

Creative Methodologies in Unequal Educational Contexts: A Case Study of Deaf Students in an Urban High School in Zapopan, Jalisco

Metodologías Creativas en Contextos de Educación Desiguales: Estudio de Caso de Estudiantes Sordos en una Secundaria Urbana en Zapopan, Jalisco

Myrna Carolina Huerta Vega

krohuerta@gmail.com

<https://orcid.org/0000-0003-3106-3920>

Universidad de Guadalajara, Guadalajara, México

Article received date: September 10, 2024 / Reviewed date: October 08, 2024 / Accepted date: November 20, 2024 / Published date: January 05, 2025

ABSTRACT

An exploratory study carried out with the purpose of analyzing creative teaching methodologies developed during social isolation due to COVID-19 is presented. The study was carried out in Zapopan, Jalisco, between March 20 and April 20, 2020, within the framework of Mandatory and Preventive Social Isolation. The sample was made up of 4 teachers, 2 interpreters, 8 parents and 20 deaf students in order to analyze the meanings constructed regarding the changes emerging due to the pandemic. Four analytical categories were identified: Inclusive Pedagogical Practices; Creativity in Teaching-Learning Processes; Speak through the body; Agency capacity in times of pandemic. The research proposes the production of knowledge in teaching-learning processes based on creativity and education in the context of a pandemic, to contribute to the planning of educational actions and policies at the secondary level with deaf students.

Keywords:

Artificial Intelligence; Educational tool; Teaching practice; Initial Education; Innovation

RESUMEN

Se presenta un estudio exploratorio realizado con el propósito de analizar metodologías creativas de enseñanza desarrolladas durante el aislamiento social por COVID-19. El estudio se desarrolló en Zapopan, Jalisco, entre el 20 de marzo y el 20 de abril de 2020, en el marco del Aislamiento Social Obligatorio y Preventivo. La muestra estuvo conformada por 4 docentes, 2 intérpretes, 8 padres y madres de familia y 20 estudiantes sordos con el fin de analizar los significados construidos respecto de los cambios emergentes por la pandemia. Se identificaron cuatro categorías analíticas: Prácticas Pedagógicas Inclusivas; Creatividad en Procesos de Enseñanza-Aprendizaje; Hablar a través del cuerpo; Capacidad de agencia en tiempos de pandemia. La investigación propone la producción de conocimientos en procesos de enseñanza-aprendizaje basados en la creatividad y educación en el contexto de pandemia, para contribuir a la planificación de acciones y políticas educativas en el nivel de secundaria con estudiantes sordos.

Palabras clave:

Metodología; Estudiantes sordos; Educación; Inclusión

INTRODUCTION

The world began to change when, in December 2019, the first case of COVID-19 was reported in China. The World Health Organization (WHO, 2020) affirms that the pandemic caused by the coronavirus disease (COVID-19) has significantly transformed daily life; a localized outbreak of COVID-19 became a global pandemic with three defining characteristics: speed and scale (the disease spread rapidly and overwhelmed even the most resilient healthcare systems), severity (20% of cases are severe or critical, with a crude fatality rate exceeding 3%, which is even higher among older age groups and those with certain underlying conditions), and social and economic disruption (disturbances in healthcare and social welfare systems, with the measures taken to control transmission having profound and far-reaching socioeconomic consequences).

The main characteristic of the virus is its rapid spread, which has prompted various actions such as health and hygiene measures; social isolation and restrictions on the movement of people have been the primary actions taken by authorities worldwide. Accordingly, the Ministry of Public Education (SEP) established the suspension of classes due to the COVID-19 contingency from Monday, March 23, to Friday, April 17, with the intention of resuming activities on Monday, April 20, provided that appropriate conditions were in place to continue operations. Up to that point, it was considered that the suspension of activities would only represent two weeks of the academic calendar, and that the following two weeks would correspond to the Easter holiday period; regarding the initial two weeks of suspension, the content was to be recovered to comply with the established plans and programs during the recess days (GOB, 2020).

Thus, most schools throughout Mexico decided to send assignments to students and assess these activities upon their return, assuming this would occur on the scheduled date. However, given the prevailing health conditions in Mexico due to the level of COVID-19 contagion, the federal government, in its report of April 16, 2020, extended the suspension of classes until May 17 in more than 900 municipalities, while the rest of the

country would do so until June 1, if conditions allowed (López Obrador, 2020). Mandatory and Preventive Social Isolation was declared in Mexico due to the COVID-19 pandemic (SEP, 2020). However, the Governor of the State of Jalisco, Enrique Alfaro, anticipated the actions taken by the president and announced the suspension of classes as early as March 7, 2020 (SEJ, 2020). During the period of isolation, people were required to remain in their residences and refrain from attending their workplaces, and were not permitted to travel on roads, routes, or public spaces, except for minimal and essential outings to purchase cleaning supplies, medicines, and food.

The Federal Educational Administration (AEF) promoted the creation of the virtual platform “Aprende en casa” (<https://www.aprendeencasa.mx>) with the premise of supporting teachers in carrying out their work in an educational modality for which few were prepared: distance education. Under the directives of the educational authority at the time, the virtual platform was established as support for students, teachers, and parents, as the latter would be responsible for teaching their children at home. The platform proposed minimum tasks—emphasizing the concept of minimum—that each level and grade of basic education would develop at home and that teachers could review. Four areas of knowledge were prioritized: Logical-Mathematical Thinking, Language and Communication, Healthy Coexistence, Civics and Health Care, complemented by minimal activities in reading, television, videos, reinforcement of knowledge, and recreational activities. To support teachers, collections of activity sheets were created for different educational levels and modalities, considering—according to the SEP—the level of maturity and independence appropriate to each age group, aimed at students and their families (AEF, 2020, p. 1).

The platform itself reveals the haste with which it was developed: most of the assignments intended to help students continue progressing in their learning consist of activities taken directly from the free textbooks and adapted into a visually unappealing format. There is no “real” interaction with the student, nor are there interactive elements

that would make it attractive for learners; in specific cases, links to YouTube videos, additional readings, and references to the free textbooks from which the suggested topics were drawn are included. Furthermore, there are no self-assessment tools that would allow students to determine whether they have assimilated the content. As an education-focused platform, it does not include achievements or incentives to motivate students to complete the activities. Especially at the beginning of the period of social isolation, there was notable criticism regarding the lack of effective dissemination of the platform by educational authorities, which did not help encourage its use. Additionally, the platform's use is suggested rather than mandatory, and it is considered merely a support tool for teachers, students, and parents, leaving its implementation at the discretion of teachers first, and parents second.

The schedules established for educational television broadcasts propose two effective hours per day for primary school students, divided into three blocks: 1st-2nd, 3rd-4th, and 5th-6th grades. For secondary school students, an hour and a half per day is proposed, with an average of twenty-five minutes per class for three subjects each day. Despite modifications made to the platform for the return to virtual classes—which were extended due to the prolonged period of social isolation until June 1, 2020—the platform's format has remained almost unchanged. The concept of assignments was eliminated and replaced with review sheets, with the addition of a couple of video games for primary and secondary levels. However, these games were not specifically created by SEP to ensure their educational value; rather, they redirect to pre-existing websites that add little to the didactic content of the platform.

Without detracting from the efforts of the educational authorities, who undertook considerable work to implement the virtual platform to ensure continuity of instruction, it is undeniable that further work is needed on the *Aprinde en casa* virtual platform to meet user needs and, above all, its general objective: to educate the children and youth of our country. Many of these efforts were delegated to other existing websites, but it is also important to

acknowledge the contributions of other educational and non-governmental entities, which provided resources for guidance, training, and didactic materials to educational stakeholders during this health emergency.

In parallel, in its Bulletin No. 75 of March 20, the SEP issued the official directive for public television and radio to broadcast educational content during the period of social isolation (SEP, 2020). The bulletin specifies that Channel 11 of the National Polytechnic Institute (IPN) would broadcast content for preschool and primary education, Ingenio TV would provide content for secondary and high school, and the Latin American Institute for Educational Communication (ILCE) would broadcast for preschool, primary, and secondary levels via the International Satellite Channel. For radio, the Mexican State Public Broadcasting System (SPR) and the Network of Educational and Cultural Broadcasters of Mexico, A.C., would participate.

It is worth noting that Channel 11, operated by IPN, has a significant history. It began broadcasting in 1959, with its children's programming starting in the 1970s, mostly for entertainment. In the 1980s and early 1990s, higher-quality series from Europe and Japan were incorporated, followed later by programming of scientific interest (Canal Once, n.d.). Thus, Channel 11 has a longstanding tradition in entertainment and education, and its programming has been included, without modification, in the Federal Government's efforts to occupy students' time during quarantine. IngenioTV, for its part, began broadcasting in August 2012 as an educational television channel, aiming to provide a new image for telesecundaria (Figueroa, 2012, n.p.); since then, its broadcasts have maintained educational standards, covering not only secondary education but also telebachillerato, with a focus on values, skills, and competencies that foster lifelong learning, coexistence, and global citizenship. This resource was already available to the general public long before the quarantine.

The Latin American Institute for Educational Communication (ILCE), proposed at the VIII General Conference of UNESCO held in Montevideo in 1954 and established by a

UNESCO agreement on May 30, 1956, set up its headquarters in Mexico City in 1978. Thirteen countries signed the treaty granting ILCE the status of an international organization (ILCE, 2020).

ILCE broadcasts educational programs via radio and television and offers both free and paid virtual courses and workshops. It broadcasts content through three television channels: 1) International Channel, for the dissemination of science, technology, and Ibero-American culture; 2) Suma de saberes, an Internet television channel offering content that promotes social improvement and personal growth; and 3) Channel 22, a free-to-air channel offering scientific, educational, cultural, and artistic content. ILCE also operates Radio ILSE, an Internet radio station providing educational, scientific, and cultural programming. It broadcasts programs for secondary and high school as support during the COVID-19 health emergency.

Regarding the Mexican State Public Broadcasting System, it is a decentralized public body responsible for providing national digital public broadcasting services, ensuring greater access to a diverse and plural array of radio and digital television content. It generates, disseminates, and distributes radio and television content digitally, openly, and free of charge to as many people as possible in each of Mexico's federal entities (SPR, 2020). The SPR's Internet radio system, *Altavoz Radio* (<http://www.altavozradio.mx/>), is primarily aimed at youth as a space for opinion and progressive music, establishing a point of interaction and expression among young listeners, but it does not offer educational programming to support students in continuing their studies.

It is thus evident that, in response to the health emergency caused by COVID-19, the SEP sought to leverage all available digital resources to continue the 2019-2020 school year from home. In other words, the SEP relied on media coverage and the accessibility provided by ICTs. However, as previously mentioned, lacking an established distance education system for basic education, as well as a prior project for implementing such a system, and primarily due to the urgency with which the aforementioned measures were taken,

their impact has not been as expected—especially because key human, social, economic, and cultural factors necessary for assessing the real impact of these measures were not considered.

While it is true that adjustments have been made to the content of the “Aprende en casa” virtual platform, in an attempt to meet the established SEP curriculum from home—due to the impossibility of creating new television programs better suited to emerging audiences—pre-existing television content was used. This is the course of action that the Mexican State's policy has followed in response to the emerging health crisis. At the end of the school year, the results of this policy action could be evaluated.

Authors such as Álvarez, Gardyn, Iardelevsky, and Rebello (2020) conducted an exploratory study on educational management strategies developed in response to the context of mandatory isolation in Argentina. Three public and four private schools with different characteristics in the Autonomous City of Buenos Aires were selected, and interviews and documentary analysis were conducted. The results indicated that the preexistence of gaps in access to digital resources, the visibility of the population's real conditions, the rapid decision-making by central government levels, combined with the heterogeneity of institutional resolutions, highlight aspects that deepen educational segmentation. The authors note that in institutions serving vulnerable populations, the priority is to ensure students' nutrition, maintain active connections, prevent dropout, and build networks. In private schools serving heterogeneous populations, concern arises regarding the differentiation of cases and the need to address particular situations. In private schools serving middle- and upper-class sectors, a variety of educational proposals and technological resources are available, facilitating the continuity of non-presential classes.

Educational inequalities in the context of COVID-19 have also been highlighted by other researchers (Bocchio, 2020; Nin, Acosta, Leduc, 2020; Ruiz, 2020; Tranier, Bazán, Porta, Di Franco, 2020), who argue that in Mexico, as in other Latin American countries, large vulnerable sectors of the population lack not only

technological devices and internet access, but also the symbolic resources necessary to learn virtually or to assist their children in this process. In this regard, Carina Lion (2020) points to inequalities and difficulties in ensuring inclusion and equity in teaching proposals during the pandemic. According to the researcher, conditions of access and usage gaps remain part of the context in our country. She also warns of gaps related to uneven educational trajectories and inequalities in families' ability to collaborate. In this unequal context, the author proposes building communities and networks, promoting playful approaches that offer challenges and link cognitive and emotional aspects, giving students a more prominent role, leaving meaningful learning experiences, and fostering dialogue, listening, and understanding of others' interests and needs.

Considering the particularities of the current educational context, within the framework of the "Stay at Home" Project, subsidized by the Ministry of Public Education, we conducted an exploratory study with the aim of analyzing teaching-learning practices developed during social isolation due to COVID-19, specifically among deaf students transitioning to secondary school. Recognizing the complexities and inequalities described, we are interested in analyzing the creative actions of teachers, interpreters, and parents of deaf children, as well as the transformative potential of certain educational practices during the pandemic. The focus is on capturing the perspectives of these stakeholders at the basic education level, analyzing the meanings constructed around the practices, and the emerging changes resulting from the social isolation situation among deaf students.

This study is grounded in theoretical approaches that define creativity as the potential of all individuals to develop novel actions in various fields and contexts. The research draws on recent studies that define creativity as a social, complex, and dynamic process. It is a social process because it always directly or indirectly involves others and the mediations of language and culture (Glăveanu, 2019). Creativity is a complex and dynamic construct in which multiple personal and contextual factors interact and transform in different moments and situations (Corazza,

Glăveanu, 2020). Furthermore, this study incorporates considerations from the Epistemologies of the South for the analysis of creative processes. We understand creativity as practices that contribute to daily existence and the sustainable livelihood of communities around the world.

The authors propose theories of creativity that connect mind and body, individual and context, recognizing the value and diversity of local practices and the multiple manifestations of originality and novelty. From these perspectives, creative processes are collaborative, supportive, and complementary (Glăveanu, Sierra, 2015). The focus is especially on analyzing the role of social actors in the development of creative actions in educational contexts. In this sense, Cristiano's proposal (2016; 2018) is relevant for defining creativity as the capacity or potential of social agents to formulate and execute new action projects. We agree with the author that creativity encompasses a wide spectrum, from everyday practices to major works or discoveries of humanity.

An action is creative insofar as it contains a significant component of novelty, referring both to the project that articulates the action and to the act effectively carried out; the novel character is attributed by an external observer, based on the establishment of reference parameters corresponding to actions and outcomes that are typical or recurrent in the relevant context of action (Cristiano, 2018, p. 122).

Thus, we understand creative actions as social practices that enhance divergent thinking, originality, and alternative productions. In educational contexts, creative actions are developed through classroom and extracurricular projects and tasks. Based on the analysis of various studies (Elisondo, 2018; 2015; Gajda, Beghetto, Karwowski, 2017; Glăveanu, 2018; Richardson, Mishra, 2018), we identify actions conducive to promoting creativity in educational environments: generating spaces for imagination and play, promoting autonomy and decision-making regarding learning, stimulating flexible thinking, self-confidence, and engagement in individual and cooperative learning. Likewise, it is necessary to

generate dialogic proposals in classroom contexts that allow for the expression and exploration of divergent, novel, and alternative ideas, sharing diverse experiences and opinions, and fostering exchanges among students.

Richardson and Mishra (2018) highlight the importance of classroom climate for creativity, emphasizing the need to create a cooperative atmosphere where students can take risks, make mistakes, and propose alternative ideas. The authors also agree that activities beyond the classroom promote creativity, as they involve connections with other people and cultural objects (Cotter, Pretz, Kaufman, 2016; Davies et al., 2013; Paek, Park, Runco, Choe, 2016). Regarding learning tasks, specialists indicate that proposals involving the committed participation of teachers and students, promoting autonomy and the choice of alternative solutions, and relating to real and relevant content in everyday life, are conducive to creativity.

Likewise, activities that require problem formulation and resolution processes and the activation of divergent knowledge and thinking are favorable for creativity. Researchers have also indicated that open-ended tasks, which do not require single answers but allow for various alternatives and solutions, are most conducive to creativity (Craft, Cremin, Hay, Clack, 2014). Similarly, activities that expand the possibilities of thinking and enable the posing of various alternatives to open questions foster creativity (Craft, Cremin, Burnard, Dragovic, Chappell, 2013).

After outlining actions that promote creative processes according to specialists, and considering the proposals of Berg, Blum Vestena, and Costa-Lobo (2020) on the importance of creativity as the foundation of educational transformation processes during COVID-19, we ask: What actions do teachers develop to teach deaf students without attending school? What activities do they propose? What is the classroom climate? Are creative exchanges promoted among students? How do they communicate? What resources are used? What difficulties are encountered? What strengths and learning outcomes are perceived? What is the dynamic established among teachers, interpreters,

and parents in the process? How are deaf students involved in these processes? In this study, we aim to investigate teachers' creative actions during times of social isolation, recognizing the complexity, uniqueness, and uncertainty characterizing the current context. We are interested in analyzing, from the perspectives of teachers, interpreters, parents, and deaf students, the particularities of educational proposals in the context of isolation, as well as perceived potentialities and difficulties.

METHOD

This study employs a qualitative methodological design to achieve the established objectives. The research method is virtual ethnography, with the primary technical tool being the ethnographic and contextual interview. The particularity of this approach lies in its nature as a discursive practice—a process of co-production of information between the interviewee and the interviewer. This type of interview serves as a strategy to encourage participants to discuss what they know, think, and believe. The ethnographic interview is also a situation in which information is obtained that typically refers to biography, the meaning of events, feelings, opinions and emotions, norms or standards of action, and values or ideal behaviors.

The study was conducted in the municipality of Zapopan between March 20 and April 20, 2020, during phase 1 (strict isolation) and phase 2 (managed isolation) of the pandemic response. Strict isolation permitted only the movement of individuals working in activities considered essential (food, health, transportation of food and health supplies). Managed isolation authorized sectors related to the sale of construction materials, mining, nuclear and forestry industries, agricultural machinery manufacturing, foreign trade, mutual societies, and credit cooperatives (GOB, 2020). Within this framework, the research aims to construct knowledge about creativity and education in the context of the pandemic, with an interest in contributing to the design and implementation of educational policies and actions at the basic education level.

To advance in the design of the fieldwork, it was essential to characterize the composition of the

participant universe: 24 individuals, including 4 teachers, 2 interpreters, 8 parents, and 20 students enrolled in the induction course for entry into secondary school. Of these, 20 identified as female, 3 as male, and one person identified as non-binary.

The age of the participants ranged from 12 to 15 years for students, and from 25 to 62 years for teachers, interpreters, and parents, with the majority being between 25 and 50 years old. Participants responded to an open-ended questionnaire administered via Google Forms. Participation was voluntary and anonymous. The interview guide was developed based on nine thematic axes, aiming to explore activities, interactions, technological resources, assessments, perceived difficulties, and innovations developed. Participants were informed about the objectives and scope of the research, as well as the confidentiality of the data and the strategies for preserving anonymity. Informed consent was obtained for participation in the study and publication of the results. The ATLAS.ti software was used for qualitative data analysis. Open coding was performed, and categories were constructed to systematize the data.

RESULTS

The primary finding was the construction of categories based on the theoretical-methodological framework, where the first element identified was:

1. Inclusive Pedagogical Practices

This category brings together the voices of teachers, interpreters, parents, and deaf students, highlighting the significant efforts made to ensure continuity in educational processes, enhance student learning, and address the complexities imposed by the current situation. Teachers, for their part, generate various educational proposals and take into account students' access possibilities. In addition to technology-mediated proposals, they develop multiple strategies to ensure that planned activities reach the students. Teachers and interpreters also consider the real possibilities for students to engage with these proposals (family situation, available resources, emotional context, etc.) and the need to address emotional, relational, and motivational variables so that deaf students feel included within their homes, where they now spend all their time.

Activities were initiated to help family members learn Mexican Sign Language (LSM), as well as to enable interaction through cooking, crafting, or even playing board games together. Many participants acknowledged inequalities and difficulties in accessing educational resources, a situation for which they developed strategies and alternatives to ensure that proposals reached all students. In other words, creative processes are employed not only in the design of activities but also in seeking alternatives to ensure that all students learn and are included in their social environment.

2. Creativity in Teaching-Learning Processes

This category encompasses the diversity of resources; in the words of the teachers, there is a marked interest in seeking varied tools for teaching. Activities include virtual resources (platforms, social networks, dictionaries, interactive games, virtual museums, Google Maps, etc.) and also draw on objects and relationships from students' immediate environments—animals, household items, and family stories are also “used” for teaching and learning. Teachers, with the help of interpreters, have developed innovative strategies for “teaching” through technological mediation (WhatsApp, Zoom, YouTube, educational platforms, audiobooks, educational portals, etc.) and the creation of audiovisual educational materials with subtitles to facilitate understanding (videos, audio recordings, PowerPoint presentations, etc.). They combine different resources and strategies, making modifications to lesson plans at various points during the quarantine. They continuously evaluate processes and make adjustments, demonstrating flexibility, divergent thinking, and the search for alternatives in complex situations. Participants' statements reflect the activation of creative thinking processes for problem-solving and self-regulation of teaching.

Teachers and interpreters have proposed activities that require the active participation of students and their families in the creation of concrete products such as homemade bread, masks, face coverings, plays, stories, games, windmills, models, songs, etc. These activities involve both students and their families, integrating curricular

content with concrete actions. There are also proposals that require input from different disciplines for the creation of a product. Families play a prominent role in achieving educational continuity, and some participants have emphasized the importance of communication between students and other family members through Mexican Sign Language (LSM).

The activities integrate conceptual, procedural, and attitudinal content, differing from traditional classroom proposals. Most tasks require skills and procedures mediated by technologies that are novel to teachers, interpreters, and students alike. Teachers and students record videos, create educational resources, share them on social networks, engage in group work, and share their productions. Teaching and learning spaces are being reconfigured, with many tasks involving increasingly broader audiences and circulating in various formats. “Visiting virtual museums, traveling via Google Maps, learning with video games, creating, editing, and uploading videos to YouTube and/or TikTok.”

[Mother 1] When the teacher told us all the materials we would need for the activities, I got stressed because, even though they weren’t expensive things, they did require my time. Additionally, the interpreter told us that we would need to be present with our daughter during the course hours, along with some other family members. Adapting and adjusting to the schedule was very difficult because I have more children and I don’t have computers or phones that can handle video uploads or video calls, but little by little, everything has worked out, and by organizing ourselves, everything is possible—we have even cooked together and put on plays. I think it’s all about overcoming laziness and breaking out of routine.

[Father 3] I even got angry with the teacher and the interpreter and told them if they thought I was rich enough to have computers, time, and money to not work and just be there watching my daughter in her course and be available for whatever she needed. The pandemic hit us at work, economically, and on top of that, schools were asking for computers and time. But after I explained my situation, they became more flexible,

and I was able to organize with my wife and other children to support my son Gustavo with the activities. So, whenever I can, I’m there; when my wife or my children can, they’re there. This has actually been beneficial, because now I’m learning LSM, which I couldn’t do before due to lack of time and motivation, but little by little, we are all learning LSM to communicate with Gustavo, and with the interpreter’s help, it’s very easy.

The educational proposals described by participants demonstrate diversity and alternative pathways; students can choose forms of resolution, resources, media, and objects. Many of the tasks are open-ended, meaning there is not a single way to solve them or a single final product. These types of tasks require creative processes from students as they foster divergent thinking, the search for alternatives, and different resolution procedures. In other words, students must plan actions, evaluate them, and redefine them according to their conditions and available resources. Previous studies have shown that open-ended tasks foster creativity, as do those that include varied resources and different forms of resolution. Activities that promote autonomy and self-regulation appear to encourage creative actions by students (Davies et al., 2013; Gajda, Beghetto, Karwowski, 2017; Richardson, Mishra, 2018). Echoing Lion (2020), we value teachers’ proposals as they include playful activities, promote student agency, and foster interactions with people and objects within the home.

3. Speaking through the Body

This category is based on Lion (2020), who proposes that creating spaces for dialogue, listening, and attention among teachers, interpreters, families, and students is essential for leaving meaningful marks in the knowledge construction process during COVID-19. The metaphor of cognitive tattoos as marks on the body clearly illustrates this category of analysis. Teaching and learning occur with the body and through interactions between bodies, even when these must be mediated by technology.

Participants emphasize the importance of face-to-face contact with students and families. Since it is not possible to share physical space, teachers develop various strategies to build interactions

mediated by technology, where they can see each other, converse in LSM, and interact with peers. Considering the particularities of the groups, teachers conduct video calls and send videos with students. This need is linked to curricular learning, but also, and fundamentally, to the need for emotional support. Several teachers report having carried out activities related to emotional education, specifically strategies for coping and expressing emotions in LSM about the pandemic and social isolation.

[Teacher 1] At first, communication was a bit disorganized, but we created WhatsApp groups and began to establish certain routines that included greetings, talking about how we felt, and looking for hopeful messages that could be in LSM. Then we would start with the learning and content we had planned. As the days went by, they became more involved and interacted with us and with each other.

[Student 1] At first I was embarrassed to play “guess the sign,” as the teacher and interpreter suggested, but little by little, I lost my shyness and started to have fun and laugh at myself and learn from my classmates. Now I feel more included in the group thanks to the camera, which helps you be present without feeling like you’re inside. It’s strange.

In cases where interaction through technology is not possible, we observed various pedagogical strategies to maintain contact and ensure continuity of educational processes. Sending photocopies, workbooks, and materials to students’ homes is a practice frequently carried out by some study participants. The analyses indicate that teachers “put their bodies into” the situation: they record videos and audios, implement strategies so that students can see them, hear them, and share experiences and emotions.

We observed that the possibilities for interaction vary according to the group, the availability of material and symbolic resources, and the organization of educational institutions. In some cases, teachers noted that at the beginning of isolation, interactions were not very frequent or were disorganized, but later became more structured and frequent. For underage students, interaction depends on the families’ willingness

and commitment to educational processes; in this sense, some teachers and interpreters point out difficulties and limitations. Face-to-face interactions are often limited by the availability of technological resources and internet access. Nevertheless, for deaf students, technology-mediated interaction was an ideal means of self-expression.

4. Agency during the Pandemic

In this category, it is important to identify the agency of the actors. For example, teachers also developed new learning from this complex situation that they had to face “overnight”: the potential of digital technologies and educational resources, strengths related to the ability to generate change and face situations, the irreplaceable nature of the classroom as a learning space, the importance of relationships, emotions, and the body in educational processes, the relevance of teamwork, and the implementation of interdisciplinary proposals. In addition to continuing to face difficulties in the educational process with deaf students, we wish to share some words from teachers that clarify the learning constructed and the potential observed:

[Interpreter 1] The classroom is a unique and irreplaceable place where a multiplicity of affections, feelings, gestures, etc., occur—things that cannot happen through a screen. The classroom is a space where every day, WONDERS happen among teachers, interpreters, and students. The pandemic helped me value the classroom.

[Interpreter 2] I am learning all the time. I think that, despite not being able to see my students, this way has created a stronger bond with them and their families, going beyond just learning content. Emotions are on the surface; feedback is very important for them. I have learned to better manage that part to motivate them and to know that even a minimal stimulus empowers their self-esteem and helps them move forward. Above all, using the body to express ourselves and helping students express themselves through their bodies.

DISCUSSION

The voices of teachers, interpreters, and parents highlight numerous difficulties, uncertainties, and conflicts; however, they also reveal transformative actions and a genuine interest

in creating new educational spaces and enhancing learning. Agency appears to be key in the construction of new educational proposals that take into account the particularities of groups and their socio-material conditions. The statements of teachers also indicate learning, developed capacities, and strengths identified as a result of the transformations brought about by the pandemic and social isolation. Teachers and interpreters identify changes and achievements, the potential of students and families, social inequalities, and ongoing challenges. In this complex context, the commitment to inclusive education and to continuing to create spaces for learning is maintained and even intensified.

Teachers report learning related to the use of different resources, teamwork, and the search for strategies to maintain connections at a distance. The statements of some teachers reflect creative and resilient processes; that is, they seek alternatives and new ways of doing things, considering the interests and needs of deaf students and their families. Teachers report that they are building learning not only related to teaching resources and strategies, but also—and especially—to relationships, emotions, empathy, and family engagement. Participants also mention learning related to flexibility, improvisation, openness, and collaborative work. As several authors note (Davies, 2013; Gajda, Beghetto, Karwowski, 2017; Richardson, Mishra, 2018), these conditions facilitate the development of creative teaching. According to Beghetto and Kaufman (2011), a certain degree of improvisation is indispensable for creativity in teaching.

Díaz-Delgado (2020) points out that, in the context of the pandemic, teaching strategies mediated by technology have been generated in an improvised yet resilient manner, recognizing the particularities of communities, the conditions of teachers and interpreters, and providing emotional support. In this regard, the reflections of Tranier, Bazán, Porta, and Di Franco (2020, p. 11) on this crisis as an opportunity to re-inaugurate social solidarity are particularly interesting:

To think about care, from a pedagogy of community inauguration as an ethic, means to continue the struggles for a solidarity that seeks to

become embodied in classrooms, outside them, and in all that is “engraved in memory,” in public policy, and in the heart [...] To turn this into an opportunity to imagine that these territories, fragmented by the pandemic, might begin to consolidate into networked territories, where borders are weakened and movements of resistance are strengthened, toward a political education of understanding and intervention with others.

This reflection also invites us to consider the role of creativity as a potential for the development of new projects of social organization (Cristiano, 2018) that include creative, inclusive, and solidarity-based actions. As Bocchio (2020) notes, beyond inequalities, the pandemic has revealed numerous practices of solidarity, especially among the most vulnerable sectors. Lion (2020, p. 7) concludes with a powerful challenge: “This pandemic is leaving us with many lessons. It will be up to us to take advantage of them to design a different, more democratic, just, and creative education.”

CONCLUSIONS

Teaching and learning during the pandemic has been the sustained commitment of teachers, interpreters, parents, and deaf students who participated in this study. Without disregarding singularities, complexities, and social inequalities, teachers and interpreters remain dedicated to continuing educational processes and developing innovative strategies to enhance learning. Creativity, as both a potential and a social process involving novel projects (Cristiano, 2018), plays a prominent role not only in the planning of educational activities but also in the search for alternatives to ensure that these proposals reach students and can be re-signified, taking into account the resources and particularities of each family. Teachers do not rely on a single strategy; they evaluate their practices, implement changes, and generate different alternatives. As a result, there are no uniform activities, but rather diverse plans that consider internet access, the availability of technological resources, and the commitment of families. Moreover, in the voices of teachers, there is explicit recognition of the interests and emotions of their adolescent students.

Teachers continue educating in a personal

environment that is also complex and unique; the overlap of professional, personal, domestic, and caregiving responsibilities characterizes life during the pandemic. Furthermore, teachers put their whole selves into the situation, recognizing the importance of relationships, meaning, and developing strategies to see, speak with, and listen to their students. These strategies are also novel, original, and address the particularities of students and their families. Teachers also acknowledge the importance of relationships with other teachers and collaborative work as a way of building networks that sustain pedagogical activities. The social inequalities observed both in the availability of material and symbolic resources, mean that the right to education is exclusive to certain sectors. The pandemic context presents a new landscape for reflecting on teachers' working conditions: What does teaching work entail? What resources are guaranteed? How is it perceived in terms of social prestige? Despite the efforts and commitment of teachers, many people do not have the opportunity to learn if they do not attend institutions. In this sense, it is necessary to reflect on the failure to fulfill the human right to education, highlighting the urgent need for comprehensive public policies that address inequalities and create favorable contexts for teaching and learning.

Throughout this study, we have sought to understand, from the perspectives of a group of teachers, the creative actions developed during COVID-19. We have presented a preliminary analysis limited to the group studied. Future research should consider other groups and contexts, address different variables, and analyze longitudinally the changes in creative actions throughout the entire process of social isolation. Additionally, it would be valuable in future studies to analyze in greater detail the social, material, and symbolic considerations of families and how these condition educational processes.

Based on the results of this research, we emphasize the importance of post-isolation educational policies valuing the commitment and effort made by teachers to continue teaching and to guarantee the right to education for millions of children, youth, and adults. Valuing teachers'

efforts should entail changing working conditions, avoiding the romanticization of teaching, and offering resources and recognition that allow for the modification of concrete material conditions. It is also necessary to acknowledge the creative practices developed by teaching teams, identifying their broad formative potential, and to generate educational proposals that ensure continuity of activities during and after isolation. New educational plans should also recognize the diverse learning achieved during isolation—learning that was not planned but was accomplished (theoretical, procedural, relational, emotional content, etc.). It is essential to develop public policies that address inequalities in access to digital educational resources and to collaboratively construct (with all members of the educational community) new calendars and contingency plans for crises and complex situations.

REFERENCES

- Álvarez, M.; N. Gardyn; A. Lardelevsky; G. Rebello(2020). Segregación educativa en tiempos de pandemia: Balance de las acciones iniciales durante el aislamiento social por el COVID-19 en Argentina. *Revista Internacional de Educación para la Justicia Social*, 9(3). <https://revistas.uam.es/riejs/article/view/12268>
- Administración Educativa Federal (AEF). (2020). Carta al maestro/maestra. Aprende en casa. Actividades para reforzar los aprendizajes esperados durante el aislamiento preventivo. México: Gobierno de México. Recuperado de <https://www.aprendeencasa.mx/aprende-en-casa/archivos/CartaMaestrasMaestro.pdf>
- Elisondo, R. (2015). La creatividad como perspectiva educativa. Cinco ideas para pensar los contextos creativos de enseñanza y aprendizaje. *Actualidades Investigativas en Educación*, 15(3), 566-588.
- Elisondo, R. (2018). Creatividad y educación: llegar con una buena idea. *Creatividad y Sociedad*, 27, 145-166.
- Beghetto, R.; J. Kaufman (2011). Teaching for Creativity with Disciplined Improvisation. En Sawyer, R. (ed.). *Structure and Improvisation in Creative*

- Teaching. Cambridge: Cambridge University Press, 94-109.
<http://dx.doi.org/10.1017/CBO978051197105.006>
- Metodologías Creativas en Contextos de Educación Desiguales: Estudio de Caso de Estudiantes Sordos en una Secundaria Urbana en Zapopan, Jalisco
- Berg, J.; C. L. Blum-Vestena; C. Costa-Lobo (2020). Criatividade e Autonomia em Tempo de Pandemia: Ensaio Teórico a partir da Pedagogia Social. *Revista Internacional de Educación para la Justicia Social*, 9(3).
<https://revistas.uam.es/riejs/article/view/12180>
- Bocchio, M. C. (2020). El Futuro llegó hace rato: Pandemia y escolaridad remota en sectores populares de Córdoba, Argentina. *Revista Internacional de Educación para la Justicia Social*, 9(3).
<https://revistas.uam.es/riejs/article/view/12473>
- Boletín Oficial de la República Argentina (2020). Aislamiento social obligatorio y preventivo por la pandemia COVID-19.
<https://www.boletinoficial.gob.ar/detalleAviso/prime-ra/227042/20200320>
- Canal Once (s/f). Canal Once "Historia". México: IPN. Recuperado de
<https://youtu.be/xyzBUkYgmag>
- Corazza, G. E.; V. P. Glăveanu (2020). Potential in Creativity: Individual, Social, Material Perspectives, and a Dynamic Integrative Framework. *Creativity Research Journal*, 32(1), 81-91.
- Cotter, K. N.; J. E. Pretz; J. C. Kaufman (2016). Applicant Extracurricular Involvement Predicts Creativity better than Traditional Admissions Factors. *Psychology of Aesthetics, Creativity, and the Arts*, 10(1), 2-13.
- Craft, A.; T. Cremin; P. Burnard; T. Dragovic; K. Chappell (2013). Possibility Thinking: Culminative Studies of an Evidence-based Concept Driving Creativity? *Education*, 41(5), 538-556.
- Craft, A.; T. Cremin; P. Hay; J. Clack (2014). Creative Primary Schools: Developing and Maintaining Pedagogy for Creativity. *Ethnography and Education*, 9(1), 16-34.
- Cristiano, J. L. (2016). Esquema de una teoría del agente centrada en la creatividad. *Papeles del CEIC. International Journal on Collective Identity Research*, (1), 1-25.
- Cristiano, J. L. (2018). Agencia, estructura y creatividad: tres modelos analíticos. *Sociológica (México)*, 33(93), 119-150.
<http://www.scielo.org.mx/pdf/soc/v33n93/2007-8358-soc-33-93-119.pdf>
- Davies, D., D. Jindal-Snape, C. Collier, R. Digby, P. Hay, A. Howe (2013). Creative Learning Environments in Education. A Systematic Literature Review. *Thinking Skills and Creativity*, 8, 80-91.
- De Sousa-Santos, B. (2020). La cruel pedagogía del virus / Prólogo de María Paula Meneses. Ciudad Autónoma de Buenos Aires: CLACSO.
http://209.177.156.169/libreria_cm/archivos/La-cruel-pedagogia-del-virus.pdf
- Díaz-Delgado, M. Á. (2020). Equipos directivos de educación primaria: improvisar la alfabetización digital durante la cuarentena. En Díaz-Barriga, Á.; S. Plá; J. Aguilar-Nery; P. Ducoing-Watty; M. C. Barrón-Tirado; A. Alcántara-Santuano; E. Ruiz-Larraguivel (2020). Educación y pandemia. Una visión académica.
https://www.iisue.unam.mx/investigacion/textos/educacion_pandemia.pdf
- Figuerola, H. (2012). Gobierno crea nuevo canal de televisión educativa Ingenio TV. *Excelsior*. Recuperado de <https://www.excelsior.com.mx/2012/08/30/nacional/856473>
- Gajda, A.; R. Beghetto; M. Karwowski (2017). Exploring Creative Learning in the Classroom: A Multi-method Approach. *Thinking Skills and Creativity*, (24), 250-267.
- Gobierno de México (2012). Plan de estudio 2012. Malla Curricular. Licenciatura en educación primaria, plan 2012. México: Gobierno de México. Recuperado de https://www.dgespe.sep.gob.mx/reforma_curricular/planes/lepri/malla_curricular
- Metodologías Creativas en Contextos de Educación Desiguales: Estudio de Caso de Estudiantes Sordos en una Secundaria Urbana en Zapopan, Jalisco
- Gobierno de México (2013). Programa de Inclusión y Alfabetización Digital (PIAD). Blog del

- Gobierno Federal. México: Gobierno de México. Recuperado de <https://www.gob.mx/mexicodigital/articulos/programa-de-inclusion-y-alfabetizacion-digital-piad>
- Gobierno de México (2020). Comunicado conjunto N° 3 Presentan Salud y SEP medidas prevención para el sector educativo nacional por Covid-19. Secretaría de Educación Pública Blog. México: Gobierno de México. Recuperado de <https://www.gob.mx/sep/articulos/comunicado-conjunto-no-3-presentan-salud-y-sep-medidas-de-prevencion-para-el-sector-educativo-nacional-por-covid-19?idiom=es>
- Google for Education (2020). Estrategia de Educación a Distancia: transformación e innovación para México. Propuesta integral frente al Covid-19. México: SEP/Tlaxcala. Recuperado de https://www.septlaxcala.gob.mx/comunicado/estrategia_para_educacion_a_distancia_contigencia_covid_19.pdf
- Glăveanu, V. (2018) Educating which Creativity? Thinking Skills and Creativity, 27, 25-32.
- Glăveanu, V. P.; Z. Sierra (2015). Creativity and Epistemologies of the South. Culture y Psychology, 21(3), 340-358.
- Glăveanu, V. P.; M. Hanchett-Hanson; J. Baer; B. Barbot; E. Clapp; G. E. Corazza; R. Sternberg (2019). Advancing Creativity Theory and Research: A Sociocultural Manifesto. Journal of Creative Behavior. <https://doi.org/10.1002/jocb.395>
- ILCE (2020). Acerca del Instituto Latinoamericano de la Comunicación Educativa. México: ILCE. Recuperado de <https://www.ilce.edu.mx/index.php/ilce/acerca-del-ilce>
- Ipri, T. A. (2010). Introducing Transliteracy: What does it Mean to Academic Libraries? College and Research Libraries News, 532.
- Lion, C. (2020) Enseñar y aprender en tiempos de pandemia: presente y horizontes, saberes y prácticas. Revista de Filosofía y Educación, 5(1), 1-8. <http://revistas.uncu.edu.ar/ojs3/index.php/saberesypracticas/article/view/3675/26>
- Lion, C. (2020). Mitos y realidades en la tecnología educativa. En: Litwin, E. (comp.) Tecnología educativa. Política, historias, propuestas. Buenos Aires: Paidós.
- López Obrador, A. M. (2020). Conferencia mañanera del 16 de abril. El Gobierno Federal y el presidente Andrés Manuel López Obrador (AMLO) anunciaron que el regreso a clases se suspende hasta el 30 de mayo de 2020 por la extensión de la sana distancia y el confinamiento o ampliación de la cuarentena por el coronavirus. Recuperado de <https://www.youtube.com/watch?v=Pjq0BuuNQqY>
- Nin, M. C.; M. I. Acosta; S. M. Leduc (2020). Pandemia en el siglo XXI. Reflexiones de la(s) geografía(s) para su comprensión y enseñanza. Huellas, 24(1), 219-239. <https://cerac.unlpam.edu.ar/index.php/huellas/article/download/4656/4946>
- Organización Mundial de la Salud (2020). Update of the Strategy in Front to COVID-19. https://www.who.int/docs/default-source/coronaviruse/covid-strategy-update-14april2020_es.pdf?sfvrsn=86c0929d_10
- Paek, S. H.; H. Park; M. A. Runco; H. S. Choe (2016). The Contribution of Ideational Behavior to Creative Extracurricular Activities. Creativity Research Journal, 28(2), 144-148.
- Metodologías Creativas en Contextos de Educación Desiguales: Estudio de Caso de Estudiantes Sordos en una Secundaria Urbana en Zapopan, Jalisco
- Richardson, C.; P. Mishra (2018). Learning Environments that Support Student Creativity: Developing the SCALE. Thinking Skills and Creativity, 27, 45-54.
- Ruiz, G. R. (2020). Marcas de la pandemia: El derecho a la educación afectado. Revista Internacional de Educación para la Justicia Social, 9(3). <https://revistas.uam.es/riejs/article/view/12355>
- SEJ (2020). Programa @prende 2.0 Programa de inclusión digital 2016- 2017. México: SEP. https://www.gob.mx/cms/uploads/attachment/file/162354/NUEVO_PROGRAMA_PRENDE_2.0.pdf
- SEP (2020). Boletín N° 75: Transmitirán sistemas públicos de comunicación, contenidos educativos durante el receso escolar

preventivo por Covid-19. Gobierno de México Blog. México: SEP.
<https://www.gob.mx/sep/es/articulos/bol-etin-no-75-transmitir-sistemas-publicos-de-comunicacion-contenidos-educativos-durante-el-receso-escolar-preventivo-por-covid-19?idiom=es>

SPR (2020). Quiénes somos. Sistema Público de Radiodifusión del Estado Mexicano. México: SPR. Recuperado de http://www.spr.gob.mx/secciones/es/quienes_somos.html

Tranier, J.; S. Bazán; L. G. Porta; M. G. Di Franco (2020). Concatenaciones fronterizas: pedagogías, oportunidades, mundos sensibles y COVID-19. *Praxis Educativa*, 24(2), 1-18.
<https://cerac.unlpam.edu.ar/index.php/praxis/article/view/4812>