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FROM "PRESENTIAL" TEACHER TO "ONLINE" TEACHER: TEACHERS' IMENTAL HEALTH I N TIMES OF COVID-19. MEXICAN EXPERIENCE

In this paper, the results of a pedagogical investigation have been presented, the objective of which was to identify the causes of teachers' stress in the times of COVID-19 due to the need to teach their classes with the support of digital media and the ways to reduce this agitation studying the Mexican experience. The carried-out study showed that teachers who work in the classroom mode are not prepared to work as online moderators. Precisely this fact generates the emotional state of stress and anguish in the teachers. Taking into account the main features of the teaching work activities that imply a high concentration and tension, as well as the concern for the health of their relatives and their own in times of the COVID-19 pandemic, the concern about the need to teach their classes using mediation technologies, it becomes that "drop that spills the water": the teacher's mental health is shaken, his/her nervousness causes physical discomfort of different kinds. This emotional state of stress and anguish in teachers is aggravated by the COVID-19 pandemic. This stress can be reduced if the teacher internalizes the basic precepts of e-moderating and if, while training them in the use of ICT, teaching is organized in a way that complies with andragogic precepts and foresees the collateral risks implied by technological academic "literacy" of the teacher of face-to-face system. On the other hand, the authors establish that it is vital to foresee the collateral risks implied by the academic and technological "literacy" of the classroom teacher: the possible waste of their very inestimable "traditional" skills: reading, handwritten notes and the written expression of their position before what is read, confidence in confiscated sources, capacity for critical analysis, reflection, imagination, creativity, among many others.

Keywords: *Mexican educational system, a teacher's mental health in the times of COVID-19, teaching supported by digital media, adult education, academic technological literacy and its secondary effects.*

Introduction. The global health problem caused by the so-called COVID-19 in the world has brought consequences never seen before, so it is necessary to adapt to the events that are looming very negative in terms of health in line with the economic, political and educational. Until the beginning of August 2020, the loss of human life has exceeded 750 thousand in the world due to COVID-19 and will continue to increase until the most effective remedy for this is not achieved: the corresponding vaccine. Likewise, those infected exceed 21 million people worldwide, with no signs of improvement in the

coming months.

It must be taken into account that the number of recovered also increases, which allows a respite from such a painful and dangerous disease. There is no doubt that the health problem caused by COVID-19 was not contemplated to attack it promptly, so emerging strategies have been carried out in this regard that as far as possible have been successful to counteract the pandemic in Mexico and in the world. One of these measures refers to moving to remote activities in the regular education system.

However, are the teachers who have mostly used to teach their classes in person to become online moderators? Do they dominate cyberculture, e-moderating techniques and the methodological competencies of the reasoned use of Information and Communication Technologies (ICT)? Do they know how to promote e-learning in their students?

For most, surely, it is an activity little practiced. Moreover, to alleviate this situation, the administrations of the educational centers of all levels (from basic to higher), began from the beginning of the quarantine (April 2020), the campaigns of the courses (usually at a distance) to update their teaching staff in the use of ICT for their classes. Sure, it is better late than never; however, these hasty measures and these super-intensive courses are leading to a situation that would be worth describing with a saying: "For the better, my house would leave". Do teachers really master Moodle, Classroom, Meet, Zoom, etc.? How do they feel in the rush to learn to teach online? How would the mental health of the teacher whom try to instruct in a couple of weeks to use the digital platforms of which they barely knew? Why are they stressed and how to reduce this stress? They are problems that we are living in the times of COVID-19 and about which we will talk in this work.

It is important to recognize that although currently digital media, media products and technology are an essential part of daily life and have become cultural objects at the service of communication, expression, exploration and coexistence, as well as the arrival of ICT. It was a qualitative change for education, the universalization of its use is far from being achieved, at least in certain regions and with certain population ages.

On the one hand, the rapid evolution of computer technologies modifies and facilitates the possibilities of dialogue in training institutions, making virtual learning environments focused on interaction available to students and teachers. But on the other hand, the technocultural context guides the new ways of being in the world, shapes time, space, links in particular ways, alters subjectivities, the boundaries of the public and the private, creates new identities and inclusion/exclusion forms: the connected and the disconnected; those who are easily subjected to the digital world (mostly young people) and those who resist and avoid joining it (mostly older people).

Can it be achieved that digital educational platforms stop being the source of stress for teachers and become a real facilitator to organize and teach their classes? How to explain that teaching supported by mobile devices provides endless opportunities and makes learning more effective? In this sense, educational theories of e-learning or online learning and their postulates are supportive. Numerous studies by Ibero-American researchers are dedicated to this topic: Avila-Barrios, 2014; Boude-Figueredo and Ruiz-Quintero, 2008; Cabero-Almenara, Llorente-Cejudo and Gisbert-Cervera, 2007; Cumbrera-González, 2007, 2007; Eslava-Cobos and Ricaurte-Perdomo, 2007; Figuer-Ramírez, Malo-Cerrato and Bertran-Camats, 2010; Fonseca-Pinto, 2013; Iriarte-Díazgranados, 2007; Leiva-Ramírez, 2015; Malo-Cerrato and Figuer-Ramírez, 2010; Moral and Arbe, 2013, Sevillano, 2009, 2013; Pérez-Mateo-Subirà and Guitert-Catasús,

2014; Riascos-Erazo, Quintero-Calvache and Ávila-Fajardo, 2009, 2011; Santoveña-Casal, 2014; Going-Martínez, 2014; Vázquez-Cano and Sevillano-García, 2015, among others.

The authors agree that the use of new mobile technologies and the Internet, from the possibilities offered through free access media and tools: wikis, blogs, mash-ups, podcasts, social software, virtual world, emerging online practices, allows us to speak of a ubiquitous, flexible and inclusive educational process [22].

Likewise, in cyberspace and with the web evolution where cyberculture, digital culture or culture of the digital society develops with the technologies that configure the modes of communication, information distribution, administration and management processes, the main social networks are the virtual (Social Software), which can be used as educational networks facilitating interdisciplinary and group work, reinforcing communication and horizontal and non-hierarchical relationship, enhancing the collective production of knowledge, allowing the publication of content and resources, enabling fluid communication and versatile synchronous or asynchronous, creating communities with shared interests, exchanging information and documents [17].

However, for digital media to be a tool that really contributes to successful learning, it is necessary for teachers to master the methodological skills of its reasoned use. The problem of training teachers to serve students via electronic devices, addressed Fainholc, 1999; García-Aretio, 2001; Gros and Silva, 2005; Salmon, 2000; Martínez, 2004; Muelas, 2004; Ugaz, 2005; Pagano, 2007; Santoveña-Casal, 2014; Going-Martínez, 2014, among others.

The researchers agree that as technological development advances, the use of new technological platforms applied to education is favored, facilitating the work of teachers to guide, motivate and facilitate work with students, so that they can build their own knowledge [16; 4].

For Pagano (2007), in the teaching-learning process in virtual environments, the teacher acts as supervisor and facilitator; his/her intervention should stimulate and guide the student, providing learning situations, helping to resolve difficulties and providing the type of bidirectional communication. Through it, education is personalized through systematic and organized support [13].

In general, the analysis of the state of knowledge of the investigations prior to the present study showed that although there is a vast amount of studies on the digital media´s use problem in education, nevertheless, the subject of teacher mental health in the times of COVID-19 related to the need for the use of digital platforms, it is not widely explored by regional researchers. Based on this consideration, the present study is justified and its current and novel nature is affirmed.

The **objective** of the research work, which results are presented below, was to identify the causes of teacher stress in the times of COVID-19 due to the need to teach their classes with the support of digital media and how to reduce this agitation, studying the case of Mexico.

The study was carried out following the qualitative approach and the following methods: analytical, which allowed examining the documentary-bibliographic material on the principles of e-learning and the postulates of andragogy, to systematize its content, in order to be able to represent its main traits. On the other hand, the systematic-structural analysis method was used facilitating the identification of the specific characteristics of the e-learning organization, as well as delimiting the collateral risks that the re-education (or professional updating) of the presently system´s teacher implies. Likewise, the

empirical study carried out with the support of qualitative interviews revealed the real emotional state of the teachers, their uncertainties and concerns. Finally, the theoretical generalization method provided the tools for the conceptualization of e-learning and the specific features that its instruction presents for adults, the formulation and concretization of the conclusions and the foundation of the investigative perspectives on this problem.

Development. The study carried out allowed to establish that being part of the educational paradigm of the XXI century, e-learning or online learning, also called distributed learning (Twigg, 2001; Bates, 2005); networked collaborative e-learning (Mc-Connell, 2006); network learning (Tiffin and Rajasimgham, 1997; Harasim and others, 2000; Resnick, 2002); mobile learning (Sevillano, 2013); ubiquitous learning (u-learning), is supported by the connectivism theory of Siemens (2006) and the concept of mobile citizenship of Cebrián Herreros (2010).

It is about the process of acquiring new knowledge "[…] from mobile communication where the mobile device becomes an extension of the senses that can be captured from a distance and at the same time or at a different time from when it originated: information, images, signals and voice, issued or created by another person: teachers, colleagues or experts" [18, p. 163].

This phenomenon gives the "[…] possibility of learning in any situation or context, learning in, with and from the environment in a narrow and broad sense […] makes it possible for practically anyone to produce and disseminate information, so that the learning can take place at any time and in any place" [22, p. 18].

Among the aspects of this new learning are exploration, discussion, argumentation, collaboration and reflection. In this modality, the student enhances their academic development through access to online courses, audio and video lectures, podcasts, grades consultation and intercommunication with classmates and teachers.

This educational modality places the student in the center, turning him into a key figure around teaching action, it focuses on "e-learning", not on "e-training"; it is based on interaction (student-teacher; student-content; student-student; student-communicative interface), configures a complex social practice that has the socializing function; it is governed by a triangular relationship between cultural practices, social structures and the action of students in the educational process.

It is flexible, it creates asynchronous instruction scenarios that allow the independence of space, communication and access to information; develops skills for self-organization, autonomy, collaborative and creative work, as well as for the search, selection, discrimination and analysis of information in different sources of consultation; it includes less fixed content and contemplates open research and communication processes; gives importance to the motivation and interests of the students inside and outside the classroom [1].

Likewise, its characteristics are: permanence (continuous access to the material); accessibility from anywhere; immediacy (access at any time); interactivity with experts, teachers, colleagues; activities situated in daily life; adaptability (correct information, in the right way and at the right time and place).

In this learning process, the teacher acts as a facilitator and e-moderator, and for him/her to be effective must be friendly, attentive, respectful and courteous, have cultural sensitivity, and not admit the use of sexist, xenophobic terms. It is part of the ubiquitous educational environment (u-learning), it integrates in itself a series of pedagogical principles and bases appropriate to the learning objectives, as well as the mediation

technologies that comply with those bases and promote interaction with the student.

The teacher fulfills several functions: organizational (establishing the activity agenda, determining its objectives, the itinerary and the specification of the rules that will mark it); technical, guidance, academic-intellectual; and social (creating a friendly and socially positive environment). He/she must engage with people in a non-mechanical way, be concise, not write too much, have the ability to interact and archive the interaction [14].

In short, following Fainholc, 1999; García-Aretio, 2001; Gros and Silva, 2005; Salmon, 2000; Martinez, 2004; Muelas, 2004; Ugaz, 2005; Pagano, 2007; Cabero-Almenara, Llorente-Cejudo and Gisbert-Cervera, 2007; Aguaded-Gómez and Cabero-Almenara, 2013; Santoveña-Casal, 2014; Going-Martínez, 2014, among others, virtual teaching is a process of guidance, help or advice, which the teacher performs on the student to achieve different objectives: integrate him/her into the technical-human training environment, resolve doubts about understanding the contents that are presented, facilitate his/her integration into the training action, or simply overcome the isolation that these environments produce in the individual and that are a determining reason for the high abandonment of students in these training actions.

Virtual teaching consists of asynchronous communication between teacher and students through electronic devices in a private and individual or public (group) way, which facilitates the orientation of students by the teacher, the monitoring of the student's activity and allows offering academic guidance and personal, specific and personalized. It makes it possible to supply the teacher-student meeting in a specific physical location and at a specific time, to carry out a more adequate and personalized training and guidance work, to deepen the knowledge of the doubts and interests of each student [13].

In such a way that virtual teaching, correctly organized, planned and implemented, is an alternative to traditional teaching, and in many cases, it becomes the only option to serve the student. Such is the case that we are currently living in the COVID-19 pandemic when there is only one way to teach classes and not interrupt the pedagogical process: do it remotely.

According to Martínez, 2004; Muelas, 2004; Pagano, 2007; Pérez-Mateo-Subirà and Guitert-Catasús, 2014; Salmon, 2000, 2003; Ugaz, 2005, among others, a successful implementation of virtual teaching is carried out when there is an understanding of the educational actors that it is a complex process that requires prior preparation of both the student and the teacher, the development of various abilities and specific skills and of a high consciousness as subjects immersed in a technologically mediated environment and consumers of digital devices and the Internet.

The virtual teacher must acquire general e-moderating skills (Cabero-Almenara, Llorente-Cejudo, Gisbert-Cervera, 2007; Aguaded-Gómez, Cabero-Almenara, 2013; Salmon, 2003; Pagano, 2007): understand the information society and the online processes; change your spatiotemporal match; learn to work with a variety of codes other than verbal ones; have communication and technical skills online; knowing how to assess the veracity of online information; be an information consultant, developer of courses and materials, academic supervisor; learn to design, moderate, guide, advise, and manage learning environments and media; identify the advantages and disadvantages of ubiquitous learning.

So the task is not easy: to become an e-moderator, the “regular” teacher must retrain professionally, update himself, renounce his old style of work, give up traditional teaching. In addition, it must be taken into account that if it is a question of teachers with

considered work experience, with deep-rooted professional habits, the work of their "conversion" is surely hindered.

To achieve the teacher's understanding that teaching supported by mobile devices facilitates the learning of their students; to avoid driving the teacher into an emotional state of stress and anguish in these attempts at his/her academic digital "literacy", it would be worth knowing in terms of all the components that make up the adult human being: physiological, psychological, social, ergological. Just as it would be necessary to base teacher update courses on the use of technological platforms applied to education on the premises of andragogy, an interdisciplinary science that is based on physiology, psychology, sociology, anthropology, economics, political science, history, etc. It is therefore about the basic postulates of adult psychopedagogy.

It should be noted that, in general, the theories that try to explain the access of subjects to knowledge, focus on the development of skills (competences), reasoning and the acquisition of concepts. There are multiple definitions for this key notion. Some authors consider it a process through which the ability to respond appropriately to a circumstance, whether novel or not, is acquired; others see it as a favorable modification of reaction tendencies due to previous experience. It has also been defined as the construction of a new series of complexly coordinated motor reactions, or the fixation of elements in memory, so that they can be remembered or recognized. Some theories propose the acquisition of combinations of reactions that enable the individual to solve, economically, a complex or variable situation or only as a synonym for intelligence [15].

However, the ways of acquiring knowledge differ in a child, a youth or an adult. Thus, Knowles (1980) names five factors that, in relation to the learning process, unequal adults and children. Unlike the child, the adult as a mature individual manifests the following characteristics: his lifestyle is based on his conceptions of communication, respect and ethics; build a self-concept; has experience; has a high level of awareness and social commitment; is in a hurry to learn; manifests intentional orientation to learning; he learns mediated by the world (the andragogic experience); he is motivated to learn when he experiences needs and interests that learning will satisfy; his orientation toward learning is life-centered; experience is the most valuable resource for learning it; he has a deep need for self-direction [8].

Hence, adult education must be the object of analysis, planning and implementation in the same way as the education of children and adolescents. The discipline that deals with adult learning is andragogy (Adam, 1987; Alcalá, 2000; Freire, 1970, 1978; Galicia, 2005; Ibarrola, 2000; Jarvis, 2002; Latapí-Sarre, 2000; Ludojoski, 1986; Kolb, 1990; Knowles, 1980; Reischman, 2000; Ruíz, 2005; among others).

To efficiently carry out teaching to an adult, it is necessary to consider the particular characteristics of each student (individual differences between human beings increase with age), take into account their experiences, aspirations, expectations, hopes, needs, interests. It is important to plan the activities following the integral interdisciplinary approach, to develop in the students the basic, professional and methodological competences; promote their autonomous learning [23].

Instructing adults means basing their praxis on the principles of horizontality, participation and synergism, where horizontality reflects the fact that both the "student" (course participant) and the instructor are adults with a certain experiential background, hence the relations between the two must be equal; both must be responsible for the planning, implementation and results of the pedagogical process; both collaborate in order

to meet the same objectives, with mutual help, understanding, tolerance, respect, each recognizing their mistakes and successes [3].

Likewise, participation implies mutual responsibility at the time of making certain decisions; participation in conditions of equality in certain tasks; collaboration in the same project, delivery, responsibility; opposition against isolation, lack of confidence, competence, fear of not being understood; constant review of the course objectives, their adaptation according to the "student's" expectations; mutual motivation.

So that the training courses for the teachers in this period of the health contingency, must focus on the following precepts: the teaching methods must create the conditions for the internal motivation of the student; students must have autonomy and be the origin of their own learning; learning should be fostered through conducts and training activities that demonstrate respect, trust and concern for the learner; teaching must become an attempt to discover new methods and create new stimuli for learning which implications are qualitative and not quantitative.

Let's see below the results of the empirical study that was carried out in the period May-August 2020 in the State of Zacatecas. Several key informants, representatives of different educational institutions (secondary, upper secondary and higher levels) were interviewed. The following criteria were used for the selection of key informants:

1. Ages 25 to 60 years;
2. Seniority of 5 years or more;
3. Occupational safety (being a staff teacher);
4. General domain of "cyberculture" (at a daily level: the use of cell phones, whatsapp, e-mail, internet, general knowledge of digital platforms and networks, etc.)

Thus, the qualitative interviews were applied to five teachers (two women and three men) at the time when they already had knowledge that in the August-December 2020 semester, they will work remotely with their groups, but before the start of the classes. According to the data collected, the interviewees showed different levels of psychological assimilation of this fact (excerpts from the interviews are presented below). Thus, for example, the 58-year-old high school teacher with 30 years of service stated that:

Interviewer: How are you going to work this August-December 2020 semester with your students? Are you going to use some digital platforms?

Interviewee: (*with four large textbooks and notebook with his notes in his arms*) I have no idea.

Interviewer: But in your school, did they organize training courses for you for teachers to use platforms?

Interviewee: Yes, but when I wanted to register, they told me that there was no longer a place.

Interviewer: So how are you going to teach your students? It seems that the courses start in a week.

Interviewee: I don't think it's something difficult… It's not about knowing how to use these platforms or not. For years, they have given us several courses on its use, but I think that the educational process in any context (face-to-face or distance) consists of the same thing: you must prepare yourself, prepare explanations of the topics and exercises and then qualify your students. If they no longer admit me to those courses, then I will only take the photos of my notes and send them to the students' e-mail.

On the one hand, the teacher's concern about the need to use this "new mode" of teaching is perceived, he is even willing to participate in the updating course if there is

"space". The interviewee presents all the characteristics of an adult when faced with the new learning: considerable experiential baggage, self-concept and self-management, own expectations, interests and hopes. However, he does not seem to be convinced to re-evaluate, re-think, re-pose his position in the educational process. Undoubtedly, he needs to "learn to unlearn". In short, it is easier to teach a person when he does not know something than to convince him/her of the importance of the knowledge that is him/her required.

Likewise, the 56-year-old university language teacher with 12 years of service argued that:

Interviewer: How are you going to work this August-December 2020 semester with your students? Are you going to use some digital platforms?

Interviewee: Yes. In May, June and July, we were trained in the use of Meet and Classroom. It became very complicated for me. I have been putting together my courses and practicing using those platforms all these months ... if it weren't for my daughter who helped me, I think I wouldn't understand anything ... But now that the semester is about to start, I'm in a panic... I get very nervous, what if I press the wrong button, suddenly my computer shuts down… How horrible! What if this happens when I'm with my students? What if I can't explain everything to them well? What if they won't be able to connect? I have several nights without sleeping well...

Very interesting was also the reaction of the 55-year-old masters department´s teacher with 20 years of service:

Interviewer: How are you going to work this August-December 2020 semester with your students? Are you going to use some digital platforms?

Interviewee: Of course. I have been working with Meet and Zoom for months, giving conferences, participating in meetings and other activities. Similarly, I will attend my master's classes and give advice to my students. In my case, my style of working will not change much, only that before I gave my presentations or explanations of topics in the classroom face-to-face and now I will give them using the internet.

It is evident that this teacher has little knowledge of interactive e-learning work and is used to playing the role of e-trainer and not of e-moderator in ubiquitous learning. In addition, the teacher does not take into account that his function is no longer to be a "lecturer but rather the guide who participates in learning according to the relevance of his facts and experiences. The experience of the apprentice counts as much as the knowledge of the teacher" [10].

Another "nonchalance" position (or, apparently, simulated "nonchalance") was revealed in conversation with the secondary school teacher (47 years, 15 years of service):

Interviewer: How are you going to work this August-December 2020 semester with your students? Are you going to use some digital platforms?

Interviewee: (*busy with chores in his private business and finishing "participating" in a virtual meeting with the principal of the secondary school where he works*) Well, now I don't even know... The principal has just told us that we have to give classes online ... So much thing they have invented with that pandemic! Let's see what comes to mind tomorrow...

Interviewer: And what are you going to do?

Interviewee: I don't know ... I have a cell phone, whatsapp ... I will send something to my students so they can work...

It should be noted that if the four previous examples dealt with people of advanced ages, young teachers without previous experience of teaching their classes remotely, also showed anguish and concern. Thus, the 29-year-old undergraduate level teacher with 5 years in service expressed:

Interviewer: How are you going to work this August-December 2020 semester with your students? Are you going to use some digital platforms?

Interviewee: Yes, I will surely use the Zoom. In the introductory meeting that the coordinator made us, he told us that we could use any means that we consider pertinent, only that he asked us to send him at the end of the semester the work evidences (tasks, activities, exams, etc.)

Interviewer: What activities do you plan to carry out with your students remotely?

Interviewee: For now I only plan to meet with them by Zoom, explain the material quickly, maybe I will do a diagnostic test... And then I will see what exercises I can send them. In fact, these days (*a week before classes start*), I have had a very intense headache and I have not felt well... Let's see if it happens soon to sit down to plan the course and more activities...

The examples presented above of teachers' reactions to the need to use digital devices clearly show the behavior of resistance to change, to the need to get out of their "comfort zone", to have to learn new things. Even this stubbornness reaches such a degree that they begin to experience physical discomforts (headache, insomnia, stomach upset, high blood pressure, etc.).

In this sense, it would be worth considering that from the psychosocial point of view, human growth, unlike other species, manifests itself in an uninterrupted and permanent way throughout its life. Likewise, any psychobiological development foresees emotional crises depending on the natural, ergological and social life of the person [5], which the instructor of a training course must know how to handle. In this work, the andragogic model that takes into account the psychobiological nature of adults and is based on the principles of horizontality, participation and synergism will be of great help.

Thus, for example, horizontality supposes considering the quantitative characteristics of the student that are related to the physical changes experienced by adults in general after the age of forty, such as the decline in vision and hearing, the decrease in speed response of the central nervous system. However, these factors are compensated when the learning environment is adequate, direct, authentic communications are established, oriented to an attitude of shared leadership where the bonding is transformed into an effective interaction between the participants and the facilitator and creates high emotional coefficients [2].

Another important moment to suppose is the ergological one: being a professional activity, the teaching exercise has its general characteristics: productivity, intensive nature and tension, safety and accuracy, minimization of non-productive work, preparation, competitiveness, dependence on the environment and of work objects [19]. Likewise, the teaching profession intertwines all types of human activity (work, instruction, play, communication); hence, the teacher fulfills a wide repertoire of roles, which makes his work even tenser. Each role he plays in solving didactic problems is related to the conditions of a given context and to his own expectations.

Noor (2004) indicates that role conflict in the workplace can occur in three conditions. The first is when the time necessary to fulfill a role leaves insufficient time to

devote to other roles, the second is where the stress of fulfilling one role makes it difficult to meet the requirements to fulfill another, and the third is where the behaviors specificities associated with one role make it difficult to meet the requirements of another. Therefore, the conflict between roles begins with the human desire to achieve success and the pressures that two imposing and incompatible demands put on the teacher that could leave him feeling frustrated.

This theory is important to explain some of the conditions under which job frustration occurs at the individual level. When the teacher is not assigned the tasks that give him a sense of accomplishment or belonging, there is a tendency for frustration to present itself and, in the long run, to lead to organizational frustration. Finally, the emotional pressure of a teacher is inevitable due to the meta-activity that he carries out: he coordinates the process, guides the acquisition of the student's own experience, his activity is directed to the other, that of the learner [11].

On the other hand, along with the recommendations regarding the use of the andragogic method, in order to reduce the teachers´ anxiety regarding the need to update themselves in the use of digital platforms, it is important to see "the other side of the coin": by forcing them to learn the new, won't they lose their usual (no less valuable) skills?

Trying to answer this question, we turn to the theory of literacy-illiteracy (Abadzi, 2004; Adams, 1993; Aikman, 1999; Archer, 1996; Barton, 1998; Brandt, 2002; Collins, Blot, 2003; Demetrion, 2005; Doronilla, 1996; Finnegan, 1988; Fransman, 2005; Galván-Silva, Muñoz-Ramos, 2010; Gee, 1990; Hornberger, 2003; Jones, 1997; Olson, 1977; Ong, 1982; Schneffknecht, 1980; Scribner, Cole, 1978; Street, 2004, entre otros), which distinguishes three levels of illiteracy:

1. Classic, related to the absence of basic cognitive skills (knowing how to read-write-count);

2. Functional, due to lack of technical knowledge necessary for the full person´s integration in social and work activities;

3. Technological, which has to do with the low or no domain of ICT.

It is worth mentioning that the term "literacy" can be ambiguous, its interpretation varies in each sociocultural, historical, economic context. What constitutes the meaning of literacy-illiteracy of the individual depends on the level of development of the society and the research that supports the concept of literacy. Likewise, throughout history, the scientific community defines this phenomenon in different ways: initially, referring only to the ability to read-write-count, that is, associating it with the acquisition of elementary cognitive skills. However, at the beginning of the 21st century, literacy (and the construction of the so-called "literate society") implies the formation of citizens capable of thinking critically and being responsible for the future of their country and the planet in general, competent to solve the daily problems of modern life [20].

An illiterate or semi-literate person (in the traditional or technological sense) lives in the so-called cultural abyss, does not understand that his/her activities are outlined to transform his/her life, to improve his/her conditions; he/she is not capable of structurally perceiving reality, the environment, he/she is not aware of his/her civil rights, he/she cannot actively and consciously participate in the political life of society. Therefore, the complaint for both functional and technological literacy is not an end in itself. Actions to achieve this are not aimed at abstract individual and social changes, nor do they promote the utilitarian interests of a pragmatic post-industrial society. Obtaining a basic

level of education is one of the fundamental human rights throughout the world [21, p. 177].

On the other hand, the representatives of the literacy theory argue about the rationality of having to "literate" (in a classical, functional or technological sense) the entire population. They start from the idea (and the negative experience of the forced literacy of entire peoples/groups) that certain literacy actions not only do not allow the participants to internalize the new knowledge (e.g., read-write-count; or use digital devices), but makes them "unlearn" what they previously knew [7].

Let us remember the history of the evangelization of the Americas autochthonous peoples (16th-18th centuries). Another example could be the classical "literacy" of Muslim peoples, whose children from an early age (3-4 years) know how to "read" (recite) the sacred texts and the teaching of reading-writing-counting in the official languages of the country to which they belong, deprives them of this ability [21].

In relation to this, the question arises: did not the obligatory academic technological literacy of today's teachers lead to the inevitable loss of their traditional knowledge and skills (reading of books, reliance on unsuspecting sources, critical analysis of what is read/heard/seen, reflection on the facts, skills to narrate the facts/express their opinion, among many others)? The incorrect interpretation of the term "illiteracy" (including technological) leads to the development of non-functional curricula when adults not only do not acquire new knowledge, abilities, skills, but also squander what they had before.

On the other hand, in relation to the unbridled technological development and the advance of cyberculture that shape our lives, change our ways of being and acting, demand new skills, the case of the worsening of functional illiteracy in developed countries such as the United States, England, France, Germany is illustrative. This situation acquired a special flood in the eighties and nineties of the twentieth century. To describe this phenomenon, in the process of their study, the researchers used different terms: functional illiteracy, secondary illiteracy, semiliterate, dyslectic, dyslexic, family litOracy, at-Risk, etc., trying to describe the low educational level of the population. The term at-Risk has even taken root in the United States after the document *A nation at risk* was introduced [6].

According to this report, 80 million American citizens were illiterate or semi-literate, 30 million were absolutely illiterate and 54 million, semi-literate (when reading and writing skills are much lower than what daily life requires) [9].

Every fourth American citizen had a low level of literacy. In this case, scholars were referring to so-called "passive literacy", when the children, youth and adults of this country simply do not like to read (and hardly read books). Thus, the following statistical data were displayed: 23 million Americans were functionally illiterate (meaning that it was difficult for them to satisfactorily comply with the simple reading, writing and arithmetic tests). Likewise, 13% of 18-year-olds were functionally illiterate, a figure that could reach 40%, since the trend towards positive change was not visualized: the majority did not present elementary intellectual abilities that are expected for their age. The 40% of them have not been able to draw conclusions from reading a text; only 20% have managed to write an essay with a convincing argument; only a third of them were able to solve a problem that requires gradual actions. These data obtained in the course of investigations carried out were considered as risk indicators for the nation. In the opinion of specialists, functional illiteracy is one of the main causes of unemployment, accidents and injuries at work, home, on the road. Losses from this situation, according

to experts (for example, those of the *ActionAid* company), amount to about 237 billion dollars a year [6].

It is evident that the new technologies that came into everyday life (especially in the "first world" countries) in the eighties and nineties of the twentieth century, led the common citizen to acquire new knowledge, also neglecting (sometimes, forgetting, losing) the "traditional" skills. Hence, it is vital that the theoretical and methodological approaches to technology literacy are reviewed so that adult education programs can be productive and effective.

Conclusions. Thus, the study carried out showed that teachers who usually work in the face-to-face mode (even those who master basic cyberculture) are not prepared to work as an online moderator, prompting their students to e-learning and the laudable use of the mobile technologies and the Internet. Precisely this fact generates the emotional state of stress and anguish in the teachers. Taking into account the main features of the teaching work activity that imply a high concentration and tension, as well as the concern for the health of their relatives and their own in times of the COVID-19 pandemic, the concern about the need to teach their classes using mediation technologies, it becomes that "drop that spills the water": the teacher's mental health is shaken, his/her nervousness causes physical discomfort of different kinds.

Hence the resistance of teachers (mostly older people) to join the digital educational world is generated, lack of assimilation that it is a complex process that implies prior preparation, development of various specific skills and high awareness of use of technological platforms applied to education.

To ensure that digital educational platforms no longer cause anguish for teachers and become a real facilitator to organize and teach their classes, it is necessary, first, to achieve the understanding on the part of teachers that teaching supported by the mobile devices, optimize learning. This stress can be reduced if the teacher internalizes the basic precepts of e-moderating. Thus, they should know that this process implies considering that the ubiquitous educational environment (u-learning) is a system of online academic, extra-academic and extension activities, planned, scheduled, carried out on time, registered, evaluated and with follow-up, same that demand the responsibility of both the teacher and the student(s).

The functions of the virtual teacher are not fixed, but are modified according to the impact of institutions such as social systems or dynamic realities subject to various transformations. This activity must be carried out under the following general principles: ubiquity, asynchrony, online-characteristics of the teaching process, use of codes other than verbal ones, distance interaction; flexibility, inclusive character, accessibility of the virtual modality, independence of the student at the time of requesting an orientation; permanence (continuous access to the content of the online platform); immediacy (access at any time); two-way mobile communication and non-hierarchical relationship; design, modeling, adaptation, moderation, advice and management of the media and environments of the educational process, creation of illustrative material, using online technical skills; consultancy regarding the search, discrimination and classification of online information; development of computer skills and office automation of the student, management of ICT; mastery of mobile devices, software, educational web pages, encyclopedias, translators.

Another important point to consider for the reduction of teachers´ agitation before the use of virtual media and a successful implementation of virtual teaching is that before

us, there is an adult learner, and only by applying the andragogical methodology will we be successful in his/her knowledge acquisition. So that when instructing (training, updating) the teacher in the use of ICT, the course must be organized in a way that complies with the following: horizontality, participation and synergism of the educational process; student orientation toward life-centered learning; consideration of the student's experience, as it is the most valuable resource for adult learning; stimulation, consolidation and enrichment of adult interests to open up new life perspectives, orientation towards new prospective directions; attention to the fact that learning is a process that helps adult learners to become aware of their experiences and evaluate them, re-think them, re-formulate them; planning of the creative participation of all, generating problematic situations, mutual cooperation and help, represented in a process of coexistence and reciprocal independence; design of dynamic, participatory, creative, analytical and critical activities; impulse of human projection, propulsion towards the interpretation of what we were, are and will be.

Finally, it is vital to foresee the collateral risks implied by the academic and technological "literacy" of the classroom teacher: the possible waste of their very inestimable "traditional" skills: reading, handwritten notes and the written expression of their position before what is read, confidence in confiscated sources, capacity for critical analysis, reflection, imagination, creativity, among many others.

Likewise, the following research perspectives are displayed on the topic of teacher's mental health and stress reduction strategies for having to work remotely: adult learning problems in virtual teaching; virtual teaching as a strategy to overcome the isolation of the adult learner; Bidirectional mobile communication and horizontal relationship in virtual teaching to an adult, etc.

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ВІД «ПРЕЗЕНТАЛЬНОГО» ВЧИТЕЛЯ ДО «ОНЛАЙН» ВЧИТЕЛЯ: ДУХОВНЕ ЗДОРОВ'Я ВЧИТЕЛІВ ПІД ЧАСІ COVID-19. МЕКСИКАНСЬКИЙ ДОСВІД

У статті висвітлено результати педагогічного дослідження, метою якого було виявити на основі вивчення мексиканського досвіду причини стресу вчителів під час пандемії COVID-19, пов'язаного з необхідністю переведення системи освіти у режим онлайн та активного використання цифрових технологій. Порушено проблему щодо зменшення в цій ситуації потрясінь, яких зазнають педагоги. Проведене дослідження показало, що вчителі (особливо літнього віку), які звикли працювати в аудиторному режимі, не готові виконувати функції онлайн-модераторів. Саме цей фактор спричинив у вчителів емоційний стан напруженості й нервозності. Зважаючи на особливості педагогічної діяльності, що передбачають високу зосередженість і напруженість, а також необхідність піклування про власне здоров'я та своїх рідних в умовах пандемії COVID-19, а також занепокоєння й тривогу щодо труднощів викладання у відокремленому режимі з використанням медіаційної технології, слід визнати, що це є «останньою краплею», яка впливає на психічний стан вчителя. Нервова система розхитується, а стан постійного хвилювання, невпевненості, роздратованості зумовлюють фізичний дискомфорт та захворювання. Емоційний стан стресу у викладачів посилюється пандемією COVID-19. Проте автори вважають, що цей стрес можна зменшити, якщо вчитель оволодіє основними принципами електронного «керування». Педагогів слід навчити використовувати інформаційно-цифрові технології. Таке навчання має бути організовано за андрагогічними принципами та передбачити врахування обставин, пов'язаних з традиційною освітою вчителя очної системи. З огляду на це автори вважають, що важливо передбачати побічні ризики, пов'язані з традиційною загальноосвітньою й технологічною підготовкою педагога. У процесі перекваліфікації вчитель може втратити свої найцінніші традиційні навички: читання оригінальних (на папері) текстів, рукописного конспектування, письмового вираження своїх думок, можливості працювати з письмовими джерелами, здатності до критичного аналізу, рефлексії, абстрактного мислення, уяви, творчості тощо.

Ключові слова: *мексиканська освітня система, психічне здоров'я вчителя в умовах COVID-19, навчання за підтримки цифрових медіа, освіта дорослих, технологічна грамотність та її вторинні наслідки.*