Learning to Unlearn, and then Relearn: 
Thinking about Teacher Education within the COVID-19 Pandemic Crisis

Aprendendo a desaprender, e então a reaprender: uma reflexão sobre a formação de professores no contexto da pandemia da COVID-19

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ABSTRACT: For decades now, in the context of teacher education, we have been discussing the importance of paying attention to the fast and profound changes both in society and in people’s personal lives, as a consequence of the widespread use of new digital technologies. Yet, not much has changed in schools, where traditional teaching still rules. Students continue to be more knowledge consumers than active knowledge producers; besides, the use of technology for educational purposes remains as either a threat or an unattainable goal. However, the COVID-19 pandemic has compelled educational institutions to rethink the role of technology in education. In this article, we comment on the crisis that has struck higher education and how it has set our institutions and ourselves, as professors and teacher educators, into a deep process of rethinking our past practices and reimagining our future.

KEYWORDS: teacher education; COVID-19 crisis; digital technologies.

RESUMO: Há décadas, no contexto da formação de professores, temos discutido a importância de atentarmos para as rápidas e profundas mudanças na sociedade e na vida das pessoas, em decorrência da ampla utilização de novas tecnologias digitais. No entanto, pouco mudou nas escolas, onde o ensino tradicional ainda impera. Os alunos continuam a ser mais consumidores
de conhecimento do que produtores ativos de conhecimento; além disso, o uso da tecnologia para fins educacionais continua sendo uma ameaça ou uma meta inatingível. No entanto, a pandemia COVID-19 obrigou as instituições educacionais a repensar o papel da tecnologia. Neste artigo, comentamos sobre a crise que atingiu o ensino superior e como ela colocou nossas instituições e a nós mesmos, como professores e formadores de professores, em um profundo processo de repensar nossas práticas passadas e reimaginar nosso futuro.

**PALAVRAS CHAVE:** formação de professores; crise COVID-19; tecnologias digitais.

1. Introduction

In the context of teacher education, for decades now, we have been discussing the importance of paying attention to the fast and profound changes happening in society and in people’s personal lives worldwide, as a consequence of the intensification of globalization and of the widespread use of new digital technologies. These changes could have motivated schools to implement the necessary changes to blur the walls that separate the world outside schools and what goes on within the classroom walls, balancing students’ and teachers’ agency in the teaching/learning processes and attending to students’ diversity. Yet, not much has changed in schools. Transmissive traditional teaching still rules in schools; students continue to be more knowledge consumers than active knowledge producers; and using technology for educational purposes remains as either a threat or an unattainable goal. However, the COVID-19 pandemic, which closed schools and universities, has compelled educational institutions as well as teachers and students to rethink the role of technology in education. In this article, we discuss the crisis that has struck higher education and how it has set our institutions and ourselves, as professors and teacher educators, into a deep process of rethinking our past practices and reimagining our future.

2. The COVID-19 pandemic strikes public higher education

In the third week of March 2020, classes in public universities came to a halt due to the coronavirus pandemic that was beginning to spread in Brazil; in that same week, most private universities switched from the on-site mode to the online mode – in some cases overnight, in others over a weekend. Throughout the first months of the pandemic, the different paths public and private universities took to cope with the COVID-19 crisis were
in the news with headlines that called attention to what could be seen by some as the “inefficiency” of public universities:

Only 6 out of 69 public universities have adopted distance learning after shutdown due to COVID-19 (PAIXÃO, 2020, our translation)

During the pandemic, 22% of private universities have suspended activities and have not adopted remote teaching, says research. (NA PANDEMIA, 2020; our translation)

We know that in our times of too much information and too little time or desire to ponder upon it, many people get informed only by reading news headlines, without bothering to read the articles that refer to them. Thus, in this context, when one reads that 78% of private universities have migrated to online learning while only 6 out of 69 public universities have done the same since the suspension of presental classes in March, a sense of disapproval of public universities starts to grow. And it grows amid a series of discursive attacks public universities have been suffering since the election of our far-right president, Jair Bolsonaro. Just to give an example, our former minister of Education, Abraham Weintraub used to say that public universities grow marijuana; besides, he threatened to punish some of the most important Brazilian public universities for promoting what he called “brouhaha” in their campi.

However, the discursive aggressions public universities have been suffering for the last two years are not the only difficulties that they have had to endure; financial cuts have also been imposed to public universities, in a clear course of action to scrap them and then justify the need to privatize them. There is even a bill designed to implement the opening of public universities to the laws of the market: “Future yourself” \(^1\), in a literal translation.

The point is that the COVID-19 crisis has posed a number of challenges to public universities, such as: 1) regaining their symbolic capital

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\(^1\) Information on the bill Future Yourself (Future-se, in Portuguese) is available at: https://www.gov.br/secretariageral/pt-br/noticias/2020/maio/projeto-de-lei-cria-o-programa-universidades-e-institutos-empreendedores-e-inovadores-future-se and at https://www.politize.com.br/future-se-entenda-a-nova-proposta-do-mec/. Access on: July 23, 2020.
by succeeding in presenting themselves as relevant to society at large, and 2) finding ways to deal with: a) technology divide, considering that many students have no access to the Internet outside university; b) lack of technological infrastructure in the campi; and c) professors’ lack of familiarity with educational technology.

Regarding the first challenge, public universities have given an important contribution to society during the pandemic, as the news article “Public universities have done more than 800 studies to map coronavirus and find a vaccine, says association” shows:

According to [Andifes], 823 pieces of research are in progress to map the new coronavirus and to find a vaccine against Covid-19.

The studies mainly seek to:

- identify the viral genome of Sars-CoV-2, a fundamental procedure for the production of the vaccine;
- elaborate computerized systems for the detection of new cases of the disease;
- find types of cheaper tests
- and nationally produce pieces for mechanic ventilators.

Besides, the education institutions made 489 ICU beds and 2,228 common care beds available. Preventive actions are also in progress: there are 96 projects aimed at producing cleaning products, responsible for providing 992,828 liters of hand sanitizer gel and 912,000 liters of isopropyl alcohol.

According to Andifes, universities have collaborated for the production of protection equipment for health professionals and citizens in general: more than 160,000 facial protectors, 104 IPEs, 85,000 cloth masks, 6,000 aprons and 2,000 hoods have been produced by education institutions. (UNIVERSIDADES, 2020; emphasis in original; our translation)

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2 For more information on the contributions of public universities during the COVID-19 pandemic, read: Reitores debatem a importância das universidades durante a pandemia em live. UFRPE, 29 de maio de 2020. Available at: http://www.ufrpe.br/br/content/reitores-debam-import%C3%A2ncia-das-universidades-durante-pandemia-em-live. Access on: July 16, 2020.

3 Andifes is the Brazilian Association of Rectors of Higher Education Institutions.
As we can see, public universities may not have moved into online teaching overnight as some sectors of society may have wished, but they were by no means stagnated. The pandemic has created the motivation and urgency for public universities to look inside and face their reality: both in terms of infrastructure and in terms of the reality of students. In her article to Gazeta do Povo online, Graeml (2020), mentions research developed by Cetic (Study Center about ICTs) to check Internet access in different Brazilian regions, which found out that: the South-East and South regions of Brazil are the ones in which more people have access to the Internet, 73% and 69% of the houses, respectively; in the Center-West region, the percentage of access to the Internet falls to 64%, to 63% in the North region, and to only 57% in the North-East. This data, added to the fact that according to Palhares (2020), “70,2% of public university students come from families which have a per capita income of up to 1,5 minimal wage”, help us understand why it is so difficult for public universities to move into online teaching. A great number of public university students depend on the infrastructure of computers and software available at universities to study and research.

As for the second challenge, we are bringing here a little bit of the actions that the public institutions we work for have taken to prepare the conditions to restart classes remotely. At UFPR, these actions may be summarized as: investigating, reflecting, developing, proposing and assisting. Classes were suspended on March 16\textsuperscript{th} and two days later COMERE (Comission of Emergency Remote Learning) was created; on March 24\textsuperscript{th} another commission was created to identify students’ difficulties regarding digital inclusion. The information the commissions created in March was able to gather helped CIPEAD (Coordination of Distance Learning Policies Integration) to start, on April 6\textsuperscript{th}, the program “Online Knowledge during the Pandemic”. Since then, CIPEAD has been working hard to provide the UFPR community with both new work/teaching virtual spaces as well as information, tutorials and pedagogical assistance to academic and administrative work during the Covid-19 pandemic. Below we can see some of the actions taken so far:

**Formative workshops:** Distance learning courses schedule, web-workshops and other formative workshops for the UFPR community;
Tutorials for remote administrative work;

**Online Pedagogic Assistance Room:** direct access to the CIPEAD pedagogic team in order to get guidance regarding the use of educational technologies and the new online virtual learning environment that was created for online classes;

**Virtual UFPR:** information and tutorial about how to use the learning environment of UFPR;

**Open UFPR:** access to MOOCs offered by CIPEAD;

**Open Sign Language Center (CLibras):** sign language center for the inclusion of the deaf community;

**#SaberesOnlineCipeadUFPR:** suggestions of courses and cultural events that may enrich individuals’ online education and also offer quality activities for people to use during the quarantine time in which they are isolated at home;

**Sectorial initiatives:** space to promote the actions developed in the different Sectors of UFPR by the Educational Technologies Centers, professors as well as research and study groups (COELHO, 2020)

As a result of all these initiatives, and the constant contact with students’ associations, program coordinators and Sector directors, UFPR implemented, from July to September, 2020, the first three cycles of remote classes, in which professors were free to offer, or not, optional subjects, and students were free to attend, or not, the subjects offered. Since the beginning of the Pandemic, UFPR has adopted a respectful attitude towards its community and is trying to create the means to make it possible for professors and students to gradually move into ‘Emergency Remote Teaching’, understood as follows:

In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that

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4 Professors were requested not to offer compulsory subjects in the first three cycles of Remote Teaching.
format once the crisis or emergency has abated. The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis. (HODGES; MOORE; LOCKEE; TRUST; BOND, 2020)

The first three cycles of Emergency Remote Teaching created opportunities for professors and students to adapt to the specificities of teaching and learning online as well as to prepare to the fourth cycle, from November 2020 to April 2021. Differently from what had happened in the first three cycles, in this fourth cycle, it was expected that all professors offered subjects, and this time teaching compulsory subjects was recommended. We do not know yet what will happen after the fourth cycle of remote teaching at UFPR, but by now we can say that this gradual movement into Emergency Remote Teaching has enabled our university to fulfil its social and educational commitment while simultaneously valuing its constitutive diversity.

Similarly, at the Federal University of São Carlos, a wide range of initiatives was launched to help the inside and outside community to cope with the pandemic. The very first of them was the establishment of the Coronavirus Care and Control Committee (PORTARIA GR 4369), which has been working tirelessly in order to help prevent the spread of COVID-19 not only among the university staff and students, but also among the city population. Apart from the health products mentioned above, researchers from the Chemistry Institute developed a kind of cloth which is capable of eliminating the coronavirus in a very short period of time; the material was soon delivered to, at least, five companies to be used in cloth manufacture.

Some other actions were taken in order to inform people about the disease and science developments: alive quarantine, undertaken by the Open Laboratory of Interactivity for the Dissemination of Scientific and Technological Knowledge, involved the broadcast of live talks via social media to an open number of participants; coronaoquê? (coronawhat?) is a series of children aimed videos which associates scientific knowledge to the confrontation of the pandemic.

As for pedagogical issues, a planning committee was formed to evaluate the return of the classes in remote mode. The first action was
a survey among professors and students to know about their conditions for access to information resources. Due to a percentage of students who reported to have very limited or unstable access to the internet, with very limited data packets (6.3%) and who also claimed not to have access to a device of their own (6.3%), the Undergraduate Council decided to offer non-presentational courses to all of those who had the necessary resources and felt comfortable with this mode of instruction. Thus, a supplementary calendar was proposed and extension activities were offered between May 4, 2020 and July 3, 2020. From August 31, 2020 to January 16, 2021, disciplines of the regular courses started to be offered again in the online mode.

The description of some of the initiatives taken by both federal universities show that, differently from what was broadcast in the media, professors, researchers and all the staff have continued working very hard to find ways of coping with the difficulties imposed by the pandemic crisis, with careful attention to the well-being of our communities.

3. Literacies: critical, new and multiliteracies: a conflation of history, research and teacher education

In the same way the public institutions we work for are experimenting ways to reinvent themselves in this moment of crisis so are we as professors and teacher educators. We both belong to a nationwide literacies research group, coordinated by Dr. Lynn Mario T. Menezes de Souza and Dr. Walkyria Monte Mór – professors at the University of São Paulo (USP). For a decade now this group has been engaged in researching themes within the scope of critical linguistic education.

Our readings, discussions and critical reflections have led us, for example, to consider different phases of the concept of literacies in Brazilian education in the last half century or so. Monte Mór (2015a) understands that there are three main moments regarding the history of literacies in Brazil. According to her, the concept of critical literacy began to evolve in our country, in the early 1960s, before the term was even coined, in the context of the successful work Paulo Freire was developing to teach adults to read and write, by using a methodology that combined reading the word and reading the world. For Freire, it was not enough to decodify the written symbols printed on the pages of books, magazines, or newspapers; he understood reading was connecting texts to one’s own world. Words had to
make sense to the reader in a much deeper level. This meant that if his adult students were bricklayers engaged in the process of learning how to read and write, he would teach them first words such as ‘brick’, ‘bricklayer’, ‘house’, ‘build’, ‘building’, which were part of their world. However, he would not stop there; he would perhaps also ask them questions like: How many hours a day do you work as a bricklayer? Who benefits from your work? Is a doctor more important than a bricklayer? Why do you think so? What can you buy with your salary? How fair is it? In sum, Freire’s ‘critical literacy’ work would also involve making people aware about unequal power relations in the world as a seed for people to develop their agency and perhaps to try to improve their life condition and the life conditions of others.

Unfortunately, Freire’s ideas about what literacy meant conflicted with the interests of Brazilian politicians during the military dictatorship period that was established in Brazil in April 1964 and lasted for 21 years, until March 1985. Freire was accused of being subversive and of attempting to implement Communism in Brazil, and after being arrested a few times on account of his teaching thoughts and methodology, he left the country for a long period of exile.

Without Freire, Brazilian education kept its focus on the traditional teaching of reading and writing for the following two decades until the notion of critical literacy per se finally arrived here mainly by means of the work of the British Scholar Brian Street – it was the beginning of a second moment in the history of the concept of literacies in Brazil. Inspired by the books Paulo Freire had published in exile, Street had begun to criticize what he called ‘autonomous literacy’, which was similar to what Freire had called ‘banking education’. Autonomous literacy implied conceiving language as neutral and focusing on a singular notion of literacy that would be centered on language regardless of the context where language was being used, by whom and in what circumstances (STREET, 2003). In opposition to this autonomous literacy, Street proposed what he called ‘ideological literacy’, which

[...] offers a more culturally sensitive view of literacy practices as they vary from one context to another. This model starts from different premises than the autonomous model – it posits instead that literacy is a social practice, not simply a technical and neutral skill; that it is always embedded in socially constructed epistemological principles. It is about knowledge:
the ways in which people address reading and writing are themselves rooted in conceptions of knowledge, identity, and being. It is also always embedded in social practices, such as those of a particular job market or a particular educational context and the effects of learning that particular literacy will be dependent on those particular contexts. Literacy, in this sense, is always contested, both its meanings and its practices, hence particular versions of it are always “ideological”, they are always rooted in a particular world-view and in a desire for that view of literacy to dominate and to marginalize others […]. (STREET, 2003, p. 77-78)

Since the mid-1980s, the concept of literacy as social practice has been informing programs in teacher education in Brazil. The research area that is now known as Critical Literacy (CL) has been influenced by Freire’s ideas, which were later taken and then reworked by scholars such as Brian Street, in England; Allan Luke, in Australia; Walkyria Monte Mór, Lynn Mario Menezes de Souza and Clarissa Jordão, in Brazil; among many others. In the Brazilian context, specifically, the assumptions of CL became even more widely spread with the publication of Orientações Curriculares para o Ensino Médio (OCEM; Curriculum Guidelines for High School) in 2006 (BRASIL, 2006). For almost two decades now we have been investigating the ways in which language intermingles with issues like identity, locus of enunciation, power relations, gender, diversity, citizenship, and how all this affects teaching and learning processes.

As we have already mentioned, Monte Mór (2015a) sees Freire’s ideas as a first wave of the concept of literacies in the Brazilian context; a second wave being informed by Street’s concept of ideological literacy, more specifically, and by Critical Literacy studies more broadly. A third wave the author identifies, the one we are experiencing now, has started in the context of all the changes that began to occur in society as a consequence of the intensification of globalization and of the spread of communication technologies. These changes are in the background of the emergence of the New Literacies Studies, with its focus on digital tools as meaning making resources; and of the pedagogy of multiliteracies, with its two main pillars: the multiplicity of cultures and the multiplicity of modes of meaning making in contemporary societies.
These two more recent waves have posed both important challenges and great opportunities to teacher education. Several academic articles, books and book chapters have been published by members of the national literacies project coordinated by Monte Mór and Menezes de Sousa, tackling issues such as multiliteracies (MONTE MÓR, 2015a), visual literacy (FERRAZ, 2014; MIZAN, 2014), critical literacy (MONTE MÓR, 2015b; JORDÃO, 2014, 2015; DUBOC, 2014; SOUZA, 2011; MONTE MÓR, 2011), new literacies (TAGATA, 2014; ZACCHI, 2014), just to cite some.

4. Times of crisis; times of unlearning and relearning

It is with this research background and our experience as both professors and teacher educators in mind that we find ourselves, in this moment of crisis, looking at the metaphoric invitation this COVID-19 pandemic has sent us to revisit our praxis. If there is an invitation we can do nothing but accept, this is the one. This is a moment to rethink, reevaluate and reorganize our beliefs and our priorities of what can/should/must be part of language teacher education from now on, in terms of knowledge, practices, experiences and critical reflections – decisions that are very particular to each institution; to each professor. One important question we are asking ourselves at this moment is: if we can go back to “normal” after this pandemic, will we go back to teaching the same way we did before the COVID-19 crisis, disregarding all we have learned as a result of teaching and learning online in this period? Why? Why not?

As educators and people in the world, we understand we are not totally free to act as we might wish, nor are we totally controlled by what institutions and the broader society expect from us. We exist, live, work in this in-between realm of possibilities that we, with more or less struggle, carve for ourselves in our spheres of action. Regarding our choices, we understand that whatever we are able to, or decide to choose, our choices are always ideological – in the sense that they reflect the way we are constituted by our histories and experiences and the way we look at things; conditioned by the dialectical force that both allows and limits our actions; and oriented to keep the status quo as it is, or to change it.

Having worked with the concept of literacies for more than two decades now, we assume that using the plural form of this noun is a sine qua non condition. Plural because our contemporary, globalized and web-
mediated world is too complex for us to think that the concept of literacy, understood as only involving people in social practices of reading and writing, is enough to cope with the challenges we have to face every day in society at large, and even more so in times of crisis, when we have to unlearn/relearn practices we were already, at least to some point, comfortable with.

Certainly, when we think about initial teacher education in language programs in public universities, in a continental-size country such as Brazil – with its different social conditions, affordances and limitations –, of course, we cannot generalize the challenges that are posed to us in our loci of enunciation, believing that they are shared by language teacher educators in public universities all over Brazil. Although teaching and learning processes in public universities usually happen in on-site programs, this does not mean that different universities only teach on-site courses, mainly when now up to 40% of the curriculum of on-site programs in public universities can be taught online. Thus, the points that we bring here have appeared in our reflections as we look back at what has been happening in the programs where we teach, how we have addressed literacies-related issues so far and what we feel we need to change based on what we have been experiencing during the COVID-19 pandemic.

Despite the emergence of the digital revolution before the pandemic era, very few differences could be seen in schools and in higher education institutions. “Teachers still stand and talk from the front of the room” and “curricula still shovel out content”, say Cope and Kalantzis (2020). This can be one of the reasons why so many difficulties have been faced with online teaching and learning, which demand a good deal of familiarity with technological devices and online resources and platforms. More than that, it seems that the concepts of teaching and learning are still the same as decades ago, when knowledge was built within the walls of a classroom and the only resource teachers could count on was the textbook.

The activities educators have been designing for their online classes reflect the mismatch between old and new times: the content to be studied is presented by the teacher on an online platform, and, during the presentation, students are asked to turn their cameras and microphones off; learners read a text or watch a video and, individually, answer questions about them. Without interaction, classes get demotivating and tiresome and contribute to deepen social isolation. And why does that happen? Cope and Kalantzis (2020, online) help us answer this question:
Because when educators try to do the same old things online, the result much of the time is a step back. Most schools and most teachers are ill-prepared for the genuine and positive changes that are possible in the move online.

Back in 1996, an array of new social practices led to the emergence of the concept of multiliteracies and the proposal of a pedagogy to meet those ends (The New London Group - NLG, 1996). According to Cope and Kalantzis (2000), two main reasons gave rise to the Pedagogy of Multiliteracies: the influence of new communication technologies in meaning making and the social, cultural and economic impact generated by globalization. A return to the manifest produced by the NLG at that time allows us to consider the adjustments to be made in the teacher’s education curricula after COVID-19, especially with respect to the communications environment and new forms of building, producing and sharing knowledge.

Just like in the mid-1990s, we now witness the impact caused by technology on both communication among people and new social practices, which refers us back to the concept of “New Literacies” and poses an additional challenge to teachers and researchers: what is “new” again? In 2007, Lankshear and Knobel stated that the word “new” in “New Literacies” referred to the practices mediated by post-typographic texts, which involved new forms of producing, distributing and receiving texts through technology. Does this meaning of “new” help us deal with the technological issues we have been facing? This and other questions lead us to think about the importance of investing on digital literacies in teacher education programs.

Some professionals will certainly continue doing the same they used to do before COVID-19, but most of them will surely feel uneasy to ignore the need for change. In this respect, public universities play a very important role: to rethink teacher’s education, especially on what refers to digital literacy. At this exact moment, online classes are an imposition COVID-19 has placed upon teachers and students, but hybrid instruction, that is, a blend of on-site and online modes of teaching and learning, had already been implemented in some public universities before the pandemic, and now it seems that, at least to some extent, it may have come to stay. Although this is especially true of graduate and undergraduate programs, it does not mean that this kind of instruction is very far from being adopted in basic
education as well. That means public universities will probably carry out the task of providing in-service teachers with opportunities to learn how to use information and communication technologies in language teaching and learning and benefit from hybrid courses.

Research on pedagogical processes for online learning, undertaken at the University of Illinois, presents us with some advantages of an online environment. According to Cope and Kalantzis (2020, no page), first, students can be involved in content curation, taking over the position of “knowledge producers rather than knowledge consumers”, after all, they are already keen on searching and selecting information of their own interest; second, they can “work together in shared online projects”, which also helps to shorten social distance; third, students not only work together, but they can also benefit from “peer-review each other’s work”; fourth, students can progress at their own pace; fifth, they can learn how to use the available digital resources to prepare their assignments; and finally, they can be aware that learning opportunities are everywhere and not only within the walls of the school.

5. Taking the opportunity to unlearn the myth of the digital native and relearn issues related to digital literacy

The term ‘digital native’, used to characterize people born after 1983 – when the third generation of 8-bits video games was launched (DANTAS, 2018; online) – was coined by Prensky (2001), who also defined those who were born before that year as ‘digital immigrants’. However, Kirschner and De Bruyckere (2017) claim that the so-called ‘digital natives’ are creatures as fictional as the yetis, which is at the same time provocative and thought-provoking, considering that the term has grown very popular since its creation. The fact is that not only do Kirschner and De Bruyckere (2017) criticize the coinage of the term ‘digital natives’, they also argue that the non-existence of “digital natives” has a series of consequences for teachers and teacher educators.

As Kirschner and De Bruyckere point out, there are a number of problematic aspects associated with the term digital native. First of all, they call attention to the fact that Prensky did not create this term “based upon extensive research into this generation and/or the careful study of those belonging to it, but rather upon a rationalisation of phenomena and
behaviours that he had observed” (KIRSCHNER; DE BRUYCKERE, 2017, p. 136). Secondly, the term *digital native* is usually associated with students’ technological skills on one hand, and with the inability of teachers and educational institutions to support such skills in the learning process on the other:

Take, for example, Teräş, Myllylä and Teräş (2011) who state that there is “a gap between higher education and 21st century skills. Although these are the natural skills of digital native learners, they are not being supported in education” (p. 1) and Lambert and Cuper (2008) who state that “preservice teachers need to use multimedia technologies within the context of students’ familiar, technology-rich living spaces” (p. 264). (KIRSCHNER; DE BRUYCKERE, 2017, p. 136)

Thirdly, Kirschner and De Bruyckere question what we really know about the knowledge and skills of the *digital native* generation. According to the authors,

A growing number of research studies [...] in a number of different countries and cultures (e.g., Austria, Australia, Canada, Switzerland, the United States) question whether the digital native actually exists, let alone if their existence would be a valid reason to adapt education to them. These researchers found that university students, all born after the magical year 1984, do not have deep knowledge of technology, and what knowledge they do have is often limited to the possibilities and use of basic office suite skills, ® emailing, text messaging, Facebook , and surfing the Internet. (KIRSCHNER; DE BRUYCKERE, 2017, p. 136)

Thus, the point is how the non-existence of *digital natives* might impact teachers and teacher educators; and again, Kirschner and De Bruyckere put together a series of arguments that serve as food for thought. They cite Bullen *et al.* (2008), who argue that apparently “[university students] do not recognize the enhanced functionality of the applications they own and use (p. 7.7) and that significant further training in how technology can be used for learning and problem-solving is needed” (KIRSCHNER; DE BRUYCKERE, 2017, p. 136); and Kennedy and Fox (2013), who observed that
while students appear to use a large quantity and variety of technologies for communication, learning, staying connected with their friends and engaging with the world around them, they are using them primarily for “personal empowerment and entertainment, but not always digitally literate in using technology to support their learning. This is particularly evident when it comes to student use of technology as consumers of content rather than creators of content specifically for academic purposes” (KENNEDY; FOX, p. 76). (KIRSCHNER; DE BRUYCKERE, 2017, p. 136)

In their research, Kirschner and De Bruyckere found that the myth of the digital native needs to be deconstructed first in teachers’ minds so that teachers can put into perspective the belief that “their students possess talents and abilities that they do not actually have” (2017, p. 137). Teachers should also understand that they do need to work to develop their students’ digital skills, just as they work to develop “any other skills and competences, namely that they need to be properly taught and acquired before they can be applied” (KIRSCHNER; DE BRUYCKERE, 2017, p. 137).

If we take Kirschner and De Bruyckere’s research into consideration, and work with the assumption that our students most probably are not digital natives, in the sense that it is not because they have been born in times of digital technologies that they already know how to fully use and critically curate the resources they make use of, we will then understand that as teacher educators we need to adopt practices that can contribute to develop their digital literacy. This is especially important because in teacher education programs our students are already, or will soon become, teachers, and we believe that after the COVID-19 pandemic we can no longer postpone discussing issues like e-learning education and digital literacy.

In terms of teacher education, a series of practices can be said to be part of the educational process of becoming digital literate. These practices might include, for example: becoming familiar with different resources to be used according to different pedagogical goals; curating these resources in terms of their content, affordances and constraints; observing one’s feelings and beliefs regarding one’s and other people’s uses of educational technologies; understanding that we will never know all there is to know about educational sites, platforms and applications; being open to construct knowledge with our students, who might not be digital natives in Prensky’s conception, but who most probably are to some level quite confident with
new technologies; and fostering a positive attitude towards the unknown. We dare say that these practices, among many others, should more than ever be part of teacher educational programs in Higher Education from now on.

If we ever resorted to excuses not to use technology in our classes, or if we only peripherally touched questions regarding educational uses of technology in our classes, we have learned during this pandemic that we simply cannot pretend technology is not there anymore. However, the moment of crisis we’re living and our experiences with remote teaching and learning have also taught us that we cannot naively believe technology will save us, teachers, from the innumerable educational problems and challenges we face every day in our educational contexts in Brazil. Adopting a discerning and critical perspective regarding e-learning is more crucial than ever.

Cope and Kalantzis (2017, p. 11-12) point out that “it’s not the technology that makes a difference, it’s the pedagogy”. They introduce seven principles of e-learning so that we avoid using new technologies in old-fashioned ways basically reproducing traditional banking education, in Freire’s words. The seven principles they mention are:

FIGURE 1

Source: Available at: https://newlearningonline.com/e-learning

1) **Ubiquitous learning**, which calls attention to the fact that learning is not restricted to the walls of the classroom; students use their mobile devices to access the Internet and interact with other people on a daily basis, and this may result in moments of formal and informal
learning. Understanding learning as ubiquitous, and using platforms that promote ubiquitous learning is a way to change the “primary axes of knowledge and meaning making from vertical to horizontal” (COPE; KALANTZIS, 2012, p. 326); in other words, it is a way of decentralizing knowledge as moving from the teacher to students, and promoting knowledge that comes and goes in different directions – from teacher to students, from student to student, from student to teacher, from a member of the community to students, etc.

2) Recursive feedback prompts us to question the validity of evaluating students only through formal tests, for in such tests students can only resort to their memory; they cannot access their mobile phones, textbooks, or talk to their colleagues. In the end, they get a grade that “shows” how successful they were, and that’s it. The feedback that comes from a summative evaluation has little to add to students’ learning process; it only classifies students as good, medium or bad, according to their grades. The idea of using recursive feedback goes hand in hand with formative evaluation. This kind of evaluation focuses on the process, and not on the product, of learning experiences. Therefore, it mainly looks to the present and to the future, to what students can still do to improve their learning results; instead of looking back and feeling disappointed for not having achieved the expected learning goals of different disciplines. In times of e-learning, teachers can get data about students’ performance coming from different sources, including from applications as well as from pedagogical sites and platforms.

3) Multimodal meaning cannot be disregarded in education anymore. Allowing students to represent their knowledge in different ways, through different media, is both a question of respect to students’ diversity and to students’ agency. Certainly, students do not need to use technological devices such as computers and mobile phones to produce multimodal texts, but it is undeniable that online environments do facilitate the production of multimodal genres such as videos, vlogs, blogs, memes, which combine still and moving images, voice, text. We consider attending to students’ local cultures, skills and preferred ways of expression relevant. Moreover, we understand that using new technologies in new ways can potentially contribute to enhancing learning experiences, and this might be an argument for considering including digital literacies in our classes more seriously.
4) **Active knowledge learning** is an important concern in the Multiliteracies/Learning by Design pedagogy, as this reflects a reflexive rather than a traditional pedagogy. Within the scope of the Multiliteracies/Learning by Design pedagogy, Cope and Kalantzis (2015) ask what students can do to know, as they understand learning is not only a cognitive process, it is also an active process. Thus, they have designed a series of epistemic movements teachers can use as a repertoire of things students can do to know. This includes experiencing the known and the new, conceptualizing by name and with theory, analyzing functionally and critically, and applying appropriately and creatively. Active knowledge making is a principle of e-learning ecologies that work with the assumption that students do not have necessarily to be on the same page at the same time, students have different learning rhythms and standardization at schools does nothing but favor some students who better adapt to the school procedures than others, and this does not contribute to a more equitable education. This principle highlights learners as knowledge producers instead of simply knowledge consumers.

5) **Collaborative intelligence** is the principle that questions the importance of insisting on having students memorize class contents when nowadays almost everybody carries a smartphone that could very well be conceived as an extension of their minds. Cope and Kalantzis (2012, p. 331) call attention to three dimensions of collaborative intelligence: a) “the capacity to navigate to, critically review and then, if relevant, link to the knowledge of the world and the many perspectives on that knowledge that are nowadays available online”, b) “the social work of knowledge making, working collaboratively [...], the scaffolded feedback process where other people must be credited as knowledge contributors [...]”, and c) “the knowledge work of the learners is oriented to the community of learners”. In their CGScholar educational platform, students can publish their work, get comments from their colleagues and comment on their colleagues’ work. Through this exchange students learn much more not only about what they have worked on, but also about what their colleagues have worked on.

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5 Common Ground Scholar (CGScholar) is defined as “a place for the creation, publication and dissemination of new knowledge, from informal posts that prompt conversations among peers, to formal peer review and publication of knowledge”. Available at: https://cgnetworks.org/medialab/cgscholar. Access on: Aug. 10, 2020.
6) *Metacognition*, or thinking about thinking, is another key principle of e-learning ecologies, as Cope and Kalantzis understand it. The authors argue that it is important to position students as co-responsible for their learning and the learning of their colleagues. One way to achieve this is by creating rubrics students should use as a basis for the production of their tasks. These rubrics will also be used for the curation of their colleagues’ tasks, when they comment on how effectively their colleagues attended to the contents of the rubrics in their work. Having students exercise their metacognition is thought to be a way to help them become more responsible and independent learners.

7) *Differentiated learning* is a way of differentiating instruction in order to account for different students’ needs. This might involve assigning some students with more challenging work while others receive less challenging work, but everybody progresses in their needs and through different levels of scaffolding. Teachers can promote differentiated learning by giving students individualized projects, or projects that group students according to their needs; peer mentoring can also be adopted.

We believe that in times of crisis, when we are being compelled by circumstances to face digital literacies in our teacher education programs, taking these seven principles of e-learning into consideration may be quite insightful. They help us problematize the misleading overspread belief that our students are digital natives, that our students’ students will be digital natives, and that simply using educational platforms such as Edmodo, Google classroom, Flipgrid, Padlet, Picklers, Kahoot, just to cite some among many others, in our classes is enough to promote the kind of discerning and critical attitude towards the uses of technology in education we mentioned before. What Cope and Kalantzis call attention to is much deeper than that; they point at how we should use technology in order to promote learning experiences that are engaging, thought-provoking, participative, collaborative; learning experiences that account for students’ diversity in many different senses: their learning styles and rhythms, their different cultures, skills, abilities and difficulties.

6. How can we move forward amid and after the Covid-19 crisis: our “final” remarks

The pandemic has provided us with an uphill battle and, all of a sudden, we were obliged to move out of our personal comfort zones and
accept the fact that the long experience we have had as professors and teacher educators was not enough to survive the educational crisis imposed by COVID-19. Much of what we used to do had to be reinterpreted to allow new practices to take place. In Spivak’s words, it was necessary to unlearn the privilege and then learn to learn from below (SPIVAK, 1994). Obviously, Spivak was not referring to a situation like the one we related in this paper, but her ideas allowed us to think of the necessary movements to become a new teacher in such a new era. The first step is to look at the traditional practices and to reconsider “the positions that once seemed self-evident and normal” (MOORE-GILBERT, 1997 apud ANDREOTTI, 2007, p. 75), that is, to unlearn. Only then comes the second step – the one which really leads to changes – learning to learn, which involves breaking up with old paradigms and being open to read the world through different lenses, paying attention to what needs to be done to reach the Other.

Like it or not, it is not possible to continue facing digital technologies as a threat to our performance and practices. As we have said before, digital technologies entered our classes with the pressure of COVID-19, but they will not leave when the pandemic is over. Thus, unlearning is urgent for the time which is about to come. More than that is our need for relearning. And we can start by looking over the university walls into the basic education schools to find out what their needs and expectations are.

Regarding the question if we intend, or not, to go back to teaching the same way we used to when the pandemic is over, at this moment we can say that we have a clear feeling that it will not be from day to night, or even in a decade (if ever), that we and our students will have the favorable conditions we would like to have to invest in the use of new technologies in on-site classes or in hybrid teaching and learning experiences. But we do not think this is a reason for us not to try to do things differently. We believe it is about time we made more effective uses of technology in our classes and investigated more critically the affordances and limitations of different devices, applications, platforms and sites to promote different learning experiences to our students.

The pandemic is teaching us, educators, new ways of doing things, very different ways, indeed. It has been painful, but, it seems, a lesson can be taken from all of this: our classes will never be the same again, for better or for worse.
Author’s Contribution

Before properly sitting to produce this article, we had a few Google Meet sessions to plan what we would like to discuss. One thing was clear to us from the start: we wanted to talk about how our institutions and ourselves have been reflecting about teaching and learning during this pandemic and then later when the pandemic is over. Both authors worked collaboratively in the production of this paper, exchanging ideas about each section. Alessandra Coutinho Fernandes authored the following sections of the article: Introduction, Section 3 and Section 5. Alessandra Coutinho Fernandes and Sandra Regina Buttros Gattolin co-authored Sections 2 and 4. Sandra Regina Buttros Gattolin authored Section 6: the final remarks, and worked on the formatting and submission of the article.

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