientific research to complete educational training, respecting the stages suggested here, knowledge, analysis, synthesis and creation; incorporate them into educational programs, together with teaching, from the first levels of institutional training to accompany the current strategy of the Government and national society. In this way, it will be possible to train researchers who will serve future generations, who will live under new schemes of national and international development, and thus correct the absence of scientific research in the national educational system.

Every training process must place the researcher in the search to possess and transmit the truth, to know and understand the issues about the ultimate causes, the essential reasons and the purpose.

The future of a nation lies in education. It is questioned and insisted that we are in a society where anti-values have been generated, which has fostered excessive violence and materiality in coexistence and interaction with others. It is truly worrying that we tend to have the death drive dominate over the life drive, Thanatos dominating Eros (Freud, 1980).

And it is now more than at other times that education is called upon to take charge of such a problem; that is, that it assumes the role of trainer and forger of attitudes and value



positions within all the educational levels it attends, from preschool to the more specialized postgraduate levels, where comprehensive training and consolidation of competencies is developed from of three fundamental axes: knowing how to know, knowing how to do and knowing how to be.

Future lines of research

The authors of this research work consider as a line of research to study the importance of learning to unlearn, that is, the ability to break paradigms that lead to the dogmatization of knowledge or theoretical positions, which can be interesting for teachers of all levels of higher education. The pandemic was a situation of urgency that, among the good things, made it possible to break with some paradigms of those who have taught one hundred percent face-to-face for more than 40 years, a situation that allowed us to see if it is possible to adopt a different way of teaching their class, distance teachers from the stagnation of the teaching-learning process that they had predisposed.

Another line of research is to go deeper into the analysis of comprehensive education. This proposal may be interesting for those higher education leaders who need to promote comprehensive education as part of the changes in study plans and programs. It consists of the incorporation of high standards of knowledge and training at the level of specialized knowledge in the professional who is dedicated to research and teaching, in addition to a series of practical skills that must necessarily be mastered for its application in professional practice, and that as a teacher should have for the training of future generations.

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Rol de Contribución	AUTOR
Conceptualización	JOAS
Metodología	JOAS, EVELIA (IGUAL)
Software	NO APLICA
Validación	NO APLICA
Análisis Formal	NO APLICA
Investigación	EVELIA
Recursos	NO APLICA
Curación de datos	NO APLICA
Escritura - Preparación del borrador original	JOAS
Escritura - Revisión y edición	JOAS, EVELIA (IGUAL)
Visualización	EVELIA
Supervisión	EVELIA
Administración de Proyectos	EVELIA
Adquisición de fondos	JOAS, EVELIA (IGUAL)