

Influence of the pandemic on children's play and interaction in early childhood education

Influencia de la pandemia en la interacción y juego de los niños de educación inicial

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ABSTRACT

As a result of the pandemic caused by Covid-19, schools were closed in Peru and the possibilities of experiential learning and socialization in children were reduced. This research investigates the perceptions of preschool teachers about this problem, from a qualitative approach and through a questionnaire carried out to 54 participants of two Local Educational Management Units of Lima Provinces. Considering that at preschool children learn through play, observation, free exploration and interactions with their peers, the results show that by limiting these activities to distance education, children's learning and socialization has been affected, as well as their progression in different areas of development.

RESUMEN

A consecuencia de la pandemia originada por el COVID-19, en Perú se produjo el cierre de escuelas y se redujeron las posibilidades de aprendizaje vivencial y de socialización de los niños. Esta investigación indaga las percepciones de docentes de educación inicial sobre esta problemática, desde un enfoque cualitativo y mediante un cuestionario realizado a 54 participantes de dos unidades de gestión educativa local de Lima Provincias. Considerando que en el nivel inicial los niños aprenden a través del juego, la observación, la exploración libre y la interacción con sus pares, los hallazgos muestran que al limitarse estas actividades debido a la educación a distancia, se han visto afectados el aprendizaje y la socialización, así como el despliegue en las diferentes áreas del desarrollo.

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Introduction

In 2020 and 2021, a complex global phenomenon took place affecting people's lives at the social, economic, educational, and health levels: the pandemic generated by COVID-19 (Banco Mundial, 2020; CEPAL & UNESCO, 2020; Cifuentes, 2020; OMS, 2022; Quesada, 2021). One of the most affected segments of the population was early childhood, as their rights to health care, education, games, and recreation, among others, were severely limited. In the specific case of schooling, the possibility of accessing face-to-face schooling was restricted, and children had to adapt to the conditions required by the distance education (Ortiz, 2021). This difficult situation is discussed by Guerrero (2021), who states that the measures taken to

deal with the COVID-19 pandemic strongly affected children under six years old due to the social isolation resulting from quarantine and the sudden closure of schools.

Hence, children have been forced to interact through screens and leave aside outdoor activities and games, movement, exploration of materials, and face-to-face interaction with peers. In places where they did not have access to connectivity or mobile devices, these interactions were further restricted, as school activities were mostly conducted via WhatsApp (Cifuentes, 2020). In this context, we were interested in studying the impact of the pandemic on preschool children in terms of interactions and games, but from the point of view of the teachers who assist the children in the learning and socialization processes at school.

This research has a qualitative approach designed and aimed to accurately understand the teachers' perspective in this context. We used the online survey technique, which allowed us to gather broader information on the topic. The participants explained their impressions on the pandemic's impact on children's interactions and games. In order to have a wider spectrum of schooling experiences to analyze this impact, we agreed on the need to research this scenario through teachers who worked in different connectivity realities. We therefore chose two decentralized local education management units (UGEL), located in provinces of the Lima Department, and not in the capital, in order to cover rural and urban areas and learn about their reality.

Art. 73 of the General Law on Education n.º 28044 (Government of Peru, 2003), defines UGEL as "a decentralized executing agency of the regional government with autonomy in the area of its competence. Its territorial jurisdiction is the province.". The agency has four purposes: to strengthen the administrative and pedagogical management of schools, to promote local capacities and collaborative work, to channel the contribution of the various State agencies, and to adapt the policies of the Peruvian Ministry of Education (MINEDU) to the reality of the regions.

For this research we surveyed public preschool teachers, both in cycles I (9 to 35 months) and II (3 to 5 years). A total of 54 respondents were surveyed through a questionnaire via Google Forms. Regarding the UGELs where the study was conducted, one of them has a population of 1214 children who attend 61 educational institutions and 46 out-of-school early education programs (PRONOEI). Approximately 650 families are estimated to be served in the five zones covered by this jurisdiction.

The province is mostly rural, and Spanish is the native language; however, in one of the districts, they speak the Jacaru language; and in the southern part of the province, some towns have Quechua as their native language. Families are mostly involved in subsistence agriculture, livestock, and fish farming, although in the northern part of the province some also make a living from regional tourism. Informants from this UGEL report that, in general, economic income levels are low to medium, and that internet access is still limited in some rural areas.

The second UGEL involved in the study serves 5,287 children in 275 preschool centers; 1,048 attend 112 PRONOEI. With respect to the characteristics of the families, the informants emphasize that they are located in both urban and rural areas, they are culturally diverse and have low incomes, and that they mostly attend public schools. The main economic activities are agriculture for self-consumption and livestock raising.

Regarding the transition to face-to-face distance education, we must go back to the beginning of the pandemic and the first measures taken to establish quarantine as a result of the COVID-19 health emergency. On April 4, 2020, through Vice-Ministerial Resolution number 088-2020-MINEDU, MINEDU passed a technical standard with provisions for teachers' remote work in order to guarantee the continuity of distance education in public educational institutions and programs. General guidelines were provided for distance teaching and learning,

and the "Aprendo en Casa" (I Learn at Home) strategy was promoted, taking into account the different educational scenarios that are found in Peru, which include realities with and without connectivity in rural and urban areas. Likewise, in order to consolidate this strategy, regulations were passed for the provision of educational services in public and private institutions in urban and rural areas of regular primary education, within the framework of the COVID-19 health emergency, through Ministerial Resolution number 121-2021-MINEDU (MINEDU, 2021a).

The distance education strategy "Aprendo en Casa" emerged as a MINEDU initiative aimed at proposing learning experiences with cost-free access based on the national curriculum, for students of the different educational levels and modalities in Peru to continue learning through various communication channels. The channels used were the web, television, and radio. The activities were published weekly according to the students' level, age, and/or grade, so that they could carry out what was planned for each day. The educational institution determined the communication channels to be favored. This strategy was developed for two school years, 2020 and 2021. In 2022, MINEDU established that school development will be carried out in the blended learning mode.

However, in the case of the preschool level, students required the support of an adult to carry out the activities and to ensure access to some of the communication channels described above (MINEDU, 2021b.) This remote education experience revealed the need for those who accompany the child and the teachers to maintain a fluent communication to facilitate the distance learning process.

An essential issue to understand the "Aprendo en Casa" strategy is the educational differences between scenarios with and without connectivity – given the diverse economic, social, and cultural situations of children in Peru – that create gaps in both children's access to the educational system and their permanence in it. In some cases, they have access restrictions to internet services due to its high cost; but even when they do have access to this service, some families only have one device for all their members to enter the classrooms (Andrade & Guerrero, 2021; Bustamante, 2020).

Regarding the strategies that teachers used to communicate with children and families, the aforementioned factors also posed challenges in distance education because not everyone can access virtual platforms such as Zoom or Meet for synchronous classes. In this sense, the MINEDU (2020) suggested the use of WhatsApp, preferably for teacher-guided asynchronous activities, except in the case of video calls, which entail real-time interaction. Note that "the initial strategy, designed as a response to a specific context, has been enhanced beyond the scope of the health emergency to become a multimodal pedagogical proposal that has triggered innovation processes at the national, regional, and local levels" (MINEDU, 2021a, p. 12). This experience guidelines were applied to basic education in general, including kindergarten, primary, and secondary levels.

With regard to the impact of the pandemic on the comprehensive development of children under six years of age, Schonhaut and his collaborators (2021) argue that

their emotional and neurocognitive development has been directly affected due to the difficult situation they have undergone, and as a consequence of decreed isolation measures. Families have been incapable of protecting children from vulnerability and stress, or of guaranteeing play, learning, timely sociability, affection, or positive parenting, which has affected the children's proper development.

On the other hand, children's development has also been found to be affected with limited access to spaces and opportunities to play, interact, meet their peers, socialize, and chat with others. Accordingly, Guerrero points out:

Children have stopped playing; but not only that –parents and educators implicitly endorse this bodily and creative death, both individual and collective. Spaces and times for play are broken, thereby missing crucial stages in favor of a holistic and integrative development (Muñoz & Almonacid, 2015, pp. 167-168)

Guerrero (2021) also highlights that, although children are not considered a high-risk group, the pandemic's impact resulting from COVID-19 is especially significant on them because it limits their schooling possibilities and, therefore, their access to health, care, recreation, and food services provided by the Peruvian public education service¹, which directly affects their development, especially if they are in situations of poverty or vulnerability.

Now, if we consider "the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts", as stated in art. 31 of the Convention on the Rights of the Child (UNICEF, 2006), it is crucial for play to be exercised as a transcendent activity that drives people's integral development. This is endorsed by Factorovich (2021), when she points out that play is a universal language of childhood and that all children should play from birth, as it serves to know and explore the world; it is pleasant and also allows for learning.

Muñoz & Almonacid (2015) argue that play is liberating and delights children with its magic. Families and schools have a key role in this by providing basic playing experiences for the child. Through play, children can take on roles, characters, and situations to imagine themselves in other worlds where they can perform, create, and develop their imagination, creativity, self-esteem, relationships and interactions with others. A school is a unique space to encourage children to play and enable playful situations. "In fact, a school is the social institution in charge of transmitting culture, to create and recreate it, and to develop progressive socialization processes under the values and principles that society has determined." (Muñoz & Almonacid, 2015, p. 164).

Likewise, play permeates children's integral development in its different dimensions, from the physical dimension (when associated to movement and discovering their bodies), the social dimension (when they have the possibility of interacting with their peers), the cognitive dimension (when it allows them to learn), the creative dimension (when they can imagine, create, and solve problems), and even the emotional dimension (when they

create bonds with other people and express themselves) (Zosh et al., 2017). The scope of games is multiple because they "involve exploration, language experimentation, cognition, and social skill development" (Muñoz & Almonacid, 2015, p. 164). According to Factorovich (2021, p. 44), they also allow bonding between caregivers and children, since "play between fathers, mothers their sons and daughters, and between educators and children, is the way to an unforgettable and long-lasting emotional construction." Prinsloo (2004) argues that play allows children to develop their identity and put into practice the values of their home and culture.

Therefore, it is important to realize that the school can potentially favor interactions among children and take on a crucial value in their lives by promoting diverse learning and the acquisition of knowledge in the different areas of their development. According to Figueroa (2021), the social interaction that takes place at school enables the child's ability to think and reason. At the preschool level, interactions between teachers and students, as well as among the latter, are fundamental for the integral development of infants, since they allow socialization, play, communication, and imagination, and bridge the gaps in contexts of vulnerability or poverty.

Early interactions facilitate children's inquiry into family and cultural practices that will be useful for socializing, learning, and adapting to their group: "Through social interaction and participation, children are able to appropriate their own culture's knowledge" (Figueroa, 2021, p. 110).

Methodology & Materials

The research has a qualitative, exploratory approach and it used the survey, "a research method applied in quantitative and qualitative studies" (Tafur, 2020, p. 51). Qualitative surveys study the interactions between people, their perceptions, and the ways in which they communicate. They focus on the study of diversity, rather than on the frequency.

A questionnaire with seven open questions and twelve closed questions was used as a data collection technique. The former helped to learn about the participants' perceptions, while the latter were used to set the context.

The survey was administered via the Internet using Google Forms, so that the study participants could respond in a flexible manner and at their own time. The questionnaire's design considered information on the context in which the teachers worked, the educational service provided, the age of the children they served, the connectivity possibilities, and the use of communication devices for distance learning. They were also able to express their perceptions regarding the pandemic's impact on preschool children's interactions and play. A pilot test was conducted prior to conducting the questionnaire to validate the questions and adjust some of the wording.

A qualitative approach was preferred as it seeks to "understand phenomena by exploring them from the perspective of the participants in their natural environment and in relation to the context" (Hernández Sampieri & Mendoza, 2018, p. 390). The purpose thus is to take an in-depth look at a phenomenon, as well as at what the participants perceive. In this sense, "qualitative methods con-

¹ One example is the Qali Warma program, which aims to provide food assistance to children in kindergarten and primary school in public educational institutions throughout the country. This social program is provided by the Ministry of Social Inclusion (MIDIS) in coordination with MINEDU.

tribute to understand and interpret complex phenomena before proceeding to their quantification" (Balcázar et al., 2013, p. 16). The questionnaire with open-ended questions is an alternative to learn about participants' perceptions without the need to establish direct person-to-person contact. This tool can help obtain more accurate and reliable information as it seeks to explore the subjectivity of the interviewees (Álvarez & Jurgenson, 2003).

The research question was the following: What are the teachers' perceptions about the influence of the pandemic on preschool children's interaction and play? The objective, therefore, was to know and analyze these perceptions.

The selection of informants was limited to both UGELs where the study was carried out. This approach was intentional because we wanted to learn the opinions of several teachers with multiple experiences in distance education contexts, scenarios with and without connectivity both in rural and urban areas close to the capital, and who conducted their classes using different tools by combining synchronous and asynchronous activities. This variability allowed us to see the heterogeneous conditions of preschool education. For example, according to Flores and his collaborators (2020, p. 507), "Internet access in Peru is not widespread yet to the entire country, and there is greater access concentration in urban areas than in rural areas." We can mention the case of Huarochirí, one of the analyzed UGELs. As a location with minimum connectivity levels, the Government considered it a priority for urgent attention and included it in the region's "Integral Connectivity Project for Social Development."

As mentioned above, the questionnaire was created by integrating closed-ended and open-ended questions. The former helped gather general information on the context in which the respondents work, for example, the respondent's title, their classroom children's age, the means used to conduct remote education, the existing connectivity level, the type of devices used by families to access the classes, the type of sessions conducted with the children, and the frequency of synchronous and asynchronous activities. The open-ended questions asked about the school's characteristics, the activities they carry out with children in the remote education context, the resources used to promote interaction and play, the opportunities children have to interact with each other and, finally, the actions they consider appropriate to promote interaction and play in early education. The general categories were teachers' perceptions, interactions, and play in preschool education.

Analysis matrices were prepared to process the information and to identify and categorize the teachers' answers. Likewise, the answers to the open-ended questions were analyzed to present the respondents' testimonies. Finally, the data were organized for interpretation.

Results & Discussion

Among the 54 participants who answered the survey, 45 work in rural areas and 9 in urban areas. It is important to consider that these are participants from the provinces and that the urban area in these localities is reduced. Their roles are varied: classroom teachers, assistants, school principals, or PRONOEI promoters, who are educational agents that take care of children from 0 to 6 years

of age. This diversity enriches the study since opinions are gathered from participants in their different roles. The answers show that, for the most part, the respondents work in cycle II multigrade classrooms and take care of children from 3 to 5 years of age, for whose integral development interactions and play are fundamental.

According to the respondents, all the families used cell phones to access distance education. In few cases they had other devices such as laptops, computers, tablets, or printed material. The limited access to computers is troublesome, since it is a vital tool for performing activities in the context of distance education, especially asynchronous activities or those that require the child to interact with a program or play a game on a web page. Likewise, although all the participants declared that their families had access to a cell phone, this type of device is not always owned and used exclusively by the children, due to their young age. Fathers and mothers use the cell phone for their tasks or those of their siblings, which restricts the flow of required pedagogical activities. Another important aspect was that families needed internet service to interact via WhatsApp or video calls, which according to MINEDU (2020) is very expensive in Peru.

Regarding the type of activities carried out, 51.9% of the participants stated that for the teaching-learning process in the context of distance education, they conducted synchronous and asynchronous activities for both urban and rural areas. About 29.6% said that they only performed synchronous activities, and 18.5% only asynchronous activities.

The sessions proposed by the respondents to the children in the distance education framework favored psychomotor, literary, graphic-plastic, mathematical, and musical activities, among others. This was evidenced in the testimonies presented below:

D1: "D1: "Learning experiences where the areas are integrated and we conduct various activities such as literary, psychomotor, graphic, and plastic arts, among others."

D2: "All of them, including permanent, literary, mathematics, psychomotor, experiments, mini chef, gymkhanas, etc."

D8: "Reading plan, psychomotor skills, and different areas."

D9: "Creative activities that develop their learning in mathematical reasoning, research, literary, and psychomotor activities, and that help develop their autonomy and coexistence."

D54: "We carry out activities related to 'Aprendo en Casa', as well as music, story reading, development of psychomotor skills, body movement, among others."

Participants stated that they sought to integrate the areas and tried to ensure that the children would have experiences linked to play, art, and movement. This is related to the purposes of preschool education, which are detailed in the Preschool Curricular Program, *Programa curricular de educación inicial* (MINEDU, 2017): respect, safety, good health, autonomy, movement, communication, and free play.

Guerrero (2021) indicates that some public and private Peruvian institutions managed to adapt to the *virtual classroom*, by using a variety of digital resources to conduct activities that contributed to the pedagogical process and to achieving competencies. This was evidenced when the participants stated that they mostly performed synchronous and asynchronous activities, which may be related to the digital competencies they had to develop

because of the pandemic and the change in the educational modality that demanded a greater ICT proficiency. Another aspect to consider is that the respondents' ability of conducting this type of activities is linked to the virtual platforms available to the educational institutions, the access to freely available educational resources, and a connectivity that ensures continuity of these activities.

One aspect that stands out is that 18.5% of participants only performed asynchronous activities. This could be due to the context of the respondents and their educational institutions, to a geographical location where the signal coverage is minimal, and to the teachers' lack of knowledge on how to conduct synchronous and asynchronous activities in a balanced way.

In the case of the rural institutions, poor access to the Internet had a direct impact on the participants' level of communication with the children to ensure learning opportunities:

- D13: "The conditions are minimal due to poor connectivity."
 D21: "There are minimal conditions due to insufficient technological resources."
 D24: "There are not many opportunities because both telephone and internet signals are poor."
 D45: "Parents do not have internet."
 D48: "They cannot interact much because of the signal and they only have one cell phone for all their children."

Likewise, Guerrero (2021) emphasizes these difficulties by noting that schools located in rural areas of Peru, in addition to experiencing poor socioeconomic conditions, do not have the necessary infrastructure to conduct virtual classes. For this reason, the return to the face-to-face modality is urgently needed.

According to the participants, 44.4% of the synchronous activities were performed daily, 33.4% inter-daily, and 18.5% occasionally. The answers also reveal that 3.7% of the teachers did not perform synchronous activities. Regarding the frequency of asynchronous activities, 31.5% stated that they were performed occasionally; 29.6% that they were performed skipping a day, 1.85% twice a week, 25.9% daily, 1.85% according to the specific needs of the students, and 9.3% never.

It is assumed that the participants' effort to use synchronous activities may be related to the opportunities they wished to provide the children with to promote peer and teacher interaction, as well as to ensure the learning envisaged in the curriculum. Synchronous activities were also observed to take place on a regular basis, generally on a daily and inter-daily frequency.

As observed, since the pandemic and distance education, children's opportunities for interaction in preschool education have been restricted. In fact, 11.1% of the respondents stated that the children had no opportunity to interact with each other; 18.5% felt that there was little interaction; and 42.6% felt that they had some opportunity to interact with their peers in pedagogical activities. On the other hand, 9.3% of the participants stated that the children had many opportunities for interaction, and 18.5% that they always had the opportunity to interact with their peers.

Regarding means of interaction, most of the participants indicated that access was very limited for various reasons, such as poor connectivity, unavailable technolo-

gical resources at home, difficulty in sharing devices, and poor internet access:

- D4: "They interact very little because they are not in the classroom to socialize."
 D13: "Conditions are minimal due to poor connectivity."
 D21: "Conditions are minimal due to lack of technological resources."
 D24: "There are not many opportunities because both telephone and internet signals are precarious and does not help their interaction."
 D35: "Very few, because their parents overprotect them and do not let them be themselves."
 D48: "They can't interact much because of the signal and they only have one cell phone for all their children."

Within these limitations, for the case of families who had access to media such as WhatsApp, Zoom or Meet, the participants reported that they made group calls to the children and sometimes used platforms for learning, as observed in the following testimonies:

- D1: "Only in group video calls."
 D3: "Before classes start and sometimes afterwards, I let them use the room for a few minutes for those who want it."
 D7: "Sending audios, photos, videos."
 D9: "They give their opinion on another classmate's answer through WhatsApp and interact when we conduct sessions through Zoom."
 D52: "The days they log in at the same time on WhatsApp and Meet."

The testimonies confirm that preschool children's levels of interaction were limited in the context of distance education, especially because when they were able to exchange opinions or experiences with other children, it was for a very short time or in specific situations. The participants stressed the difficult connectivity conditions for a proper development of the virtual classes. Another aspect, related to the role of family accompaniment, became evident when they mentioned that the children did not express themselves freely during the classes because of the presence of the accompanying family member.

As for the resources used to promote children's interaction, the respondents highlighted dialogue, dynamics, interactive games, MINEDU's "Aprendo en Casa" platform, songs, dances, and puppets, as can be seen in the following testimonies:

- D1: "Video calls, with some games, dynamics that facilitate interaction."
 D4: "Interactive games, online stories, etc."
 D5: "Visuals, interactive games, PPT, concrete material, continuous dialogue."
 D9: "Images, audios, videos, music, posing problems, open questions, we ask for opinions, input about it."
 D19: "The Ministry of Education platform."
 D23: "Family games."
 D35: "Guiding parents, giving them plenty of information on the subject: talks, brochures and videos."
 D38: "Application sheets, storytelling with puppets, reuse materials."
 D45: "Making videos related to the activities."
 D53: "Videos, stories, audios, among others."

Participants used a variety of resources to promote play and interaction, and this would also be related to their knowledge of how to use these tools and how to put them into practice with the children. The use of videos, images and audios was found to be common.

Regarding the impact of the pandemic, 57.4% of participants considered that it affected the interactions of the children in their classroom significantly; 24.1% stated that the level of affectation was extreme. Those who stated that the impact was fair (9.4%), little (7.4%), and that they did not perceive any change in children's interactions in

their classroom due to the pandemic had lower percentages (1.9%.)

From these results, it is clear that a large majority of participants agree that the pandemic affected children's interactions significantly, in some cases extremely. It is necessary to recognize that the school is a space rich in interactions that favors the development of social and emotional skills. There, children have the opportunity to play, negotiate, express their ideas, ask questions, exchange opinions, establish agreements, among others. Interactions have a socioemotional impact on them and on their learning; at these ages it is essential to encourage cooperation and establish friendly relationships that allow them to understand how the world and their context work. At the same time, they enable families to value the emotional aspects that emerge from school education (Vargas et al., 2021).

When participants were asked how the pandemic affected children's interactions, they pointed out changes in their behavior and some specific traits related to self-confidence, spontaneous communication with peers, language, play, active participation in class, conflict management, development of autonomy, among others (Figure 1).

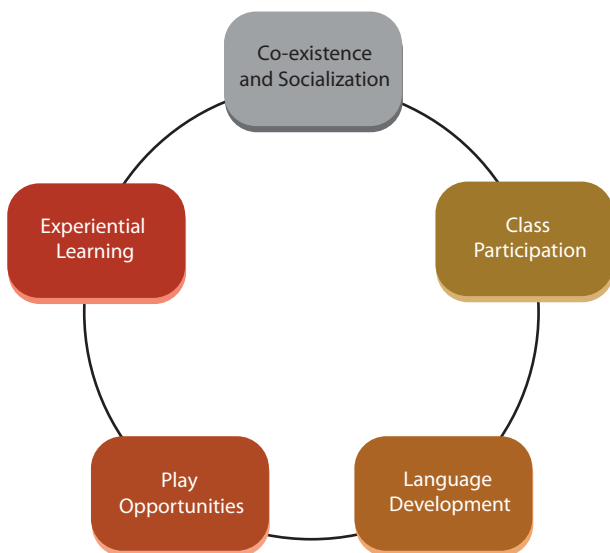


Fig. 1. Ways in which the pandemic affected children's interactions.

Source: Authors' own elaboration.

When we inquired about the impact on coexistence and socialization, as well as on opportunities for play, the participants stated that:

D35: "Children have become self-centered. They want everything for themselves. They don't want to share or talk to anyone".

D48: "Children are no longer able to explore and live with their age peers."

D54: "At the beginning of the year, the children were not very communicative. Over time some, not all, improved, because there is a group that does not have access to synchronous activities."

D10: "In the classroom they have more opportunities to socialize, improve their language, their oral expression..."

D16: "Due to lack of socialization, children are shyer and more aggressive."

D33: "Because they miss playing together."

D47: "It was a hard blow for the children to live in this situation because they could not socialize with their friends."

D24: "By not being able to use the classrooms, the children cannot interact with each other."

Based on the testimonies, it is observable that the lack of socializing opportunities had a significant impact on the children's development, especially at the socio-affective, communicative, and emotional level, which is fundamental at this age, as well as a necessary condition to favor learning.

Likewise, the respondents expressed their concern about the levels of children's participation in the distance learning classes:

D2: "Children do not want to participate much."

D3: "We work with very small groups. The time to work with them in front of the camera is limited, and physical contact is very necessary for them at that age."

D17: "They do not participate much in the questions posed by the teacher."

D51: "Shy children, together with lack of parental support."

When reviewing the pedagogical theories about meaningful learning in these ages, it can be observed what was stated by Ausubel (1981 & 2002): children's active participation is a decisive factor in achieving the expected results. In this sense, to the extent that children are the protagonists of their own learning, the knowledge acquisition process will be more meaningful. On the other hand, when children's opportunities to participate in class are limited, their interest in learning and sharing their points of view and impressions is reduced and their attention levels decrease.

With respect to language development, the participants stated that:

D9: "By not interacting with their peers, the children have not developed favorable language levels, conflict management skills among peers, or their autonomy, since most of the time the adult tells them what they should say or do."

D39: "Children mostly spend time indoors because of the pandemic, so it is hard for them to interact with other children and with me. Most of them are still not fluent and it is difficult for them to interact through WhatsApp."

In their testimonies on the influence of interactions on experiential learning, the teachers expressed that:

D52: "The most important stage in preschool children's development is the psychomotor part. It is very hard to work with children in this area through a screen or WhatsApp. The first thing is to guide the parents and have them carry out the activities with their children. But parents do not consider the development of these competencies to be important, nor do they give importance to personal, social or S&T [science and technology] competencies; they only focus on the areas of mathematics and communication."

As prescribed in the Preschool Curricular Program, *Programa curricular de educación inicial*, it is essential that learning be experiential and based on exploration and direct experience, because children need to apprehend the world through their senses. Likewise, experiential learning allows them to develop observation and to permanently question themselves in order to answer these questions, since children are epistemological beings (Páñez, 2004). In addition, experiential learning enables the development of scientific thinking skills since children formulate their hypotheses about a fact, anticipating some assumptions, and then contrast them with reality, confront them, and finally draw their own conclusions.

According to teachers, the types of games that children preferred were mostly those related to psychomotor

skills, movement, and body expression, followed by artistic activities, arts and crafts, technology, board games and, finally, experiments. Given the nature of children at these ages, where movement and play are fundamental for development, one can infer that the teachers sought to incorporate these types of activities, despite the limitations of distance learning.

Around 57.35% of participants felt that play opportunities were highly affected by the pandemic, and 20.35% stated that the impact was total. On the other hand, 11.1% of participants reported a fair impact; 9.3% reported little impact; and only 1.9% reported that the pandemic did not affect play opportunities.

Because of the pandemic, especially in the beginning and due to the rigorous quarantine measures, outdoor play opportunities were limited. Children could only interact with their nuclear family and within the household space. The consequences of this situation are reflected in the development of the children's social skills, but it also has an emotional impact that has repercussions in different areas of their integral development. Likewise, according to several research studies (World Bank, 2020; CEPAL & UNESCO, 2020; Cifuentes, 2020; OMS, 2022; Quesada, 2021) it is important that children learn through play and permanent contact with the environment that surrounds them, because this influences their routines. Physical development is fundamental at this age for the unfolding of their psychomotor skills. Distance education has limited experiential learning and direct experiencing, combined with an overexposure to screens due to the long time spent in classes.

Finally, participants were asked about the activities carried out to promote interaction and play in the context of distance education. In response, they mentioned activities to promote movement and experimentation, raising family awareness of the importance of play for children's integral development, creating or adapting digital resources to promote learning and interaction, and expanding Internet access to ensure proper connectivity for all. A group of participants pointed out that appropriate protocols need to be developed according to the reality of each educational institution, for a safe return to the classroom. The following testimonies illustrate some of these proposals:

D4: "Start activities with games that involve moving their bodies and experimenting with it."

D5: "In classes, have active pauses for body movement, psychomotor."

D9: "Occasional visits to assist students in groups, raise awareness of the parents' commitment to accompany them in the learning process."

D10: "Make our own classes with videos, preferably of the teacher inviting the children to record themselves in all their activities."

D16: "Make families aware of the importance of play for our children and their active participation in games where they acquire the best learning."

D24: "They should create protocols appropriate to the reality of each educational institution for the early return of classes."

D32: "The action to be implemented is providing the children with different educational play materials, because ours are scarce."

D33: "Hold a workshop to produce materials."

D39: "Hold small meetings on Zoom and let them share with each other so that they can get to know themselves."

D44: "More psychomotor activities."

D52: "Back to the classroom, there is no other way. I would be lying if I give you options."

D53: "Request to improve the network to improve connectivity."

Their testimonies reveal that, although the participants have a certain level of knowledge about the importance of play and interactions for preschool children, the context of distance education has presented various limitations to their proposals because the connectivity conditions and access to devices in Peru is highly variable.

As mentioned in the foregoing paragraphs, Figueroa (2021) states that social interaction is fundamental for children in school because it fosters thinking and reasoning, as well as socialization and play. However, as Schonhaut and his collaborators point out (2021), the pandemic's social isolation has restricted children's development possibilities. Even more so in the case of children who have limited connectivity and access to distance education, or limitations in the use of the Internet, whose networks, in Peru, are mostly concentrated in the cities (Flores et al., 2020).

Conclusions

Participants were aware of the impact on the interactions and play choices of preschool children in the distance mode, as screens limit the possibilities of sharing, conversation, spontaneous play, exploration, and learning linked to movement. They also stated that Internet access and device availability is a key factor for the proper development of virtual classes, especially for children under 6 years of age. In Peru, connectivity gaps are determining factors in access to distance learning. Children's most commonly used device for their education at this time was the cell phone, and teachers communicated and interacted with the children through WhatsApp or video calls.

The findings showed that the respondents made efforts to ensure the use of synchronous and asynchronous activities, which included psychomotor, art, mathematics, or music, among other activities, to achieve the learning planned in the curriculum. They found that children mostly preferred psychomotor games that enabled movement and body expression. During classes, they also considered technological and artistic activities, board games, and experiments.

According to the participants in this study, the pandemic and the resulting distance education had reduced the children's possibilities for interaction. The moments they had to communicate and exchange ideas or opinions were scarce, as for example, conversations on the Zoom platform, which had to be held in a specific manner and very quick. Teachers also noted that the poor connectivity conditions affected virtual classes.

Participants' most used resources in the virtual classes were dialogue, dynamics, interactive games, songs, dances, puppets, and activities on the "Aprendo en Casa" platform, with the aim of promoting children's interaction and play during the activities.

Most teachers stated that the pandemic has significantly affected children's interactions, especially those who did not have proper connectivity. The fact of not going to school, a space rich in interactions and which fosters the development of social skills, was restrictive, as the children had fewer opportunities to play, negotiate, express their ideas, ask questions, exchange opinions, establish agreements, etc. This was also reflected in the children's behavior: the respondents noticed difficulties in terms of

self-confidence, spontaneous communication with their peers, language, play, active participation in class, conflict management and development of autonomy, among others. In addition to this, there is the emotional impact, which will surely have consequences on the development of social skills and other areas.

As preschool children face a context of vulnerability, their teachers consider that a series of actions need to be developed to promote interaction and play with the context of distance education. Moreover, it is imperative that all the agents involved in the education of these children are aware of the importance of the protocols required in this health emergency to guarantee a safe and flexible return to face-to-face education, in a gradual and sustained manner.

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