TEACHING IN THE PANDEMIC ERA: TECHNOLOGIES IN ENGLISH LANGUAGE TEACHING TO THE DEAF

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▪ ABSTRACT: The world has been facing the greatest challenge of the 21st century since March 2020, when educational institutions in Brazil had to interrupt their classroom activities, adopting productive isolation and remote teaching. From this perspective, we felt compelled to produce this qualitative work, of a bibliographic character, to draw reflections on technologies in the teaching of English to deaf students in the Pandemic Era. Data show that the world has been changing and a considerable number of teachers and students are facing some challenges due to it, especially as the school reality had to move to a completely different space. Therefore, the public education system needed to reinvent itself to make it possible to share knowledge through digital information and communication technology. Bearing that in mind, we described and indicated possible uses for seven apps and extensions, which allow deaf students to learn through visual, contextualized activities. In conclusion, we advocate that Brazil must invest in scientific research, in strengthening education systems, in education measures, in continuing teacher education and training, and in the development of educational policies that address the new demands of education.

▪ KEYWORDS: Pandemic; English language teaching; technology; deaf.

Introduction

The world is currently facing the greatest challenge of the 21st century. "The pandemic of the disease caused by the new coronavirus 2019, COVID-19, has greatly impacted the world scenario, aggravating the rates of morbidity and mortality" (PIRES BRITO *et al*., 2020, p. 54). Faced with this scenario, in March 2020, educational institutions in Brazil had to interrupt their classroom activities, adopting productive isolation as well as remote teaching.

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One of the objectives of social isolation is to assist humanity in controlling the impacts of the epidemic on society. This fact highlighted the clear need to train and qualify professionals in the field of education to face new challenges in teaching and learning, especially in the context of public schools.

Teachers, for example, were forced to resize content, spaces, and times imposed by remote education in the digital environment, to make use of applications (apps), social networks, and active methodologies for teaching, and, mainly, to reflect and question themselves about the best ways to exchange knowledge with students in the so-called "new normal", in order to achieve previously established pedagogical goals.

From this perspective, we felt compelled to produce this qualitative work of a bibliographic character (TRIVIÑOS, 2015), which is in its initial phase. It aims to draw reflections on technologies in the teaching of English to deaf students in the Pandemic Era. More specifically, our purpose was to answer the question: what are some challenges and possibilities regarding the use of technology in English language teaching to the deaf during the COVID-19 pandemic?

To achieve our objective, we sought to base our discussion on Almeida (2021), Brasil (2017), Ferreira and Bastos (2020), Antunes Neto (2020), and Pires Brito *et al.* (2020), among others.

In our study we discuss in the first part some impacts of the pandemic on our society, then we deepen our discussions regarding English language teaching, deafness, and technology. After that, we suggest some digital apparatuses, which may help in the teaching of English to the deaf. So, we draw some conclusions and propose some reflections on this challenging reality.

Some impacts of the pandemic

Debates on Covid-19 and its impacts have intensified in face of the uncertainties caused by the pandemic (FAUSTINO; SILVA, 2020), whose progress and consequences required quick and conscious measures on the part of different spheres of human activity in order to preserve the population (PIRES BRITO *et al.*, 2020). Such measures, based on a solid scientific basis, promoted and guaranteed the strengthening of strategic actions to face COVID-19.

Yet, in face of so many uncertainties and gaps caused by the pandemic, many Brazilian teachers remained at home (FAUSTINO; SILVA, 2020). As Faustino and Silva (2020) rightly point out, the 21st century brought us the era of technological sciences and the evolution of the way we learn and teach. Certainly, we have been experiencing an educational transformation during the pandemic.

In this sense, teachers have sought to discover possibilities for their teaching practice and to better understand the remote teaching format. Even so, there is no way to deny the negative and worrying repercussions in the educational sector because of the discussions on the directions for education in the country (FAUSTINO; SILVA, 2020).

Following the interruption and the educational response to Covid-19, UNESCO (2020) released data that indicate an impact on approximately 70% of the student population in the world, who were in isolation. According to UNESCO (2020), at the peak, more than 1.7 billion students were affected. The research pointed out, at the time of publication, that the number of children, young people, and adults who did not attend schools or universities because of COVID-19 increased significantly.

According to Faustino and Silva (2020), replacing face-to-face classes with online ones was useful and effective, endowing teachers with autonomy and maturity, as well as access and skills with technological resources. However, this did not seem to be the reality, as many schools either remained inactive or struggled to maintain activities, especially if we consider info-excluded students.

As Coelho (2020) and Faustino and Silva (2020) well put it, promoting remote education at all costs can lead to the exclusion of students, instead of installing an education without borders, especially in the case of students who live on the peripheries, in the countryside or cities other than the school location (FAUSTINO; SILVA, 2020).

In this sense, what is expected, as Martins and Almeida (2020, p. 223, our translation) put it, is that the Digital Information and Communication Technologies (DICT) used

> [...] are interfaces of joint constructions, in synchronous and asynchronous forms, enhancing debates, critical thinking, creativity, doing together, reflections on the social experience imposed by the pandemic, effective and loving communication, the curriculum integrated with the reality of students, multidisciplinary curriculum acts that bring teachers together, projects that can be carried out to find solutions to contemporary problems and so many other discussions necessary for quality education and that become essential to the formation of citizens ready to deal with the new world that is coming.[1]

This scenario highlights a transformation in education that may permeate the Post-Pandemic Era. In this sense, some specific reflections on technologies for the teaching of the English language to deaf students will be outlined in the following topic.

Technology and teaching during the COVID-19 pandemic

The world has been changing and a great number of people are facing some challenges due to it. It would not be different with teachers and students, as the school

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[1] Original: "*sejam interfaces de construções conjuntas, de formas síncronas e assíncronas, potencializando os debates, o pensamento crítico, a criatividade, o fazer em conjunto, as reflexões a respeito da experiência social imposta pela pandemia, a comunicação efetiva e amorosa, o currículo integrado com a realidade dos estudantes, atos de currículo multidisciplinares que reúnam professores, projetos que possam ser realizados para encontrar soluções para problemas contemporâneos e tantas outras discussões necessárias para uma educação de qualidade e que se tornam essenciais à formação do cidadão pronto para lidar com o novo mundo que está por vir.*" (MARTINS; ALMEIDA, 2020, p. 223).

reality needed to move to a completely different space. Thus, we are living in a digital era that is full of connections and possibilities. Although it is not new, it still brings challenges to be overcome, which shows us that more research needs to be carried out concerning this theme.

In this context, the use of digital apparatuses in Brazil is encouraged by the Common National Curriculum Base (CNCB) (BRASIL, 2017) which is a document that subsidizes regular education in the country – therefore, another reason to widespread and make the use of this type of instrument more accessible in these spaces.

Thereby, it is essential to recognize the potentialities of using DICT to teach in the 21st century (CANI *et al*., 2020). We are in an era in which more students have access to digital technologies so that the teaching of additional languages using these instruments can promote successful possibilities and experiences (FREI *et al.*, 2011; MACHADO; MATTAR, 2020). We assume that this openness exists as a result of the ease that these means bring to the classroom. Also, it places the learners in a critical position in which they may control their learning.

However, it is well known that the school, at certain moments, has not been stimulating critical thinking in its spaces. That was a reality worsened by the need for remote teaching due to the COVID-19 pandemic since the educational system was substantially affected. Therefore, the educational system, especially the public one, needed to reinvent itself to make it possible to share knowledge through the use of DICT. For this reason, we agree with Cani *et al*. (2020) that after this pandemic the school will nevermore be the same. So, we may start to change this scenario somehow in order to improve our teaching practices and resignify our approaches with our students.

It would not be different with deaf students, as we live in an inclusive perspective that requires the consideration of our students' needs. Unfortunately, Almeida (2021) and Moraes and Barros (2020) show us that the teaching of the English language to the deaf community in Brazil does not reach the standards which are expected.

In this sense, Pacheco and Silva (2020) state that the use of technological tools helps with social engagement and the development of autonomy and critical communication with people from different places and realities. Also, including students' reality enables a wide range of social exchanges. Nevertheless, despite being embedded in a technological setting, many people still do not know how to use digital gadgets and tools properly. Thus, we as teachers may bring some of the various digital possibilities to the classroom.

This process is a huge challenge as the school is no longer the only space where students can obtain knowledge. For instance, due to the decentralization of knowledge students have a wide range of materials available online. Furthermore, due to the COVID-19 pandemic, it became clear that the physical limits of the school could be easily crossed, so there has been an exponential search for DICT (SILVA; TEIXEIRA, 2020).

Pereira and Krieger (2018) postulate that technology can engage educators and students in different forms of learning. According to Figueiredo (2019), technological

tools can play an important role in the student's learning process. Therefore, it is evident that the use of DICT benefits both teachers and students.

Thus, we agree with Tomaz (2018) when she states that DICT enables learning in both formal and non-formal educational processes. This consideration aligns with what Pereira and Krieger (2018) defend: the world, as well as the ways of perceiving it, are refurbished because of technology. In this regard, we believe that deaf students' educational realities can also be positively resignified by DICT.

In this technological context, several issues are intensified when we look at the deaf community since it already has its educational background affected by different circumstances. However, Schenka-Ribeiro and Sholl-Franco (2018) point out that DICT can amplify the interactions among peers at the schools in which there are deaf students.

As we can see, DICT may play an important role in social inclusion. Still, the Brazilian educational reality does not satisfy the expectations concerning inclusion, which is a context that worsened due to the health crisis caused by the COVID-19 pandemic. Although the use of technologies in this health and social crisis has become increasingly relevant, we must consider students, educators, and school communities' reality to understand how technologies can be part of their life in an accessible way (SILVA; TEIXEIRA, 2020). Under these circumstances, more than ever, further discussions on this paradigm are needed.

It is important to bear in mind that technologies are powerful resources that can contribute to teaching the deaf (FISCHER; KIPPER, 2016; TOMAZ, 2018). In this context, sign languages and technologies are potential instruments that mediate the environment in which the learners live (LOPES, 2012). Moreover, cyberspace facilitates not only the contact of the deaf with sign language but also with other languages, favoring countless possibilities of communication between deaf peers and deaf and hearing peers (TOMAZ, 2018).

Such a process must be carried out carefully as a lot of software and contents available are not in sign language. Therefore, the teacher must be aware of the issues related to accessibility, as just using DICT in their practices is not enough. It is necessary to consider and respect the needs of all students.

We understand that an instrument that should include and engage may also exclude and demotivate students depending on the form that it is used. Hence, when it comes to deaf students it is necessary to explore the visual aspect, as it is something that significantly affects the transmission of what the teacher is proposing.

Also following the guidelines of Fernandes (2006), Reis and Morais (2020), Moraes and Barros (2020), and Almeida (2021) we understand that the written modality of any language is the best modality to be taught to the deaf. It has been widely defended because this modality respects deaf students' needs (MORAES, 2012, 2018; PEREIRA; KLEIN, 2015; SOUSA, 2018; BORGES; LIMA, 2018; MORAES; BARROS, 2020) and does not force them to develop oral skills.

We advocate that DICT may stimulate classroom engagement, autonomy, and critical communication. Therefore, as we live in a globalized world, we understand that

teaching English to deaf students through DICT is something that can enable them to have more access to different kinds of knowledge and information.
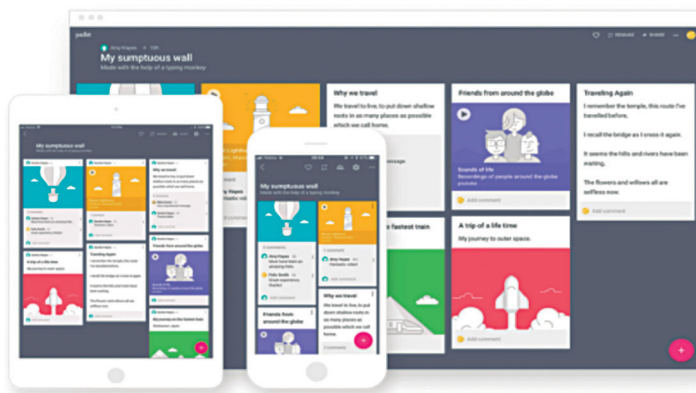
DICT as pedagogical proposals for teaching English to the deaf

We suggest in this part of our study some digital platforms that can ease the teaching of the English language to deaf students. All materials suggested here focus on the written modality of English as it is the one that respects deaf students' needs and specificities. Below it is possible to check some platforms' descriptions and possible uses for them.

Padlet

It enables the creation of virtual walls to facilitate the organization of different types of projects. The walls can be customized according to the creator's needs and are compatible with different formats of content, such as text, photos, videos, links, drawings, shared screens, etc. It has paid and free versions. It is available on the web and for Android and iOS.

Image 1 – Samples of Padlet walls

Source: Padlet[2].

Padlet allows teachers to promote collaborative writing, course assessment, video and comment posting, pictionary book, interactive storytelling, and Wishlist and letter writing. Such activities cater for deaf students' sensory needs as they experience the

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[2]   Available on: https://pt-br.padlet.com/. Access on: Oct. 20, 2022.

world from a more visual perspective, and for the need to work on written language and interaction.

StoryboardThat

It is a website on which students can create comic strips. There are various templates and tools to make the story. It has paid and free versions. It enables people to teach, learn and communicate through comic strips.

Image 2 – A comic sample on the StoryboardThat website
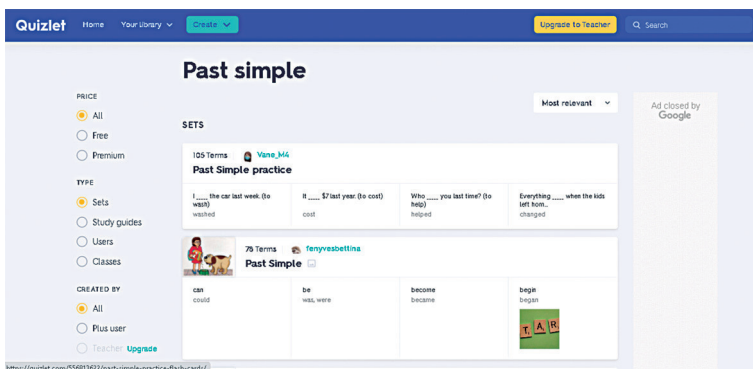

Source: StoryboardThat[3].

This website facilitates activities related to creating comics, creating presentations, exploring verbal and non-verbal language, and creating multimodal projects. As well as those promoted on Padlet, these activities cater for deaf students' visual experiences, and for the need to work on written language.

Quizlet

The platform enables users to create flashcards, access other people's flashcards, play educational games, and study several subjects online. It is available in free and paid versions. It is compatible with Android, iOS, and online.

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[3]   Available on: https://www.storyboardthat.com/. Access on: Oct. 20, 2022.

Image 3 – The set search page of Quizlet

Source: Quizlet[4].

Some possible uses to this website are practicing vocabulary, creating flashcards activities, spelling activities, and grammar activities. Therefore, besides allowing teachers to focus on visual aids, which are important for deaf students, it also allows further practice on language structure.

HelloTalk

It is an application for learning English or other languages by communicating with people from different countries around the world. It is free and compatible with Android and iOS.

Image 4 – HelloTalk chat samples

Source: HelloTalk[5].

Some meaningful uses for HelloTalk are creating chat groups with English speakers, chatting with people from different parts of the world, and exchanging language tips with speakers of other languages. These use mostly the written modality of the language, which is highly beneficial for deaf students.

Bubbl.us

It is an online tool for creating digital mind maps with a simple and elegant look. It enables users to share their mind maps with people or on social media. It is possible to collaborate with friends or colleagues in real-time in a classroom.

Image 5 – Bubbl.us layout

Source: Bubble.us[6].

Bubbl.us can be used for summarizing important parts of a text, creating pre-reading and pre-writing activities, organizing definitions and concepts, brainstorming ideas about different topics, and expanding lexical activities. Besides focusing on the written modality of the language, this website brings elements of fun and color to classes.

Grammarly

It is an advanced spelling and grammar correction tool that helps to avoid mistakes while writing in English. It has free and paid versions, and its access is available on different platforms such as smartphones, tablets, and computers.
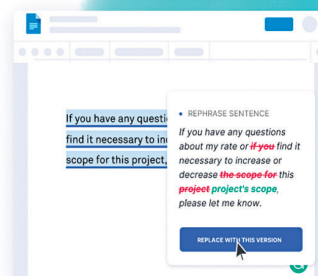
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6   Available on: https://bubbl.us/. Access on: Oct. 20, 2022.

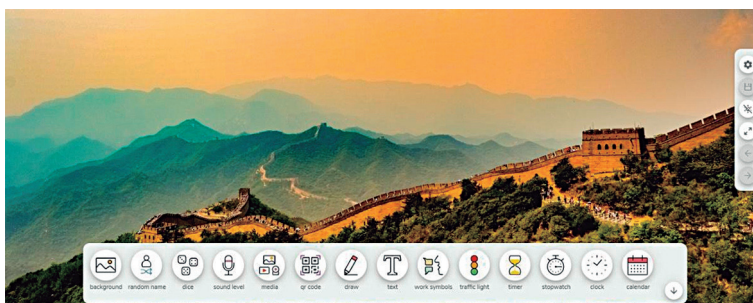**Image 6** – Text correction sample on Grammarly

Source: Grammarly[7].

Grammarly is especially interesting for collaborative writing activities, organizing written materials, and proofreading written texts. Such activities cater for deaf students' needs to work on writing.

ClassroomScreen

ClassroomScreen is an online platform that helps teachers and students to interact in class and to show simple and visual directions for the lesson. The teacher can choose one or more out of 13 widgets to help engage students and support classroom activities.

Image 7 – ClassroomScreen Homepage

Source: ClassroomScreen[8].

Some possible uses for the platform are timing games and activities, drawing, making notes, registering students' progress on a project, generating QR codes, typing

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[7]   Available on: https://app.grammarly.com/. Access on: Oct. 20, 2022.

[8]   Available on: https://classroomscreen.com/. Access on: Oct. 20, 2022.

instructions, sharing lesson agenda, creating lists, raffling, using visual work symbols to let students know different types of interaction in class, polling and collecting feedback.

The tools and platforms aforementioned are some suggestions to teachers who need to teach the English language to the deaf in a more inclusive approach, as they may help in exploring the written modality of the language as well as the visuality (MORAES, 2012, 2018; PEREIRA; KLEIN, 2015; SOUSA, 2018; BORGES; LIMA, 2018; MORAES; BARROS, 2020). We understand that students who have different backgrounds will require different adaptations according to their needs, so it is important to bear in mind that the teacher will always need to consider students' reality to provide a better approach.

However, it is crucial to state that proposing these uses according to the needs of students is something that involves teacher training for the use of these technologies and resources and for teaching the deaf, both cases are still far from an ideal level that, in fact, can optimize teaching and learning. Therefore, there is a latent need to invest more in continuous education for teachers.

Conclusion

With the development of this article, we aimed to outline reflections on technologies in the teaching of the English language to the deaf in the Pandemic Era. For that, we sought to base our discussion on Almeida (2021), Brasil (2017), Ferreira and Bastos (2020), Antunes Neto (2020) and Pires Brito *et al.* (2020), among others.

Initially, we discussed some of the impacts of the Pandemic on education that seem to stress a considerable change in education, which may permeate the field in the future. Hence, an investment in technologies and training for the teaching of the English language to deaf students constitutes a condition *sine qua non*.

We also went through some concepts in language teaching mediated by technologies. As stated then, we advocate that digital information and communication technologies may stimulate classroom engagement, autonomy, and critical communication. Furthermore, as we live in a globalized world, teaching English to deaf students through such technologies is something that may provide the deaf with access to different kinds of knowledge and information, empowering them towards self-emancipation.

Last but certainly not least, we listed some suggestions of digital platforms that can facilitate the teaching of the English language to the deaf. All materials suggested a focus on written English as it is the modality that respects most deaf students' needs and specificities. We described and indicated possible uses for Padlet, StoryboardThat, Quizlet, HelloTalk, Bubbl.us, Grammarly, and ClassroomScreen.

The proposed technologies allow deaf students to learn through visual, contextualized activities. The platforms are very visual, using figures to help those who have difficulty listening, promoting learning by associating words to objects as well as interacting in contextualized communicative situations. Activities are also suggested for tracing words

and working on writing and reading skills. Nevertheless, deaf education must include multiple elements of support and reinforcement – viewing pictures is not enough. One of the most important things is exposure to the new language in a variety of ways.

Moreover, it is clear to us that Brazil must invest in scientific research, in strengthening education systems, in education measures, in continuing teacher education and training, and in the development of educational policies that address the new demands of education.

MORAES, A. H. C. de; ALMEIDA, M. L. de. O ensino na era da pandemia: tecnologias no ensino da língua inglesa para surdos. **Alfa**, São Paulo, v.66, 2022.

▪ ***RESUMO***: *O mundo enfrenta o maior desafio do século XXI desde março de 2020, quando as Instituições de Ensino no Brasil tiveram que interromper suas atividades em sala de aula, adotando o isolamento produtivo e o ensino remoto. Nessa perspectiva, sentimo-nos compelidos a produzir este trabalho qualitativo, de caráter bibliográfico, com o objetivo de traçar reflexões sobre as tecnologias no ensino de inglês para alunos surdos na Era Pandêmica. Os dados mostram que o mundo está mudando e um número considerável de professores e alunos está enfrentando alguns desafios por conta disso, principalmente porque a realidade escolar teve que se deslocar para um espaço completamente diferente. Portanto, o sistema educacional público precisou se reinventar para possibilitar o compartilhamento do conhecimento por meio das tecnologias digitais da informação e comunicação. Pensando nisso, descrevemos e indicamos possíveis usos para sete aplicativos e extensões que permitem que alunos surdos aprendam por meio de atividades visuais contextualizadas. Concluindo, defendemos que o Brasil deve investir na pesquisa científica, no fortalecimento dos sistemas de ensino, nas ações de educação, na educação e formação continuada de professores e no desenvolvimento de políticas educacionais que atendam às novas demandas da educação.*

▪ ***PALAVRAS-CHAVE***: *Pandemia; ensino de inglês; tecnologia; surdo.*

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