

# Technology-Mediated Secondary Education in Paraguay: an Exploratory Study

Valentina Canese\*, Roberto Páez, Jessica Amarilla, Pamela Rodríguez

Universidad Nacional de Asunción, Paraguay

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## ABSTRACT

Researchers around the world have amassed vast amounts of information about ICT use in education. This study focuses on ICT use in high school in Paraguay and the changes that took place with the advent of the COVID-19 pandemic. The pandemic has forced governments to take quarantine decisions, confine people to their homes and delay daily activities in all social and productive spheres. In Paraguay, in terms of education, classes were suspended at all educational levels, forcing the authorities to establish contingency plans. The National Government, through the Ministry of Education and Science (MEC) established an Education Plan in times of Pandemic with the Project "Your school at home" which established training mechanisms for teachers in the country for the development of classes in the virtual modality of Distance Education, in addition to creating written didactic materials, audios and videos, plans and evaluation guides for the different subjects of the Secondary Education courses, available in an online portal as digital resources and freely accessible to the actors of the educational community. Through focus group interviews with secondary teachers from several regions in the country, issues related to the effects of the pandemic and government goals were discussed. Results evidence an urgent need for greater coverage and access to the internet, technological tools, and teacher training in such tools and in the didactics of Distance Education.

## 1. Introduction

The implementation of technology in the field of education has brought about changes in the teaching and learning process over time. ICT is understood as Information and Communication Technologies and is the most commonly used acronym to refer to the technological tools used to communicate, disseminate, store and manage information (Hamilton-Ekeke & Mbachu, 2015). Other authors agree that ICTs are used in the educational setting to "store, retrieve, manipulate, or transmit information electronically in digital form" (Firmin & Genesi, 2013, p. 1606). Similarly, Mahini et al., (2012) focus on the use of ICT in the planning and facilitation of computers for communication and teachings, as well as Kutluca and Ekici (2010), who focus on the use of computers as effective and enriching tools for the classroom process. However,

\* Corresponding author E-mail address: vcanese@facen.una.py

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other researchers have qualified the implementation of ICT in education as a more complex process that does not imply a single solution for the use of technologies in the classroom (Venkatesh, 2016) and therefore, they consider it important to also integrate new pedagogies within instruction (Firmin & Genesi, 2013).

This leads to rethinking the role of technology, those who use it in the classroom, and how they use it, since adding technological tools do not necessarily lead to an improvement in education (Hennessy et al., 2005) or to an efficient integration that benefits learning (Dwyer, 2015). That is why other research has focused on a more complex integration of technology in the teaching-learning process. For example, Mishra and Koehler (2006) focus on the importance of technological pedagogical content knowledge (TPACK) and how these aspects should be considered together for the implementation of technology in a theoretical, pedagogical, and methodological way (Mishra & Koehler, 2006; 2013). Other research is based on the TPACK model in the study of ICT integration as well as teaching experience with the use of ICT (Li et al., 2018; Mouza et al., 2014; Niess, 2007; Niess et al., 2009). It is also important to consider that for good integration, ICT should be part of the teacher training curriculum (Voogt & McKenney, 2016; Tondeur et al., 2013) as well as part of the student's classroom curriculum (Hamilton-Ekeke & Mbachu, 2015; Ahmadi, 2018).

The different research mentioned above seeks to generate a better understanding of the educational experience and to avoid or diminish the impact of the difficulties that arise during the integration of ICT in education. Such difficulties come in the form of a lack of training or time to integrate ICT into the learning process and improve classroom instruction (Siefert et al., 2019; Voogt & McKenney, 2016), lack of access to technological tools (Francom, 2016), especially for students and teachers who are in rural areas (Wright & Wilson, 2011), lack of relevance of the use of technologies by teachers as they are not compelled to implement technology if the institution does not have adequate resources or they do not see technology as a useful and important tool (Francom, 2016; Voogt & McKenney, 2016). Francom (2016) states that the number of students in the class could also represent a barrier to proper ICT integration as well as emphasizes the importance of administrative support to address such difficulty. Koehler and Mishra (2013) emphasize the importance of teacher support for ICT integration because while many teachers have training opportunities, these may be outdated due to the rapid evolution of technology. This in turn contributes to teachers feeling unprepared for efficient ICT implementation, let alone when learning to use ICT represents an intense effort that must be accommodated within the busy teaching schedule (Koehler & Mishra, 2013).

As illustrated above, the process of integration of ICTs tools into the classroom requires a complex combination of factors that include the role of ICTs in education, the types of teachers that make use of these tools, and the types of schools they are part of, as well as the availability of resources, their experience and purpose of technology for everyday use (Graves & Bowers, 2018). In other words, technology implementation requires conscious efforts that go beyond simply using computers. On that note, scholars have explored the role that teacher belief and their perspectives have on the implementation of ICTs in the classroom (Ertmer et al., 2015; Lubega, 2010; Li et al., 2018; Ottenbreit-Leftwich et al., 2010; Lu & Overbaugh, 2009). For instance, scholars have studied the level of ICT integration through the lens of the Expectancy-Value theory of motivation (Wozney et al., 2006). They studied internal and external attributions that affect ICT use and the values assigned to ICT by teachers. Teachers indicated the level of technology integration such as awareness, learning, understanding, familiarity, adaptation, and creative application. Moreover, researchers found a strong correlation between student-centered styles of teaching and high computer proficiency, as well as personal use of computers and their use in the classroom. In this study, teachers indicated the need for more training in the use of ICT tools to better address their students' needs (Wozney et al., 2006).

As the use of ICTs in education has also gained prominence in Paraguay, previous studies have addressed the topic considering its use for social inclusion (Prieto, 2014) or the impact of programs such as "One Laptop Per Child" (OLPC) administered by the non-governmental organization Paraguay Educa since 2008 (Sena, 2009; Elías, 2012), both in Paraguay (Misiego & Demellenne, 2015) and in Latin America (Elías, 2012). Misiego and Demellenne (2015) address issues related to pedagogical changes, socialization processes, and digital competencies with teachers in addition to participating in students' cognitive processes. On the other hand, the Ministry of Education and Science (MEC) has been implementing the program named "Improvement of Learning Conditions through ICT Adoption in Educational Institutions in Paraguay" since 2016 in search of improvements in the educational process from the integration of ICT in the classroom (FEEI). The 2018 report contemplates topics such as participation in training courses in the use of technology, the difficulty of incorporating technology in the classroom, and access to the internet and technological equipment (Aquino et al., 2018).

However, the present study seeks to provide information on the use and scope of ICTs in secondary education since there are currently no studies with such an approach. This study is part of a larger research project and is intended to report on teachers' experience with ICT implementation in the classroom. In this way, it is expected to inform and influence public policies that propose solutions for the improvement of the teaching and learning process in secondary education in Paraguay.

## **2. Methods**

The work presented in this article is part of a broader study that follows a mixed methods triangulation approach (Creswell, 2017). The results presented here are from the exploratory phase where the focus groups were used to learn about the opinions of secondary school teachers regarding the use of technology and the development of classes in the Distance Education modality. The selection process for the focus groups was carried out following a non-probabilistic sampling scheme, taking into account the geographical areas with the highest number of students enrolled in High School Education.

The members of the groups were chosen following inclusion criteria such as: secondary education teachers from the same school or region, secondary education teachers from the same area, and educational actors of secondary education from the same institution and/or institutions in the same region. These groups correspond to the following geographical areas: central department (2 separate groups of 6 members each), department of Cordillera (1 group of 5 members), department of Concepción (1 group of 5 members), department of Itapúa (1 group of 5 members) and the city of Asunción (1 group of 6 members).

During these meetings, the conversation was guided to address the following broad topics: availability of technological resources in the public middle-level educational institutions, where the teachers of the focus groups work, before and during the pandemic; internet access, before and during the pandemic, both for each teacher and student, as well as for the institutions; level of teacher training before and during the pandemic; the utility of MEC resources belonging to the "Tu escuela en casa" project; and, teachers' perception about the use of ICT after the pandemic. The questions that guided the discussions included the use of technological tools in daily life and whether they use such tools in their role as teachers, the degree of mastery of the technological tools used in the development of classes, training in the use of technological tools, technological infrastructure, availability at school, at home, virtual platforms: what platforms are used to conduct classes, their advantages, and disadvantages, as well as key challenges to be addressed in Secondary Education for the development of virtual classes.

The meetings were conducted and recorded using the Google Meet video conferencing tool. Subsequently, the recordings were transcribed using the Office365 automatic transcription tool. Once the transcripts were read and adjusted, a content analysis was performed using coding to generate analytical categories or themes resulting from these interviews. Thus, the following categories were identified: access to and availability of technological resources, resources and materials used, and teacher training. The results of the analysis are presented below.

### **3. Results**

#### **3.1. Access to and availability of technological resources**

Results indicate that 100% of the teachers reported that internet access is the greatest difficulty for the development of classes. Teachers in Asunción also mentioned the economic factor that prevents each student in their family environment from having access to a cell phone suitable for the development of classes, in addition to the cost of paying for mobile data for internet use in any company. A teacher expressed "...The teachers spent a lot of money during this pandemic to get items. WiFi connection that previously they didn't think was necessary because they had their data package on their phone and that was more than enough. Analog phones or phones that suddenly didn't have the capacity to do so many functions, today they have. If their computer was not in condition with cameras or any other element nowadays" (Cordillera teacher).

The availability of technological resources in the educational institutions where the teachers who participated in the focus groups are working is scarce and limited. Teachers from various areas reported, "I mean, since the beginning of the year, the first week I was with them, I already knew my reality, we didn't have a computer room" (Teacher from Central), "...there are no requirements to include technology in the classrooms, at least from the school administration and the school does not have computers for that... (Teacher from Itapúa). On this note, all the teachers indicated that in their institutions there is computer equipment either in Computer Labs or in Academic Secretariats, such as personal computers, mini-notebooks, notebooks, "the computer room has 15 computers and there are 30 or more students in the classroom, so it is no longer possible to use them because we cannot get everyone to use them" (Teacher from Concepción).

The teachers stated that the use of computer tools in the institutions is limited since in most cases they are exclusive to technical baccalaureate degrees in computer science or related subjects. The teachers from Cordillera, Concepción, and Itapúa indicated that the institutions have computer labs, but that the number of computers is insufficient to accommodate a whole group of students and not even those of an entire school. The teachers of Capital and Central indicated that the computer equipment does not receive the technical treatment of conservation and updating, and therefore stops working very quickly.

We used the TV and DVD a lot, right? And that was what we used before. Then some computers appeared, but in reality, they were mini notebooks. And then they started to have certain problems that we could no longer use... (Teacher from Asunción).

We don't have enough, we need more equipment (computer tools) and I think that after this (Pandemic) we will be using even more... (Teacher from Asunción).

Regarding the technological infrastructure required for the development of classes in times of Pandemic, 100% of the teachers indicated that they acquired notebooks, computers and/or high-end cell phones by self-management as expressed by them "...all the classmates made a great effort to acquire a notebook, to have Wi-Fi if it is available in your area, to work... (Itapúa teacher). The teacher had to upgrade their devices in order to cope with the educational process

from their own homes, "...the school has computers but no internet, so I bought one for my notebook and upgraded my phone plan to have more internet and be able to work" (Teacher from Concepción). They also indicated that the lack of technological resources is also the students' main difficulty. For this reason, 100% of the teachers indicated that the WhatsApp messaging service became the platform used par excellence for the development of classes as it was used to create group chats by schools according to the grade levels and subject matter as can be appreciated in the following excerpts.

We also tried to work that way with our students, we tried, we say that way because it was not possible because of the availability of the Internet for our kids. There were areas where the Internet was very, very bad and it was not possible to work with that. Some didn't have credit, etcetera, etcetera, etcetera. But we were able to use WhatsApp to work with the students. Exclusively we had to end up using Whatsapp and with that to communicate with our students and send and receive assignments. (Teacher, Central)

In the public sector, we work exclusively through WhatsApp. Because of the socio-economic condition of the kids, they usually said they could not afford the Internet hours they needed for TEAMS, for example. We tried using TEAMS, but it was not possible, just with WhatsApp, with explanatory videos. (Teacher, Central)

No, at night school, [we worked] with Whatsapp groups. I would share with them the exercises in PDF. And then I used my YouTube channel because I filmed the video through my YouTube channel and I shared it in the Whatsapp group, right? That's what I did in my public school. In the YouTube channel I already have a series of videos saved with the different lessons that I am going to present, right? The exams were also done via whatsapp form. That is, I created the Google forms on my computer and shared them in the whatsapp groups. And [it went] quite well, because it makes the work much easier, because it is automatically corrected and everything else, right? (Teacher, Asunción)

These are just a few examples of the way Paraguayan teachers referred to this tool (WhatsApp) as "the solution" to access and connectivity issues. As it can be appreciated, many teachers resorted to using WhatsApp as the main communication tool to share resources and assignments, answer questions and even evaluate students. The next section will discuss the resources provided by the government to support remote teaching.

### **3.2. MEC resources**

Paraguay's Ministry of Education developed the platform "Tu escuela en casa" for the development of classes in virtual settings. This platform contains learning resources and guidelines for teachers, students, and families, who can access them through the link [www.aprendizaje.mec.edu.py](http://www.aprendizaje.mec.edu.py). For teachers, the set of resources consists of daily lesson plans in PDF format; daily lesson plans in JPG format; a video tutorial; explanatory audio, and a Digital Learning Object for the playful fixation of the contents of each class if necessary. The platform also guarantees teachers the flexibility to develop their own lesson plans based on the essential skills and characteristics of their group of students. The teachers participating in the Focus Groups also expressed different opinions regarding the didactic materials used for the development of the classes.

All the participating teachers indicated that they had accessed the MEC portal and the didactic materials developed for the development of Secondary Education classes. The participating teachers from Cordillera, Concepción, and Itapúa admitted using the didactic materials provided by the MEC and also under the scheme and planning structured from the same MEC platform: "The homework or the activities, the contents sent by the Ministry through your school

at home, help a lot. We, the teachers, just had to reinforce it a little more. In our case, in rural areas ñamboguejy vaera ñane ñe'etepe chupekuéra the explanation. But it was very useful: (Teacher from Cordillera). Others used those resources with the support of other materials of their own elaboration "The MEC materials were useful, but the contents had to be adjusted to us and the students; in many cases, they were unrealistic" (Teacher from Concepción).

Teachers from the interior of the country indicated that the materials produced for Secondary Education should take into account the Guaraní language in order to be more accessible to students. In the capital city and the Central Department, opinions are more diverse. Some teachers indicated that the materials were very useful. Others from Technical High Schools indicated that there was a shortage or absence of materials adapted to their plans and that for this reason, they developed their own materials: "I decided to use and make adaptations in terms of activities. And I even regret not having made many more adaptations in terms of the activities, because that is where there were still more problems in terms of the wording or the approach, of the exercises or topics that were not very relevant, for example (Teacher from Asunción). A teacher from a technical school reports:

I am a teacher in a specific area, a health technician, and we had the problem that the MEC did not prepare (teaching materials) for us, just as it did for our colleagues. I know that if it had been prepared for us it would have been very practical. It took me a long time to look for the videos that had to be related to my area" (Teacher from Asunción).

Teachers from the Capital and also from Central indicated that in some institutions the use of the materials available in the MEC's Digital Resources Platform was mandatory. A teacher commented: "Yes, yes, at [our school] I had to use (the materials provided by the MEC). At first it was optional. But then we were forced to use them. In the second stage we were told that we had to use" (Teacher from Central).

The effort and the work and the dedication that the MEC has made is worth a lot because I can get everything down to the third year of high school. So it was worth a lot for me at least... (Teacher from Asunción).

MEC helped. It helped me a lot with the tasks to send, download and send. It was a luxury for me, really... (Central teacher).

From these excerpts, it can be appreciated that Paraguayan high-school teachers appreciated the resources provided by MEC, although they were not always sufficient for their teaching and they had to make or find their own resources.

### **3.3. Level of training**

Of the training received in the use of technologies before the pandemic, 100% of the teachers indicated that there was none or very little and that the MEC initiated virtual training mainly in the use of ICTs as the first contingency measures in the face of the pandemic. In the conversation, they agreed that they had to learn in record time the use of virtual platforms and the adaptations required for distance learning. All the teachers indicated that the training required and received was rather by self-management or collaboration among colleagues. This is expressed by a teacher from Cordillera " ...with respect to the training we had, we were also working on what the MEC is offering. But the MEC only offered Microsoft TEAMS, nothing else. So most of us opted for training courses offered by other institutions, and universities. And there we were learning. We were also training in other platforms such as Classroom, as I mentioned before, and nothing else. Everything is based on self-management" (Cordillera teacher).

The training mentioned by teachers who received formally by the MEC or the educational institution itself, in decreasing order of frequency in the response were: Use of the Microsoft TEAMS Platform, emotional Intelligence, and use of the MEC's Digital Resources Platform. The training mentioned by teachers, self-managed by them or in union with colleagues, in decreasing order of frequency in the response were: use of other virtual platforms: Zoom, Google Meet, Classroom, use of EXCEL spreadsheet, use of PowerPoint, and others applications such as Google Drive, Word, etc. Teachers emphasized the fact that they forcefully had to learn to adapt to the pandemic situation as can be appreciated in the following excerpt:

We learned, we learned, we learned, we were forced to learn and we did not learn everything yet. We learned, training was done with our own colleagues, with the directors who learned before. They learned before and trained us. Our colleagues trained us, the evaluators also, that's how it was. That's how it was at the regional center. And then training was offered. Some of them were paid, but by groups that were surely formed, right? But we did not teach. We were taught by our colleagues and we still haven't finished learning. Because then a lot of work came on top of us and we had no more time. That's how it was, we had no more time because everything had already advanced. We already had to attend to the students and we simply had no more time to continue. But we learned from each other, the directors taught us. We formed groups, many times we could not access because we had to be in another room when the training was given and so on. And then there was no more time, we had no more time. (Teacher, Cordillera)

This excerpt illustrates the sentiment shared by many of the teachers who participated in these meetings. They highlighted the fact that they learned a lot during this time, but at the same time that they still need to learn much more. Relatedly, teachers mentioned difficulties in using TEAMS as they were used to using other platforms with different characteristics (e.g., MOODLE). This can be appreciated in the following excerpt:

Personally, for example, I did get training through the MEC with TEAMS. But it was a bit difficult for me. I couldn't get into the same logic. I wanted to bring the logic of our MOODLE platform and I didn't have that logic and it was a bit difficult, right? And after they required us to use [TEAMS], that the students didn't use, that is, there were too many things at once... Suddenly, for example, we were required to upload the files of the plans and all that. The plans had to be uploaded to TEAMS and I used it for those things, to upload the plans, to upload spreadsheets. (Teacher, Asunción)

As mentioned above, other teachers did not feel completely confident in using the technological resources provided which later on affected their perception of the usage of ICTs tools. This was expressed by one of the interviewees as follows: "I feel sixty percent [confident]. I'm still missing a lot of things. For example, I see many things that I am missing, for example, those audios. I dreamed of sending audios and many times they didn't work for me. We did not see, we did not hear and it traumatized me. So I stopped using audio. And that's how it happened to a lot of people." (Teacher, Central). The excerpts above illustrate the complexity of the use of ICTs tools and resources and how the training received was not sufficient to address the difficulties faced by teachers who were used to other platforms for the development of their classes. In the next section, we will share teachers' views on their own ICT use vis-a-vis all of these previously mentioned categories.

### **3.4. Perception of ICT use**

The MEC opted for Microsoft's Teams platform for the development of virtual classes of the subjects of Secondary Education in officially managed schools, according to the Education Plan in times of pandemic. In this regard, the teachers who took part in the discussion had

different answers when evaluating the usefulness and effectiveness of the aforementioned platform. 100% of the teachers mentioned having received information on the training provided by the MEC both synchronously and asynchronously. Approximately 80% of the teachers admit to having received training in the use of the Teams platform. 50% of the teachers participating in the discussion admitted having tried to use the application for the development of virtual classes and then gave up using it. A teacher reports, “I could not transfer my learning to teaching, for example, one, because the students did not use it, right? and another because when they did not use it, neither did I” (Teacher from Central). Similarly, another teacher mentioned that “The greatest difficulty in using TEAMS were the students who did not know about it, nor did they want to, despite the fact that it was very interesting, we left it aside” (Teacher from Itapúa). All the teachers interviewed assume the fact that the application of Teams for synchronous classes involves high-quality Internet connectivity and the availability of technological resources such as high-end cell phones or computer equipment that most of the students indicate they do not have. A teacher from Cordillera mentioned, “If we are going to work with Microsoft TEAMS, it is practically impossible, precisely because of the connectivity issue” (Cordillera teacher).

Although we teachers received training for the use of the TEAMS platform, we even liked it, we saw its usefulness, but we had to stop using it because the students did not know or did not want to learn how to use it (Teacher from Concepción).

We trained with the people from the MEC remotely for the use of TEAMS, but since it was not mandatory for teachers, we ended up using the platforms we already had experience with, in my case ZOOM (Teacher from Asunción).

These excerpts illustrate how although teachers' views regarding ICT are positive, as they consider necessity of our current society, the conditions in which they find themselves having to integrate them into their practices make it very difficult for them to have an effective adoption of the tools which in turn may improve their level of use or the impact that they could have in students' learning. In the next section, we present a discussion of these findings vis-a-vis the current literature on the matter.

#### **4. Discussion**

The results of the exploratory study show the situation of secondary school teachers in Paraguay during the period of adaptation to the pandemic caused by COVID-19. The results coincide with other research conducted in similar contexts where adaptation to the virtual mode of teaching was immediate, bringing with it difficulties not only inherent to the virtual modality but also to the abrupt change of circumstances. The teachers interviewed indicate that although they received training on the use of Microsoft TEAMS, not all of them were able to make effective use of the tool due to the lack of availability of technological resources and the lack of use of TEAMS by the students. However, they reported that WhatsApp was the main tool for the development and organization of synchronous classes. Other studies agree that WhatsApp was the main means of communication between students and teachers during the development of classes (Santos et al., 2020; Mishra et al., 2020; Ferri et al., 2020; Fernández et al., 2020; Baptista Lucio et al., 2020). In the case of Baptista Lucio et al., (2020) the researchers highlight that although WhatsApp is the main communication tool between teachers and students, Facebook, Messenger, and phone calls are also used according to the school level of the students. So also for communication with parents, WhatsApp is the main tool, but video calls and social networks are also used depending on the school age of the student (Baptista Lucio et al., 2020). Ramos et al. (2020) in their study on teacher perception regarding pedagogical work during COVID-19 reports that some teachers consider that the widespread use of

WhatsApp has affected their privacy as students and parents have access to their private phone numbers. However, they consider WhatsApp an effective tool for feedback (Ramos et al., 2020). On the other hand, in a similar study in Paraguay, Picón et al., (2020) report that teachers used text messages for communication with students.

Despite the difficulties, several teachers highlighted that the use of the Tu Escuela en Casa platform and the materials sent by the MEC were resources that facilitated the planning of distance classes. It should be noted that not all teachers had access to the didactic materials provided by the MEC, which led some of them to develop their own materials, resulting in more work for the teacher. On this point, it has been shown that the implementation of technology for learning and teaching processes decreases the workload according to the perspectives of primary and secondary school teachers (Selwood & Pilkington, 2005). Other studies report that in higher education contexts, distance education requires more preparation by faculty (Kenny & Fluck, 2017). It is important to mention that the pandemic resulted in an abrupt change in pedagogical practices which led many teachers to be overloaded with tasks (Phillips & Cain, 2020; Giovannella, 2020). Similarly, in the higher education context, increased teacher workload due to COVID-19 is also reported (Marek et al., 2021), as well as student workload (Adedoyin & Soykan, 2020). Teachers who participated in the study by Ramos et al. (2020) mention that in some cases they did have an increase in work due to the creation of new materials, content feedback, and constant communication with parents and students.

The scarce availability of technological resources such as computers and cell phones represents an obstacle to the development of virtual classes. Also, the lack of access to a reliable internet signal is one of the major obstacles for both teachers and students. This problem coincides with the results of previous studies on the use of ICTs in times before the pandemic and during the pandemic (Francom, 2016; Wright & Wilson, 2011; Fernández et al., 2020; Jain et al., 2021). Similarly, another major difficulty mentioned by teachers is the lack of infrastructure for both teachers and students. While teachers may acquire better tools to cope with the school year, this is not the case for students. These results coincide with the study by Fernandez et al, (2020) where teachers report that students do not have the necessary tools and perhaps not even the skills to handle technology for academic tasks. Another study reports the lack of infrastructure for both teachers and students such as the lack of technological devices and the lack of unlimited internet for class development (Giovannella et al., 2020). Such a situation may affect educational quality as it represents an access gap that affects some educational actors (Giovannella et al., 2020).

The present study coincides with the current literature on the educational situation experienced by teachers at all educational levels. In Paraguay, although some teachers consider the support of the Ministry of Education and Science (MEC) appropriate through the implementation of didactic materials, it is still important to highlight the difficulties encountered. By identifying the strengths and weaknesses of the plan implemented by the MEC and the work guidelines of each educational institution, it is possible to make evidence-based changes to improve the teaching-learning process. In this way, it seeks to benefit not only the teachers of the educational institutions but also other members of the community such as students and parents.

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