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Londoño-Monroy, Gloria; Alvarez-Maestre, Annie-Julieth; Melenge- Escudero, James-Alexander; Pérez-Fuentes, Carlos-Alfredo; Aguilar-Barreto, Andrea-Johana

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Challenges and reflections on teacher training in times of Covid-19: an analysis from educational psychology

Retos y reflexiones sobre la formación del profesorado en tiempos del Covid-19: un análisis desde la psicología educativa

Gloria Londoño-Monroy practicas.literatura@tdea.edu.co
Tecnológico de Antioquia IU, Colombia
https://orcid.org/0000-0003-1159-8231
Annie-Julieth Alvarez-Maestre
coor.licenciaturas@tdea.edu.co
Tecnológico de Antioquia IU, Colombia
https://orcid.org/0000-0002-9432-8554
James-Alexander Melenge- Escudero
practicas.psicologia@tdea.edu.co
Tecnológico de Antioquia IU. Medellín, Colombia
https://orcid.org/0000-0001-8281-2579
Carlos-Alfredo Pérez-Fuentes saber.pro@tdea.edu.co
Tecnológico de Antioquia IU, Colombia
https://orcid.org/0000-0003-0645-5973
Andrea-Johana Aguilar-Barreto vice.academica@tdea.edu.co
Tecnológico de Antioquia IU, Colombia
https://orcid.org/0000-0003-1074-1673

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Abstract: Objective: to analyze the pedagogical practice experiences of teachers in training during the COVID-19 contingency, making visible the challenges, conditions, and emerging reflections of the pedagogical practice in pandemic and social isolation and characterize the teaching-learning strategies that favor skills in teachers' professional practices consistent with the need for mental health care and maintenance of the quality of life of students. **Materials and methods**: this research was developed from the constructivist paradigm and through the methodology of systematization of experiences. The study sample consisted of 231 students from strata 1, 2, and 3, and 11 practice advisers from a professional teacher training program. **Results**: professional practices in teacher training are a crucial moment for the development and strengthening of competencies associated with teaching-learning from the discipline. Before 2020, most of the professional practices were developed inperson, a situation that changed in the health contingency of COVID-19, causing a demand for sudden adaptation on the part of trainers and teachers in training for the development of practices professionals in virtual environments. **Conclusions**: at the end of the study, the different emerging challenges are evidenced, such as a weak command of information and communication technologies, empathy as a cognitive-emotional teacher competence, the constant maintenance of student motivation and the application of curricular flexibility strategies. Likewise, prevention and support actions developed based on an

adaptive educational environment are identified, which favors successful training in times of social distancing, quarantine and isolation.

Keywords: psychology, professional practice, education, coronavirus infections, higher education.

Resumen: Objetivo: *analizar las experiencias de práctica pedagógica de maestros en formación durante la contingencia del COVID-19, visibilizando los desafíos, condiciones y reflexiones emergentes de la práctica pedagógica en pandemia y aislamiento social y caracterizar las estrategias de enseñanza-aprendizaje que favorecieran las competencias en prácticas profesionales de maestros en coherencia con la necesidad de atención de la salud mental y de mantenimiento de la calidad de vida de los educandos.* **Materiales y métodos**: *la presente investigación fue desarrollada desde el paradigma constructivista y a través de la metodología de sistematización de experiencias. La muestra del estudio fueron 231 estudiantes de estratos 1, 2 y 3, y 11 docentes aseso- res de práctica de un programa profesional de formación de maestros.* **Resultados:** *las prácticas profesionales en la formación de maestros son un momento crucial para el desarrollo y fortalecimiento de competencias asociadas con la enseñanza aprendizaje desde la disciplina. Antes del 2020 la mayoría de las prácticas profesionales se desarrollaban en modalidad presencial, situación que en la contingencia sanitaria del COVID-19 cambió, ocasionando una demanda de adaptación repentina de parte de los formadores y de los maestros en formación para el desarrollo de las prácticas profesionales en ambientes virtuales.* **Conclusiones**: *al final del estudio se evidencian los diferentes desafíos emergentes como, el débil dominio en tecnologías de la información y la comunicación, la empatía como competencia cognitivo-emocional docente, el mantenimiento constante de la motivación estudiantil y la aplicación de estrategias de flexibilización curricular. Así mismo, se rescatan las acciones de prevención y acompañamiento desarrolladas en función de un entorno educativo adaptativo, favorecedor de una formación exitosa en época de distanciamiento social, cuarentena y aislamiento.*

Palabras clave: psicología, práctica profesional, educación, infecciones por coronavirus, educación superior.

Introduction

The adaptability of educational processes and teaching-learning strategies in Colombian higher education was challenged by the health contingency plan implemented answering to the COVID-19 emergency in March 2020. In order to reduce the transmission of COVID-19 amongst the community, there were guideli- nes provided nationwide for social distancing measures, including closure of educational institutions, prohibition of mass gatherings, forbidding mass events, restrictions on mass transportation or traveling, and other social measures for the morbidity control; such as the modification of work and disease control habits. These guidelines caused higher education institutions giving in-person classes to start implementing teaching strategies for the distance to guarantee their continuity, mostly in online mediation and virtuality.

Assuming these conditions of isolation came with adjustments in academic calendars, the development of training activities through Information and Communications Technology (ICT) mediation and remote connections, increased resources for virtual platforms and increased accessibility to bibliographic resour- ces. Some institutions even strengthened their departments associated with university welfare for the physical and psychosocial support of the educational community [1,2].

Although the response tried to be quick, the requested adaptations and adjustments had to guarantee equal access for students and teachers to the

different actions applied. Consequently, the flexibility of the curriculum was appropriated by various pedagogical and didactic strategies for teaching-learning and evaluation processes. In addition, training of the educational community on technology was also required to shape the challenges of the pandemic [3,4]

On the other hand, the educational community's resilience to the demands of adap-tation added to the list of challenges for Higher Education Institution (HEI) in the pandemic. The forced transformation towards virtual education implied the almost immediate appropriation of virtual tools for students and teachers in order to reactivate higher education mediated by technology [5].

In this regard, the strategies and methodologies enabled for university academic activation included establishing appropriate mechanisms of communication, collaborative work, virtual teaching and with ICT mediation, enabling computer platforms, synchronic and asynchronic sessions, redefining the evaluation criteria and its flexibility and the use of digital strategies such as WhatsApp and Facebook to manage knowledge or compliance with assignments [6,7]

Although it is true that virtual education at a distance and through ICT mediation implies an appropriate and gradual preparation and induction that guarantees the appropriation of the technological tools altogether with the domain of the design of virtual learning environments, the development of these skills will allow the ideal transit of a model focused on the content and the teacher, making a model in online teaching focused on e-activities and e-learning. And although studies show a positive predisposition on the part of the student to this type of teaching [8,9], the case of training during isolation was not given in normal situations, but rather, was accompanied by difficulties in access, fear of contagion, uncertainty, socioeconomic difficulties, distress and anticipatory anxiety [10,11].

Research developed on learning during the Covid-19 has shown that during the time of the pandemic, high levels of anxiety and stress were generated in students, causing deficits in concentration, working memory and affecting other cognitive processes associated with information processing, thus involving academic performance [12,13,14]. In fact, before the COVID-19, researches like Mbarek's had detected frustration, nerves, anxiety, stress andpsychological affectations in virtual education contexts in normality [15].

In other words, if under normal conditions psychological effects were present in virtual education contexts, given the high indicators of depression, anxiety and stress in virtual learning environments in the context of the pandemic, it can be concluded that learning environments during COVID-19 may further exacerbate students' mental health problems [16,17]. Recommendations from studies for improving teaching-learning strategies include lowering expectations for students and providing them with all possible options and alternatives. In this regard, it is important for teachers to be aware of the inevitable

cognitive impairments during the pandemic, so activating empathy and compassion will be essential to help learning.

The experience described in this article is the result of addressing the emerging educational challenges during the COVID-19 contingency, in a professional program for teacher education, by implementing teaching-learning strategies that foster competencies in their professional practices, and consistent with the need for mental health care and maintenance of the quality of life of learners. About this topic, research such as that of Lema, García, Martín & Calvo [18] identified negative effects on teacher training during their practice in virtual and distance mode, perceiving it as a threat to the professional development of future teachers. On the other hand, Drozinsky and Ayala-Schimpf [19] also warn about the impact of professional practices in virtual mode during the contingency of COVID-19.

In the same way, Gazzo [20] encourages the innovation of teaching practices in education in times of COVID-19, resorting to the digitization of documents, the production of audiovisual materials, the interaction from applications for the development of classes, the offer of multimedia content and tutorials. Meanwhile, Abregú & Molina [21] recall that the challengesof the practices of teachers in training include structural problems of the community such as difficulties in accessing the internet, low connection quality and power outages; Likewise, the socioeconomic reality of the students and the problems associated with the violation of rights affect the performance of the teacher role.

Based on these investigations, it was possi- ble to hypothesize a high probability of impact on the development of the pedagogical practice exercises of 231 teachers in training. The effects of these teachers in training implied, not only the interaction with the teaching spaces for their students, but also their own limited conditions to access learning, such as internet access, technological equipment for the crea- tion of teaching support material ; on the other hand, resilience and ideal mental health to respond to the demands of teaching-learning in conditions of COVID-19. Therefore, the higher education institution had to be attentive to all emerging problems in order to minimize the effects as much as possible and provide satisfactory practical training experiences.

The objective of this research was to analyze the experiences of pedagogical practice of teachers in training during the contingency of COVID-19, making visible the challenges, conditions and emerging reflections of the pedagogical practice in pandemic and social isolation and characterize the teaching-learning strategies that favor skills in teachers' professional practices consistent with the need for mental health care and maintenance of the quality of life of students.

Materials and methods

Type of study

This research was developed from the constructivist paradigm and through the methodology of systematization of experiences. Every

systematization is preceded by a practice. Unlike other research processes, this one ispreceded by a "doing" that can be recovered, recontextualized, textualized, analyzed and reinformed from the knowledge acquired throughout the process. Every subject is a subject of knowledge and possesses a perception and a knowledge that is the product of his or her doing [22]. Both the action and the knowledge about the action that he or she possesses are the point of the systematization processes, which are processes of interlocution between subjects in which discourses, theories and cultural constructions are negotiated. During the practice there are multiple readings that have to be made visible and confronted in order to build a common object of reflection and learning.

The methodological proposal for the systematization of experiences comes from a heterogeneous conceptual base. Its construction is composed of diverse academic sources. Just as diverse epistemological approaches to the systematization of experiences coexist, so too are diverse conceptions of systematization and the "way in which they conceive the forms of producing knowledge". Each conception of systematization produces particular forms of categories, which are characterized by not being neutral and emerge depending on the perception one has of knowledge, know-how, logic, reality, power, objectivity, etc [23].

In this sense, the author builds a series of typologies, from which he defines some of the conceptions of systematization and which make reference to: photography of the practice, reconstruction of the lived experience, systematization as obtaining knowledge from the practice, dialectical systematization, systematization as recontextualized praxis and, finally, systematization as systemic understanding.

Sample

The sample of this study included 231 teachers in training enrolled in the 2020-1 semester of a university program in the city of Medellín in the Department of Antioquia – Colombia. Eleven teacher advisors also participated inthe experience, who accompanied the training process for 16 weeks. The students were characterized as follows:

40 (17.32%) were advancing their initial level 1 practice, oriented to the observation of diverse educational contexts; 149 (64.50%), their initial pedagogical practices of pedagogical assistance and mediation in levels 2 to 8, and 42 (18.18%) the professional practices in interinstitutional modality (pedagogical mediation), research, entrepreneurship or artistic-literary creation, in levels 9 and 10.

The inclusion and exclusion criteria

This research used convenience sampling. A respect, it was considered as an inclusion criterion all students enrolled in courses teaching practice, from the first to the tenth semester during the period 2020-1 and teachers assigned to courses with practical component. As an exclusion criterion, the participation of students enrolled in the program who were not taking teaching practice subjects and teachers who attended theoretical courses were omitted.

Procedures

Each systematization of experiences is a construction itself. However, this does not mean that it is not possible to define some moments, instruments and procedures for their realization. Nor does it mean that any research that involves communities in a dialogical and participatory way can't be called systematization of experience. In this regard, this research was developed in a professional program for the training of teachers, in a population of students from strata 1, 2 and 3, with a sample of 231 students and 11 practice advisors. The steps established by Peresson [24] were applied for the systematization of the internship:

1. Describe
2. Problematize
3. Translate
4. Interpret
5. Understand
6. Propose actions
7. Act

Describe. At first, the research team carried out a review of the problem associated with teacher training in times of COVID-19 and the impact of the health contingency on higher education training, in terms of pedagogical, learning and physical health aspects and mental. In this regard, current studies were found on said impacts and recommendations to minimize the effects.

Problematize. Upon detecting a possible alteration to regular exercise within the professional teacher training program, the team of researchers decided to keep an exhaustive record of the processes associated with the practices. To this end, the collection of information from: record of minutes, syllabus, evaluation agree- ments, practice reports, planning, progress reports, curricular flexibility reports, logs and practice advisor report was prioritized. Likewise, the organization of the documents was oriented towards the research objective, analyzing the experiences of pedagogical practice of teachers in training during the contingency of COVID-19, making visible the challenges, conditions and emerging reflections of the pedagogical practice in pandemic and isolation Social.

Translate. With the information generated by the sources, an ordering was carried out by means of a matrix. The matrix related the items of: coding, type of document, type of information, relevant data, keywords, category.

Analysis techniques

In coherence with the constructivist paradigm, the qualitative approach and the study method, the information analysis was developed through a qualitative data matrix and later the analysis strategy was developed by content analysis, the latter, understood as a processing technique of any type of information accumula- ted in coded categories of variables that allow the analysis of the problem that is the subject of the investigation. The steps that led to theanalysis according to the Peresson model [24] are the following:

Interpret. As a method of information analysis, content analysis was used to make sense of the systematized information. Through the registration of the matrix and the exhaustive review of the data, the frequencies of the phrases and significant words of each category were identified.

Understand. As a comprehensive exercise in systematization, the results and conclusions section was constructed, responding according to the objective set to the following questions:

What stages and changes have pedagogical practices had?

What key elements strengthened and weakened the exercise of the practices?

What aspects influenced the different levels of the experience?

What lessons learned remain from the experience?

Propose actions. The conclusions section generated a set of procedures and a series of recommendations for the operation of the exercise of pedagogical practices in the next academic period.

Act. Based on the final report, the processes were adapted in order to improve the spaces for pedagogical practices within the health contingency and social isolation due to COVID-19.

Thus, in the systematization of experiences it is possible to consider the apprentice (practitioner) of a profession as a person with mental entities and relative autonomy that allow him/ her to process information on his/ her own, to organize it and to link it to theories that explain, understand and solve the diverse problems that, in this case of the Bachelor's degree, from the pedagogical context impose on him/ her [25]. In this sense, self-regulated learning and metacognition play a substantive role in the process of systematizing experiences. An exercise that not only supposes the awarenessof the cognitive state of the subject of the action and of his degree of competence, but also of his own level of difficulty [26]. Those who learn a profession need to decenter themselves from the executive processes in order to be empowered as second-order observers, to be able to think before, during and after the action (practice) [27].

The systematization of experiences brings with it the opportunity for the same practical component of a profession to generate the professional knowledge it requires and to recognize the subject in the very process of its production. It presents a cognitive demand to decenter from the executive processes, brea- king the linear causality, facilitating the historical recognition of the same practices, their beco- ming and future, in reflexive cycles of feedback, facilitating the improvement of the practices.

Ethical aspects

As the present investigation was developed through the systematization of documents and experiences subsequent to a selected phenomenon, the method did not pose a risk to the people involved. In this regard, the research was approved in its previous proposal by the respective Institutional Research and Ethics Committee.

Results

Specifically, in the first semester of 2020, for the bachelor's degree, there were 11 advisory teachers, who attended in 16 groups to 231 (100%) students enrolled in practical subjects (21 students on average), of which: 40 (17.32%) were advancing their initial level 1 practice, oriented to the observation of diver- se educational contexts; 149 (64.50%), their initial pedagogical practices of pedagogical assistance and mediation in levels 2 to 8, and 42 (18.18%) the professional practices in interinstitutional modality (pedagogical mediation), research, entrepreneurship or artistic-literary creation, in levels 9 and 10.

A low percentage (1.73%) corresponded to students with a diagnosis of developmental disorder or with different types and levels of disability; also a low percentage belonged to students who lived in suburban areas or muni- cipalities near Medellín and who went to their facilities to study.

Of the 231 students, 178 (77.05%) regularly attended one of the 128 practice centers, most of which were educational institutions with basic primary and secondary education programs, but also organizations with flexible formal education programs (youth and adults from outside the city, children and youth under state protection, adults in prisons) or with social or community education programs.

During the first semester of 2020, the program suspended the internships in the external centers; however, from the governing bodies and coordinators of the program, various strategies for reading the reality, mitigation, attention and training were arranged, in coherence with the social responsibility that is demanded of all HEI.

The first strategies were diagnostic:

(a) in coordination with the Academic Vice- Rector's Office, Institutional Welfare, the dean's offices and the program coordina- tors, an update of the students' characteri- zation was designed, in order to recognize their technological and socioeconomic conditions:

(b) a more detailed characterization of all the students of the degree, by the teaching team, to establish, from a direct and per- sonal conversation where they were living the quarantine, in what conditions and accompanied by whom, in addition to the states of Internet connectivity, availability of computer equipment, and habits of use of various digital services (social networks, videoconferences, virtual classrooms, and e-mail); at the same time, the risks of socio-economic, cognitive or mental health vulnerability;

(c) the provision for teachers of a question- naire that allows the permanent reporting of alleged cases of students with special educational needs or who require some type of institutional support or attention.

Specifically, for the bachelor's program, mi- tigation and care actions included:

a) reporting and monitoring, by the academic coordination of the program, of students referred to Welfare to receive psychological or socioeconomic support;
b) permanent communication with teachers to identify students at risk, by the internship coordination;
c) telephone communication, by e-mail or WhatsApp, with each of the prioritized students, strengthening their support net- works, while providing accompaniment; and the written record of the care processes for complex cases.

Discussion

In undergraduate teaching programs, the initial practices (from I to VIII semester) and the professional practices (in IX and X), become the scenario to test the learning and generic and specific-disciplinary competences (training, teaching and evaluation) of the future teachers and educational agents [28]; the action, reflection and critical research that allow the recontextualization of the cognitive, ethical, pedagogical, didactic and disciplinary knowledge in different contexts. Moreover, the articulation of theory with the realities of concrete and the resignification of pedagogical knowledge and teaching.

According to the National Educative Ministry (MEN in Spanish), since 2017 in Colombia, teacher training programs can only be offered in person, in various HEIs with programs that receive qualified registration by the MEN (the majority of which are located in a few urban centers, making it necessary to move or change permanent residence in order to have accessto such centers during training). In addition, the practices must be carried out as mandatory in this face-to-face modality, considering that direct physical interaction is vital to define and apply strategies for reading the context and approaching the students in real learning environments, for pedagogical mediation and interaction with the members of the educational community [28].

However, with the unforeseen situation in 2020, the MEN adapted the conditions, so that the HEIs should manage and offer opportunities for distance practice, non-presential or alternating in various scenarios: practice centers with which there is an agreement and that go through the same conditions of adaptation and adaptability. At the same time, the practitioners were called to quickly qualify themselves in the educational attention in distance, virtual and ICT mediation scenarios, and to accommodate themselves to a complex and little explored singularity throughout their training.

Research such as that of Lema, García, Martín & Calvo [18] in Spain, on how to learn to be teachers without being in the classroom, has shown that undergraduate students (who consider the practicum as the most influential set of subjects in their professional develop- ment), with the new circumstances they have been negatively affected in their training, given the generation of perceptions and feelings of uncertainty, demotivation and insecurity losing the empowering experience of face-

to-face practice in virtuality; also because they feel at a formative disadvantage to face their first years of work performance, which has led them to argue that they should recover the experience lost during their subsequent practice.

Other studies, such as those by Drozinsky and Ayala-Schimpf [19] in Argentina, have shown that in the practical subjects of those who are trained as teachers, in times of this coronavirus, they have seen experiential learning displaced and placed by the teaching of conceptual contents, to the detriment of un-derstanding and significance, of the significant construction of procedural competences. At the same time, such authors warn that the construction of an adequate image of science, close to reality, where the true nature of scientific work is addressed, has been hindered, that a weakness has been caused in the establishment of affective links between teachers and students, and that a shortage of models that allow the real mental construction of natural processes and scientific procedures has been produced.

In the case of the professional program analyzed, these problems and challenges have not been alien; however, efforts were made to address them in a relevant way to maintain motivation, promote learning, and well-being.

Actions developed allowed the consolidation of a database of students without access to Internet and/or computer resources, as well as the provision of different types of support (loans or donations of equipment; procedures to facilitate connectivity), in coordination with the ICT institutional leader. Also, from those who required the provision of flexible teaching and learning strategies, at a distance, without the mandatory mediation of digital information and communication resources, given their di- gital disconnection in their housing areas (rural areas, for example, from where they originated and to which they had to return); and from those who classified by the various types of vulnerability, to provide them with priority attention from Welfare with its programs of psychosocial and health services, artistic, cultural and socioeconomic support (food fund, psychology or general medicine).

Subsequently, based on the results of the diagnostic strategies, actions were defined to attend and mitigate dropout, among them, the consolidation of the Program for Timely Student Improvement and Transformation. Likewise, the articulation of this program with University Welfare and the Early Warning System, allowed giving response to the educational, psychosocial and socioeconomic needs of the academic community [2].

Together, in the professional practices as learning methodologies, the team of teachers and the coordination of practices prioritized: (a) the observation and formative research in the own contexts of university learning mediated by ICT, taking as case studies the classrooms in which the students usually participate (the different courses in which the students interact during their training); (b) the pedagogical mediation with relatives and with groups of friends or neighbors with whom the contact and the virtual communication were facilitated; (c) demand

processes of creativity applied to the planning, design and construction of strategies and educational materials in various formats, using various digital multimedia and multimodal resources; (c) share practice experiences with peers, through the recording and viewing of videos, to encourage metacognitive processes and reflection of practical exercises.

In order to facilitate the motivation and the use of the professional practices by the students, actions implemented were [4,7]:

- Accompaniment to synchronous classes administered by the practice center (analysis of the exercise and participation of students as class leaders).
- Synchronic group meetings and personalized consulting using platforms such as Zoom, Teams, WhatsApp and telephone.
- Asynchronic meetings using Classroom, Moodle and other platforms.
- Construction of reports on guiding or causal questions.
- Conversations from readings done previously and discussions from questions.
- Context characterization exercises based on documentary analysis (Institution Education Programs, Program Education Project, web sites), in the virtual phase.
- Design of didactic sequences to bring family and friends closer to the reading of literaryImportar listatexts, using tools from the transmedia narratives.
- Weekly creative exercises to expand literary texts using techniques from transmedia narrations.
- Storytelling and creative writing exercises.
- Creation of didactic guides taking into account the curricular guidelines.
- Visualization of films about learning and reflection contexts based on what has been seen (replacing visits and real pedagogical outings).
- Observation of teachers and classmates, with the support of field journals.
- Interviews with teachers, presenting the results in video, audio or written form.
- Reflective writing about teaching practice in different contexts.
- Structuring, planning and presentation of a class, based on what has been learned, using the tool of animated video or own recording, during a synchronous class.
- Games using Kahoot and literary Stop through Google Form.
- Participation in conversations with invited experts.
- Practice taking as students their parents, siblings, nephews, children, among others.
- Tracking biographies and life stories of teachers.

From the coordination of practices, as a support to teaching, contact was maintained with the cooperating teachers of the practice centers; visits to the virtual classroom were made to 11 of the 16 practice groups; accompaniment was offered to advisory teachers during the quarantine through telephone communication, e-mail and WhatsApp; they were

asked for qualitative reports on the development of the practice in a flexible modality; they were asked about their own connectivity, mental or economic conditions and were invited to participate in a virtual support group directed to teachers. In addition, Human Resources made phone calls to all teachers asking about psychosocial risk factors.

Finally, several assessment strategies were applied, seeking to take measures and improvements for the following semester, which, so far, is carried out in the same way: in a flexible, non-attendance mode, with the mediation of ICTs (except for specific cases that develop the praxis in situ with biosecurity conditions).

Conclusions

After the analysis of the reports of the teaching team and advisor of the internship, the teaching evaluations and the reports of university desertion, it can be sustained that the processes of practicum through the ICTs have had strengths in the midst of this exceptional situation. Some of them are of an attitudinal order on the part of the students, such as the disposition towards changes and interest in pedagogical reflection; high participation during the synchronous classes; majority commitment to the development of activities that were assigned; openness and positive reception; concern and eagerness to learn in the new experiences.

In the social-emotional dimension, the students showed high levels of resilience and autonomy, highlighting also the creative thinking and the prioritization of their life project. The process demonstrated increased capacity for discussion and argumentation on the part of students who normally participated little in face-to-face classes.

As for teachers, the capacity for pedagogical reflection and curricular flexibility was evident. Likewise, a constant concern for the formation of their students, generating strategies to facilitate teaching-learning from the mediation of ICT. The teachers and cooperators also showed professional commitment, empathy and assertive communication for the accompaniment of the graduates in training.

Similarly, most of the practitioners highlighted the continuous accompaniment and consideration during the contingency. Therefore,knowing their needs was a fundamental part of the process: they measured each reflective space, assertive psychosocial assistance and accompaniment (except for some cases, espe- cially with students who moved to rural areas, with little connectivity).

As for the weaknesses or problems during the practices, some were evident that were not necessarily due to virtualization, but on the contrary, it allowed to make them visible: low capacity of written expression of the stu- dents due to a low level of knowledge of the rules and protocols of the Spanish language; hesitation when arguing ideas and describing processes; insecurity towards one's own knowledge, specific knowledge and talents, low self-esteem; increase of negative attitudes in students with low tolerance to frustration that require strengthening elements of emotional type and assertive communication; affectation of

the psyche and economy of many students, which affected the rhythm and disposition towards learning.

In the classroom or in the virtual meetings it was also evident: the lack of mechanisms to encourage and maintain student participation in the synchronic meetings; difficulties in managing one's own time; little capacity for critical reading of theoretical texts and for relating these theories to processes mediated by ICT; low levels of basic digital literacy, of digital multiliteracy and of development of the multiplicity of technological competencies to apply them for educational purposes.

And finally, the experience has left different demands on higher education in terms of practical subjects, at least in the case of teacher training in Colombia: the need to motivate students towards the technological environment for training purposes; to adapt the curriculum to facilitate the convergence between ICT and formal education, as well as the practices to come; to implement role-playing exercises through planning, recording and socializing classes, with situations proposed in advance by the teacher to apply learning from the case study strategy and problem-based learning, in conjunction with writing and creative practices.

Bottom line

This research provides relevant information for professionals in the area of education, mental health and other social sciences who are interested in educational processes and their relationship with health emergency con- tingencies as COVID-19. The subject dealt with in this study is fundamental for human development and for the health sciences, and during its planning, execution and conclusion it has been thought to improve the quality of life of its participants. This document analyzed the challenges of higher education and the implications of professional training in isolation conditions within the health contingency of COVID-19. This study provides information on actions to minimize the adverse effects of higher education in isolation, seeking from them, the maintenance and promotion of physical and mental health.

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Enlace alternativo

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