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Technologies in the classroom and their relationship with teaching practice: representations of English language teachers

Allessandra Elisabeth dos Santos
Paulo Boa Sorte
Universidade Federal de Sergipe (Brasil)

Abstract

This article aims at analyzing the representations of four English language teachers regarding uses of technologies in order to understand the relationship of these representations and the practice of the teachers. We understand uses of technologies intertwined with experiences shared by members of a community which, in this case, we identify as language teachers, based on Social Representation Theory (Moscovici, 2010). This field research is a qualitative study. Data were collected through questionnaires, class observation and interviews, and analyzed according to Teacher-Research by Freeman (1998) and the coding process by Auerbach and Silverstein (2003). The analysis revealed two representations originated from six themes. In this article, we address the representation of technologies as essential pedagogical resources in English classes, based on the themes: analog technologies as an essential pedagogical resource in English classes and digital technologies as an essential pedagogical resource in English classes.
Keywords: Social Representations. English teaching and learning. Ensino médio integral. Technologies.

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Tecnologias em sala de aula e sua relação com a prática docente: representações de professoras de língua inglesa

Resumo

Este estudo objetiva analisar as representações de quatro professoras de inglês acerca dos usos de tecnologias para compreender a relação dessas representações com a prática das docentes participantes. Entendemos os usos de tecnologias permeados por experiências compartilhadas por membros de uma comunidade que, nesse caso, identificamos como professores de línguas adicionais, a partir da Teoria das Representações Sociais (Moscovici, 2010). Esta pesquisa de campo adota princípios de natureza qualitativa. Os dados foram coletados por meio de questionário, observação de aulas e entrevista, e analisados segundo a perspectiva da Pesquisa-Docente (Freeman, 1998) e do processo de codificação de

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Auerbach e Silverstein (2003). A análise revelou duas representações oriundas de seis temas. Neste artigo, abordamos a representação tecnologias como recursos pedagógicos essenciais na aula de inglês, oriunda dos temas: tecnologias analógicas como um recurso pedagógico essencial na aula de inglês e tecnologias digitais como um recurso pedagógico essencial na aula de inglês.

Palavras-chave: Representações Sociais. Ensino-aprendizagem de inglês. Ensino médio integral. Tecnologias.

Las tecnologías en la sala de clases y su relación con la práctica docente: representaciones de profesoras de lengua inglesa

Resumen

El objetivo de este estudio es analizar las representaciones de cuatro profesoras de inglés en cuanto a los usos de tecnologías, y como estas representaciones están relacionadas con su práctica docente. Se abordan los usos de tecnologías en el contexto de experiencias compartidas entre miembros de una comunidad de profesores de idiomas, fundamentado en la Teoría de las Representaciones Sociales (Moscovici, 2010). Se realizó una investigación de campo de carácter cualitativo, recolectando datos mediante cuestionario, observación de clases y entrevistas. Los datos se analizaron siguiendo la perspectiva del profesor investigador de Freeman (1998) y el proceso de codificación de Auerbach y Silverstein (2003). El análisis reveló dos representaciones en seis temas. Este artículo se enfoca en la representación de las tecnologías como recursos pedagógicos esenciales en las clases de inglés, a partir de los temas: tecnologías analógicas como recurso pedagógico esencial en las clases de inglés y tecnologías digitales como recurso pedagógico esencial en las clases de inglés.

Palabras clave: Representaciones sociales. Enseñanza y aprendizaje del inglés. Escuela secundaria completa. Tecnologías.

Introduction

The increasing use of digital technologies and interactive communication networks amplifies an enormous change in how we deal with knowledge. By extending certain human cognitive capacities, such as memory, imagination, and perception, digitally supported intellectual technologies redefine their reach, their meaning, and sometimes even their nature. New possibilities of distributed collective creation, cooperative learning, and network collaboration offered by cyberspace make us question the functioning of institutions and the usual ways of dividing labor, both in companies and in schools (Lévy, 2010).

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When considering high school life nowadays, we can imagine a classroom with students who have access to diverse information, literally, in the palm of their hands. Simultaneously, we can glimpse a school far from this reality, even with the frequent changes in laws and the creation of updated official documents that seek to contribute to the improvement of the education system in Brazil. In this scenario, we can also see a student who deals with two distinct worlds: the first, considered "real", happens outside the school environment, and it is full of a variety of communication and digital media, whose access to information is possible at any time and place; the second world, seen as the classroom, is plural, undergoes constant transformations throughout history and is marked by the difficulty of quickly reflecting on what happens in the first world. Several studies have analyzed contexts like this, such as Boa Sorte (2019), Boa Sorte & Santos (2020), Fuza & Miranda (2020), Monte Mór & Takaki (2017), Paiva (2015, 2019), and Zacchi (2017).

During our career as English language teachers in public and private spheres, in regular schools, language schools, and at the university, we were able to experience transformations while conducting our classes as well as observe changes in classes of fellow teachers. Agreeing with Paiva (2019), we understand that, historically, the presence of digital and mobile technologies for teaching languages is constant. Physical distance is no longer an impediment to communication, altering the vision of knowledge and generating reflections on school education and the culture of teaching and learning languages. In addition, technologies present in our daily lives demand agile and alert mental behaviors or, at least, encourage the adoption of an active and critical attitude towards the world. Therefore, "[new] ways of processing culture are intimately connected to new mental habits […] new ways of acting. Challenges presented by these emergencies should put educational systems in a state of readiness" (Santaella, 2013, p. 19).
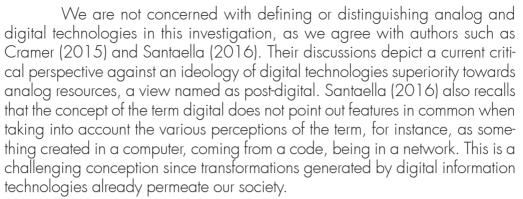
Based on Social Representation Theory (Moscovici, 2010), we believe that teachers' use of technologies constitutes experiences shared by members of a community that, in this case, we identify as language teachers. These representations interpret meanings from the world and incorporate orders and perceptions, understanding and communicating what is known. According to Wenger (1998), belonging to a community is an understanding of communities of practice, which are everywhere, including informal learning

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environments. While integrating our daily lives, we relate to these communities, making meanings and learning.

Social representations are generated through two processes: the transformation of abstract ideas into concrete images and a set of meanings that make things known based on what is already familiar, the processes of objectification and anchoring respectively. However, it is also a dynamic nature event in social life, described by two functions: conventional and prescriptive. The conventional function allows people to control their environment through a system of values, ideas, and practices. In contrast, the prescriptive function implies a tradition, a way of thinking that determines codes for naming and classifying the various aspects of their world and their personal and social history, ensuring communication between community members (Moscovici, 2010).

When considering teachers' feelings of adhesion or fear of using technologies, these representations can be studied, seeking to establish connections between affective, mental, and social elements with cognition, language, and communication (Jodelet, 2001). In a context of visual dynamism between an individual and their relationship with tasks in various contexts of society, social representations emerge in the use of technologies, especially those created after the internet and marked by ubiquitous communication inside and outside school.

This article was carried out in the state of Sergipe, where there is a full-time teaching modality offered by what is known as *Centros de Excelência de Ensino Médio*[1] (CEEM). These schools are noticeable due to more available technological resources for teachers. Through *Escola Educa Mais*[2] Program, the plan was to implement full-time high school education in 38 public schools in Sergipe by 2018, in order to improve quality of education, create and adopt a new concept of school, contribute to the reduction of dropout and failure rates among students in public state schools. The focus on investments in infrastructure and technological resources is, therefore, essential in CEEM. Thus, when we present uses of technologies in English language classes as the object of this study, we outline as our main goal: to analyze the social representations of four English language teachers about uses of technologies to understand the relationship of these representations with the practice of the participating teachers.

We are not concerned with defining or distinguishing analog and digital technologies in this investigation, as we agree with authors such as Cramer (2015) and Santaella (2016). Their discussions depict a current critical perspective against an ideology of digital technologies superiority towards analog resources, a view named as post-digital. Santaella (2016) also recalls that the concept of the term digital does not point out features in common when taking into account the various perceptions of the term, for instance, as something created in a computer, coming from a code, being in a network. This is a challenging conception since transformations generated by digital information technologies already permeate our society.

Initially, we present the methodological procedures adopted to conduct this research. Then, the theoretical foundation and data analysis are connected, emphasizing the discussion of the participants' social representations regarding technologies as essential pedagogical resources for English language classes. As for the final considerations, we emphasize that teaching in CEEM does not guarantee access to technological resources for teaching practices.

Research methodology

This research is qualitative because it considers a more significant concern with the process in relation to the product; that is to say, there is an interest in studying a problem from the point of view of how it is manifested in daily activities, procedures, and interactions (Lüdke & André, 1986).

This field research was carried out in two CEEM, Centro de Excelência de Ensino Médio A and Centro de Excelência de Ensino Médio B whose inclusion criteria were: having the three high school grades already functioning according to full-time modality; offering wi-fi network connection, a computer lab and a library, as for school facilities. The participants are four English language teachers in charge of the three high school grades, full-time modality. While Angélica, Flora, and Maia work at CEEM B, Amarílis teaches at CEEM A.[3]

For data collection[4], we used the following instruments and techniques: questionnaire, class observation, and interview (Freeman, 1998; Lüdke & André, 1986). The questionnaire was designed considering questions to

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obtain a profile of the participants, to collect data on the technologies available in the schools, on the resources adopted by the teachers, and the ways of using them in their classes (Table 1).

Table 1 – Questionnaire

What does it mean to make use of technologies in English classes?
Mention existing technologies in your school.
In your opinion, what is the purpose of using technologies in high school English classes?
What advantages do you see when using technologies in these classes? What disadvantages?
Do you feel the need to learn to use technologies for your English teaching practice? Explain.
How do you see the use of technologies in your school?

Source: Authors' elaboration.

The second stage in the data collection process was observing the teachers' pedagogical practices. Based on Freeman (1998), we made a script that determined and directed the aspects to be observed, such as furniture description, lighting, noise level, thermal comfort and ventilation, number of students, table and chairs layout at the time of class, the interaction between teachers and students, the interaction of students with technologies, activities carried out during classes, technologies used in classes, cognitive, affective, social elements, beliefs, attitudes, and values. Ten lessons of each participant were observed, each lasting 50 minutes, totaling 40 lessons so that "[as] the observer [follows] *in loco* the daily experiences of the subjects, [can] try to grasp their vision of the world, that is, the meaning they attribute to the reality that surrounds them and to their actions" (Lüdke; André, 1986, p. 26).

The last stage of data collection was the semi-structured interview technique which, as Freeman (1998) points out, allows the participant to share information. The script questions, whose order was not necessarily followed, addressed issues such as (Table 2):

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Table 2 – Interview

What technologies did you use during the observed class(es)?
What technological resources do you have access to here at the school?
Do you often include the use of technologies when planning your classes?
Was there a contribution from the use of technologies so that the objectives of your class were achieved?
Do you use technologies in your daily life? In what way? How do you feel about this use?
How do you think your students use technologies in their daily lives?
How do they use technologies in the classroom?
In your perspective, what would your students' view be like regarding the use of technology in English classes? How do they relate to such usage?
How do you feel about using technology in your classes?
What were the impacts of the use of technologies on the classes observed?
For what purposes were these technologies used?
Are you comfortable using technology in your classes?
You replied in the questionnaire that you would like to have had in your curriculum a subject that dealt with uses of technologies in teaching English. How do you believe this course should be like?
Considering one of your observed classes, what would this class be like without the use of technologies?
How would you describe a good English class using technologies?

Source: Authors' elaboration.

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The interview script was informed by some of Freeman's (1998) categories: behavior and experience; opinions and values; feelings and knowledge. In addition, guided by Lüdke and André's (1986) recommendations, we ensured open dialogue with the interviewees, continuously referring to our script for question completeness. Although the four interviews took place post-tenth class, they occurred in different environments, library or teachers' lounge, each lasting between 36 and 58 minutes.

The data analysis process is based on Freeman's (1998) teaching research methodology. The participants' social representations about uses of technologies in their pedagogical practices originated from the multiple sources of information obtained through questionnaire and interview responses, class observations, and field notes. The procedure involves four stages: naming or coding; grouping; finding relationships and displaying. Initially, the collected data receive labels from participants' words, identified as grounded codes and not defined a priori. Then, these labels are sorted into categories

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relevant to the research goals and the theoretical foundations. Subsequently, the relationships are established based on recognizing patterns between the collected themes, revealing responses from the data set.

The analysis of the interview transcripts was also guided by the coding process of Auerbach and Silverstein (2003), whose objective is to identify patterns in the interview texts. This process starts through the initial contact with the raw text, the selection of relevant excerpts to achieve the specific objectives and understand the participants, the identification of repeating ideas by the participants, the grouping of common ideas into themes, the grouping of these themes into theoretical constructs, to the organization of these constructs in a theoretical narrative. This step establishes the bridge to the understanding of representations about uses of technologies and their relationship with the participants' teaching practice.
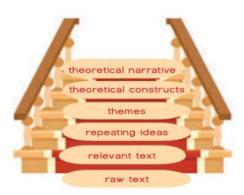
Figure 1 – Coding Process

Source: Created by Santos (2020) based on Auerbach and Silverstein (2003).

The authors compare the coding steps of Auerbach and Silverstein (2003) to a staircase (Figure 1) of six treads, where each step is the foundation for the following step and, at the same time, allows the researcher to move between initial and more abstract levels of understanding. In addition to the ladder analogy, the authors associate the step of identifying repeating ideas, step 3, with the blocks of an initial construction, referring to the civil construction process also mentioned by Freeman (1998).

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During the analysis procedures, we identified the themes: technologies as a facility, technologies as a threat, technologies as ubiquity, and technologies as entertainment, which converged to representation 1: Technologies Understood as Digital Technologies. Analog technologies as an essential pedagogical resource in English classes and digital technologies as an essential pedagogical resource in English classes also emerged, which converged to representation 2: Technologies as Essential Pedagogical Resources in English Classes.

Adhering to Auerbach and Silverstein's (2003) conventions, themes are italicized and theoretical constructs, which indicated the representations, in capital letters. Although omitted as they are unrelated to this study's focus, the themes scarcity of technological resources in the school environment and the need for continuing teacher education regarding uses of technologies emerged from the four participants' data. Such outliers, as termed, by Freeman (1998), are anticipated during analysis stages both by this author and by Auerbach and Silverstein (2003). Outliers reveal emerging data, valuable data to interpretation by highlighting participant perspectives.

In line with scientific paper norms, this article only focuses on representation 2: Technologies as Essential Pedagogical Resources in English Classes. In this context, we highlight as theoretical foundation: Social Representation Theory, English language teaching and uses of technologies, as well as documents and special legislation on full-time high school education.

Tracing the theoretical path and analyzing the data: technologies, social representations and English language teaching

The representation analyzed in this paper is Technologies as Essential Pedagogical Resources in English Classes, which was originated from the emerging themes analog technologies as an essential pedagogical resource in English classes and digital technologies as an essential pedagogical resource in English classes.

Noticing a dialectical relationship between these themes, we emphasize Moscovici (2010), stating that the mass media is one of the reasons for this antagonistic stance, as they accelerated this trend that social representations

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need to be transformed in order to permeate daily life and integrate with ordinary reality. The phenomena that create social representations are new, making people feel strange and acknowledge the need for understanding.

Representations are symbolic yet non-neutral forms, viewed as shared, socially-specific knowledge constructed in everyday communications. In this theory, widespread knowledge is valued, and thus, common sense knowledge is in a scientific category, making its investigation possible and relevant (Moscovici, 2010).

According to Moscovici's Social Representation Theory (2010), the generating processes of representations, anchoring and objectification, occur with the function of making the unfamiliar abstract concepts into familiar and depart from the information we have, which we collect along with other members of a social group, seeking to understand the new by anchoring in the old knowledge. In the objectification mechanism, we seek to transform reality into visible and concrete, while we combine a concept with an image, an icon, a language expressed in simplified ways.

Behavior and discourse are scaffolding for the formation of social representations. The findings of Pereira & Silva (2021) also demonstrate the impact of experiences, beliefs, and social interactions on shaping English teachers' discursive representations regarding the internationalization of education. Since both behavior and discourse support a social representation, we bring, in the discourse of participant Maia, an example of these processes in the generation of representations, when she reports on the reasons for her preference between the use of analog or digital technologies and the two other participants who work in the same educational institution.

> We may have noticed this among us: we work in different ways. Angélica is very fond of new technologies, so she likes to bring them to the classroom. Flora is very fond of games, dynamic activities. She uses a lot in class. I like working with texts. So, I try to work with reading comprehension for everything. Each one has a style. So, it's been about four years since I started working more with texts. Personally, I'm not a tech savvy either (Maia, 2019).

The decision reached by these three teachers regarding the choice of analog or digital technological resources is based on the information they have, such as lack of continuing education on the insertion of technologies

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in classes and scarcity of resources in the school environment. Moreover, the difficulty of handling these resources in classroom routine and the slowness to have them in place at the beginning of all classes are considered obstacles, avoiding teachers to become familiar with some resources in their teaching practice, not only as technologies like entertainment, but technologies like pedagogical resources whether analog or digital.

Whether analog or digital, the relationship between using technology and teaching foreign languages goes back centuries. In Kelly's (1969) view, just as technology influences teaching, the reciprocal relationship is also a fact due to the domain that machines exercise over communication in the modern world and because the act of teaching is essentially communicating. The author describes that cassette recorders, film projectors, and television sets have undergone changes influenced by the needs in the teaching process. At the same time, teachers and books are pressured to integrate these new means of transmission of information.

According to Paiva (2015), the education system has always been under pressure to integrate technologies into its scenario, from the book to the computer. As a result, there has always been this dialectical relationship towards the new, starting with an initial behavior of acceptance or rejection and going through paths of distrust/denial, insertion, and normalization.

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> The history of technology in language teaching could not be linear in a country like ours, where social differences prevent technologies such as paper, books, and even electricity from being within everyone's reach. Many technologies already obsolete, such as the slide projector, never reached certain schools. On the other hand, the computer is already fully integrated into English teaching in some institutions, and many teachers already adopt teaching materials accompanied by CD-ROMs. It is already possible to observe a gradual change of many who rejected, at first, the innovations brought by the computer and the internet. However, this technology continues to be seen by some people as a miracle cure and by others, as something to be feared. The computer may not be within everyone's reach, but it is also necessary to keep in mind that neither the book nor the computer will work miracles in the learning process. The successful acquisition of a foreign language depends on the inclusion of language social practice activities and, depending on the use made of technology; we will only be

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bringing to the screen the old models present in the first textbooks (Paiva, 2015, p. 14).

The first textbooks were grammar books. Throughout history, the importance of this resource has changed. Not influenced by the theory or teaching method of the time, but for reasons such as cost, availability, and layout. The book became more accessible to students after the invention of printing, and its importance fluctuated over the centuries. Much of its importance was also due to the development of self-taught language study. During its trajectory, it generated divergences, dividing opinions among educators about their insertion into the school. The rejection of this technology came from the belief that, in the classroom, students should only listen and the book should be used for studies at home (Kelly, 1969).

During the 40 classes observed, we noticed that the textbook was used in three. However, the mentions of this technology were the teachers' guidelines to use it at home, to carry out tasks and studies on grammatical content, as expressed by participant Amarílis:

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> There was a greater need for the book. It serves students' purpose for studies and guidance as to contents for tests. As we also know, the book is an excellent instrument, an excellent methodology, especially to learn a foreign language. There are some texts for you to work on. Some bring music either American or from a pop context. They enjoy working with music (Amarílis, 2019).

The participant recognizes the textbook as an essential pedagogical resource, which offers options for the teaching-learning process, such as developing text reading comprehension. She states that, due to the difficulty of having resources, the availability of the book[5] is a celebrated fact: "… with the arrival of the book, it became much better for the students, do you understand? The fact that they have the books, despite the excuses. "No, teacher, I left it in the locker, I left it at home." (Amarílis, 2019). The teacher also comments on the school library: "we do not have a library as well equipped as we wanted to, but this has already improved a lot" (Amarílis, 2019) and she adds on the importance of other books, such as textbooks and dictionaries, the latter also mentioned by participant Flora in table 3.

Table 3 – Analog Technologies as an Essential
Pedagogical Resource in English Classes

"Printing copies has always been a problem. Now it's okay because I have the books. There was no way students learn a language without having at least a book."
"If you teach a class using technology, you will have to pick up and prepare that room hours in advance. Complicated! So, most of the time, I use more printing resources or the book, because they make easier, so I don't waste time." (Amarílis)
"Then, after the tests, there are recovery exams. I avoid making copies here at school. So, the solution is to use slips of paper, and they answer in a notebook and take a picture to keep it. I think that's it; we use these things on a daily basis."
"Once I decided to take the dictionaries and bring everything in a box and leave them in the room, or ask the monitor to pick up the dictionaries for the students, or the students themselves go to the library and take the dictionaries." (Flora)
"Now the school has a library. From time to time, you see students here. They borrow magazines, books. Not many, but you see some. When there is a reading activity, we don't bring books and magazines; at least me, we use printed materials."
"In my classes, I usually use texts, notebooks, books, blackboard, markers, and my speaker. I like to bring song lyrics." (Maia)

Source: Authors' elaboration.

We analyzed the information from table 3 and combined it with the class observation data. We identified two technologies used almost daily by three participants: paper, photocopied or printed handouts, and the whiteboard. According to Kelly (1969), books, and here we also add handouts, are used for individual classroom use, but when the focus is on the whole class attention to a single point, the whiteboard fulfills this function. Furthermore, we noticed a relationship between the frequency of using these resources. The lack of one implies greater use of the other and vice versa, not being associated with using the whiteboard described by the author.

Since the book is rarely used in the classroom, teachers need text reading comprehension and grammatical structure handouts. When the request for copies is not met, for example, because the number of copies received is smaller than the number of students, some strategies have become commonplace, such as writing the task on the board for students to copy on their notebooks and then complete the exercise. However, even in this context of *Centros de Excelência de Ensino Médio*, photocopies are always present, and there are problems with the supply of everyday materials, for instance, whiteboard markers, as Maia emphasizes:

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> Despite the state bureaucracy and occasional unpleasant encounters, I manage to access necessary resources like printing and photocopying, which is what I usually need. Because you deal with grim-looking expressions, and that's what I mean about public service. As nobody owns public service, there's a lot of frowning and complaint, but, overall, I have access to what I need. I can make copies, which is what I use. I can't work with new technologies. I've already decided I don't want to. Angélica decided to buy all her materials, including cables. Finding cables in this school is difficult, limiting my use of certain technology. Despite this, I see my school as privileged since it's better equipped than many others. The school once limited copy quotas and often lacks basic supplies like markers, requiring teachers to buy their own. I find it hard to believe a school can't afford markers. An approach could be to allocate a presumed monthly teacher quota, and then supervise. I've ruined clothes refilling markers. How am I supposed to teach without markers? We have access to resources, but it could be better (Maia, 2019).

Maia's thought raises awareness about the precariousness of teaching in public education (Jesus; Lima, 2016; Nascimento, 2007) and points to the excluding theme scarcity of resources. While the participant vents her frustration, she reiterates Lima (2011, p. 159): "the disregard with which foreign language teaching has always been addressed in Brazilian schools is notorious, despite the laws, resolutions, and guidelines published in order to reverse — or not — this situation."

Angélica, seen as the most immersed participant in digital cultures, as previously pointed out by Maia, recognizes the importance of the book but clarifies the reasons why she does not use it in the classroom and, therefore, chooses to use her own resources in her classes:

> Why am I not using their book? It's terrible! The one I wanted wasn't approved by the public school system. So, we couldn't keep it. I had to use another book. I used it until last year, but it didn't work because the students couldn't answer or do any activities. This handout I'm using, they can do exercises. It's not all written in English, so it's easier for students (Angélica, 2019).

Angélica replaced the textbook approved by PNLD for activities, texts. She also expanded students' contact with language by working on projects.

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While following High School Modern Foreign Language Book Guide 2015 (Brasil, 2015), she began to diverge from it when chose not to use the material in class. She adopted Bernoulli digital booklet, through a mobile app, but used it with the same purpose as a photocopied handout, as explained by Monte Mór (2017):

> It's commonly noticed that digital and mechanical technologies are seen or treated similarly as if they shared the same concepts and produced the same effects. Considering the presence of technologies in schools, it appears that, in most cases, referring to digital technology does not make any distinction between this type and analog or mechanical technology, which society has had contact with for centuries (Monte Mór, 2017, p. 267-268).

The author refers to two technological moments in the pedagogical scenario. The first refers to mechanical technology: blackboards, chalk, mimeographs, slide projectors, technology produced to expand senses and ability to understand. In the second and recent moment, technology is produced to keep the objective of increasing senses and understanding capacity "while it slips through fingers by strangeness and enchantment caused by computers, software, mobile applications – digital technology." (Monte Mór, 2017, p. 268). She comments on the digital society, which exposes and expands linguistic, social, cultural pluralization and diversity covered by norms of a society of writing.

This quote by Monte Mór refers to the quotations of the participant Angélica for several reasons. First, the participant commented on the lack of continuing education about the insertion of technologies in education and showing interest in using digital technologies regardless of whether the school provides technological resources. Second, the teacher stands out in the school environment for going to classrooms carrying a suitcase that contains her own resources, a laptop, speakers, a wireless computer mouse, and a projector.

> I have a colleague who says, "I admire your willingness to bring your projector to school, but the projector is too expensive for me to be using it, turning it on and off repeatedly. So, I would never bring it." I reply: "But I bring it because it makes my job easier." "I wanted to get into the classroom and have the projector ready, so I could simply turn on the computer, connect it and teach my lesson. It makes life a lot easier. Here we can have disagreements with

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colleagues. There have been cases when we book a technological resource, and then one arrives first and takes it. Boy, it's a terrible mess! So, to avoid this type of problem, I've been using my own projector and laptop for years now (Angélica, 2019).

Angélica justifies her need to afford her resources due to low quality of the technological resources offered in her working environment: "[…] at the school; you have access to a broken projector, a computer that works poorly." (Angélica, 2019). Complaints about the lack and precariousness of technologies by the other participants who teach at *Centro de Excelência de Ensino Médio B* demonstrate similar dissatisfaction.

Amarílis, the only participant who works at *Centro de Excelência de Ensino Médio A*, also shows dissatisfaction with technological resources for her English classes. In table 4, Amarílis regrets that she no longer has a room only for English classes and comments on the difficulty of accessing the only two rooms, currently equipped with a projector and a computer. Table 4 also brings some repeated ideas, which converged on the theme digital technologies as an essential pedagogical resource in English classes.

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Table 4 – Digital Technologies as an Essential Pedagogical Resource in English Classes

"When my classroom was set up, I had a DVD player, an exclusive TV. No need to be worried, right? There were a computer and a projector. There was a sound system only in that room. So, I could say, Today I'm going to use music in class. When I had all the resources, we could study using music, vocabulary acquisition in music, searching. There are two rooms here that have an overhead projector, it is already there, but it's hard to book this room. I have to plan days in advance if I want to use it, schedule it, even months ahead." (Amarílis)

"We have a projector and laptops. Not enough, we share with 30, 40 teachers. We can use the auditorium, but we waste class time to set up the equipment: speaker, microphone. I wanted to have all set up in the room, but it's not possible. I have to set it up in the first class, and sometimes I leave it ready and ask other teachers to switch rooms. Some technical glitch might happen while using the devices, so I prefer to buy mine. The only thing I still don't feel like buying is a projector. It's pricey, easily damaged, but if it was cheaper, I'd buy one."

"Since I'm a very visual person, my tendency is also to bring more visuals to them and this connects to emotions, videos provoke emotions. I like it. It helps me memorize stuff. It's easier for them too. […] when it is possible to use better technology, computer, apps. They draw attention […] It would be nice if they could build a game using the content they are given because everyone would learn more when creating something, but it is not very easy to do that. Then I reflect, maybe in a different public school context. Now we are doing whatever we can. Sometimes, there are several theories, but when you think of reality: "What can I do?" We do as much as we can to offer students variety." (Flora)

"When a student doesn't have a computer at home or his smartphone has poor connection, the school makes the library available. Unfortunately, there are not as many computers as these booths, not sure if they will put new ones, but there were two computers available."

"In some classes, if a topic comes up, I ask them to google on the mobile. If I present a text with new words, I ask them to use their device to look up some words and not translate the text. It happens from time to time, but not always. (Maia).

Source: Authors' elaboration.

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Maia refers to the use of smartphones to search words on the internet. Leffa and Peixoto (2017) highlight the mobile device's role as an educational asset in English language learning. Its broad access to text, audio, and video content, along with diverse age brackets and social strata, positions it as the most inclusive digital technology. Amarílis also sees this potential:

> One of the main goals of uses of technology is to extend students' knowledge, beyond language, grammar, which is to bring them closer to other countries' culture, open up their views so they can compare with their lifestyle. Or maybe aspire to live a different reality. I use technology in my classes with this primary goal: to expand horizons, make the class more interactive and dynamic, and make students acquire a taste for the language… I wanted them, at least,

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> to try to read a text, understand the message, without translating it. "The text repeats that word a lot. It refers to this or that". But some are too lazy to even read (Amarílis, 2019).

Over the years, teachers have gained greater familiarity with digital technology and teaching practices integrating it (Monte Mór, 2017). This behavior reduces the degree of uncertainty regarding digital technology integration in school learning. Although teachers gradually identify themselves with these technologies, it is still necessary to encourage reflections on the learning digital transformations.

The author emphasizes that there's a growing interest shown in recent studies, regarding the role and effectiveness of digital technology use in schools. In fact, many students find that the incorporation of digital technology in the school setting makes it more engaging. However, uncertainties about this supposed effectiveness arise from masters and doctoral research on the relationship between digital technology, schools, education and language teaching. These include potential marketing agendas that could conflict with educational goals; the gap between the educational potential of digital technology and its application in native and foreign language classes, as well as the disparity between everyday personal uses and uses in schools.

Paiva (2015) sees social inequalities as reasons for preventing access to technological resources such as paper, books, and even electricity. By stating that, the author raises our doubts as to the working conditions reported by the participants in these *Centros de Excelência de Ensino Médio*. The texts of Law n. 13.415, December 16, 2017 (High School Reform), Sergipe state law for full-time high school implementation, BNCC (Brasil, 2018), and PNE (Brasil, 2014) present goals and strategies not only to computer network access but also to the provision of digital technological resources and structure needed for the formation of this new concept of school, concept already mentioned by Santaella (2013).

Monte Mór (2017, p. 276) adds: "recent researches conducted on the impact of knowledge of digital technology on the field of education and language studies warn that this is not only about introducing technological devices and network connection in schools." As for these two CEEM, the reality seems distant from the goals presented in the laws, even due to not enough internet speed to support a school environment this size.

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The text of PNE law (Brasil, 2014) includes internet connection as a goal, but does not mention continuing teacher education in this digital society scenario. Monte Mór (2017) also calls attention to the results of several studies, emphasizing that changes in classrooms do not "simply" imply the introduction of technological devices and network connection, they require new teacher education on the understanding about literacies.

With the expansion of the familiarity and integration of digital technologies in English classes, researchers such as Boa Sorte et al. (2019) reaffirm the belief in the need for teacher education which boosts critical thinking and autonomy in students. Additionally, enabling students to reflect and discuss issues with pluralist, ethical, democratic and critical perspective lenses, a significant remaining challenge to analog technologies of writing.

Final considerations

This study analyzed the representations of four English language teachers regarding uses of technologies in order to understand the relationship of these representations and the practice of the teachers. The analysis revealed two representations originated from six themes. In this article, we explored the representation of technologies as essential pedagogical resources in English classes, based on the themes: analog technologies as an essential pedagogical resource in English classes and digital technologies as an essential pedagogical resource in English classes.

Social Representation Theory (Moscovici, 2010) reaffirms preexisting beliefs and interpretations that agree with our attitudes and thoughts most connected to tradition. These are speeches and attitudes that aim for a sense of security and control when facing conflicting or risky issues. Despite being excluding themes, two other relevant matters emerged from the participants: scarcity of technological resources in the school environment and the need for continuing teacher education concerning uses of technologies.

Even though the two schools are CEEM, they do not provide teachers with enough technological resources, and therefore maintain strangeness and fear regarding their use. We also understand that the lack of familiarity as well as the ways technology is used in their classes are influenced by not only insufficient internet connection speed for a school environment but also by the low

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frequency of continuing teacher education, as pointed out by the participants. According to the teachers, as the focus of formation is to present changes in the high school program, especially concerning the topic of assessment, we did not identify a continuing teacher education plan aiming at a teaching-learning process closer to the transformations undergone by society and driven by increasingly constant presence of digital information and communication technologies in our daily lives. The purpose of teacher education, in this sense, should focus on human development rather than learning to handle one resource or another, besides working on the theme of continuous assessment, one of the strategies proposed in the PNE (Brasil, 2014).

In this scenario of lack of perspective due to the scarcity of resources in these school environments, the smartphone, being a ubiquitous element in the context of the two field schools, can serve the purpose of raising critical issues through texts from the media as well as memes and digital games, recommended by Boa Sorte (2019) and Zacchi (2017) respectively. However, with the quality of network connection offered by these two educational institutions, students' internet data would be needed, in addition to their mobile devices. Thus, we see the participants' decisions on uses of technologies influenced and based not only on their own social representations but also on the decision-making to immerse themselves in digital cultures as a motivating factor to use technologies in their teaching practices.

Drawing on Moscovici (2010), we reiterate that altering working conditions for these high school English language teachers would create a need for other social representations in order to reconstitute common sense knowledge and become familiar with new interactions and collective experiences. The lingering impact of the COVID-19 pandemic significantly influenced societal behaviors and relationships, enforcing social distancing that reshapes social bonds and disrupts work and school routines, including the suspension of in-person activities. This unprecedented situation, devoid of tradition of speech and attitudes references, reflected the need for new social representations. The halt in face-to-face activities spurs digital technology use among students, teachers, and professionals, who are continuously questioning and seeking comprehension of new circumstances, while acting. These diverse interactions and collective experiences compel us to reconstruct and deconstruct our speeches and attitudes, our social representations about technologies, and our worldview.

Notes

1. *Centros de Excelência de Ensino Médio* (CEEM) are referred as Centers for Excellence in High School education. The first centers were implemented in the capital of Sergipe, through Complementary Law n°. 179, dec. 21, 2009.

2. This program is also part of goal n. 6 of the State Education Plan/*Plano Estadual de Educação* (PEE) (SERGIPE, 2015).

3. Following the ethical guidelines, the participating teachers' and schools' names are fictitious, in order to preserve their identity.

4. This research was approved by the Institutional Review Board of the Federal University of Sergipe-UFS (CAAE 06065718.4.0000.5546) and received substantiated opinion n. 3.248.298.

5. The National Textbook Program (PNLD – Programa Nacional do Livro Didático) of English Language began in 2011, so it is quite recent compared to other subjects.

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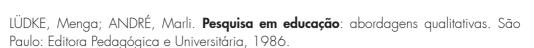
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Ms. Allessandra Elisabeth dos Santos
Doutoranda pelo Programa de Pós-Graduação em Educação
Universidade Federal de Sergipe (Brasil)
Grupo de pesquisa Tecnologias, Educação e Linguística Aplicada
Grupo de Pesquisa Multilingual Learners in Schools da Virginia Commonwealth University
Orcid id: https://orcid.org/0000-0002-9057-2955
E-mail: alle25@academico.ufs.br

Prof. Dr. Paulo Boa Sorte
Universidade Federal de Sergipe (Brasil)
Programa de Pós-Graduação em Educação
Líder do Grupo de pesquisa Tecnologias, Educação e Linguística Aplicada
Orcid id: https://orcid.org/0000-0002-0785-59987
E-mail: pauloboasorte@academico.ufs.br

Nomes e E-mails dos translators
Tabatha Costa Bastos
tabatha.bastos@hotmail.com
Allessandra Elisabeth dos Santos
alle25@academico.ufs.br

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