Technology in English Teaching: School Infrastructure and Technological Training of English Teachers

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Abstract: Technological devices are important tools by which people share and acquire information. Therefore, the use of technologies in the context of education is very relevant for the teaching and learning process. Thus, the focus of this work is to analyze the use of technologies in the classroom, teachers' technological training, and also the school infrastructure in the technological scope. The research carried out has the qualitative theoretical aspect. Data were collected through a questionnaire applied to the English teachers of four state schools from Itapipoca, Brazil. Through the data obtained from the study, we observed that teachers positively evaluate the technological infrastructure of the schools where they work and, although some of them do not have a degree in the area of technology, they often use digital devices. This research is important for the perception and reflection on the need for new pedagogical practices with technology at schools as instruments that facilitate interaction, teaching and learning.

Key words: English teaching and learning, technological infrastructure, teachers and technological trainin

1. Introduction

The world of education has been undergoing a major transformation as the technologies of the digital revolution increase. The phenomenon of globalization has shown the potential use of technology by people from all over the world. Information exchange and knowledge between people are taking place in a global sphere. As a result, the learning of a large amount of information has expanded and can quickly develop the cognitive skills and competencies of users of these technologies. Still on this topic, Moran (2014, p. 54) corroborates the discussion by stating that "lifelong continuous learning, in the multiple groups and physical and virtual networks ― is one of the hallmarks of today".

Thus, with the advent of new technologies in the daily lives of young people, it becomes necessary to think about the importance of the strong relationship between technology and education in the school environment. Therefore, we should reflect on its use as a pedagogical tool in the field of teaching and learning in schools since computers, internet, CD-ROMs, DVDs, CDs, stereos, speakers, mobile phones and projectors are some of the tools used by English as a second language teachers in the classroom setting. Authors such as Allan Collins and Richard Halverson (2009) believe that modern forms of technology provide learning opportunities that contradict the teaching and learning methods of traditional schools and universities.

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However, there is no doubt there are some challenges and obstacles that surround teachers, notably the English teachers in public schools. The difficulties are related to the structure of the school environment that does not adequately have basic technological elements such as computers, projectors, internet connection, stereos and speakers. In addition, the deficient teachers' training stands out because they cannot keep up with the development of technologies and their pedagogical functions.

Therefore, these are factors that intersect, making the use of digital technologies in the educational environment more difficult and, consequently, suppressing the pedagogical benefit for the cognitive and social development of students.

Thus, given the importance of the use of technologies in the development of more dynamic, interactive classes that support the sharing of knowledge in a collaborative way, as well as the perception of the deficiency of the technological structure and adequate training of English language teachers, we will raise discussions and reflections on these elements mentioned previously.

This way, this study aims to identify the presence of technological structures in the school environment that facilitate the teaching of English in a digital perspective, and to identify the academic and technological education of the English teacher in the handling and use of these technologies, available to the four state schools in a town called Itapipoca.

2. Technologies: Powerful Learning Tool and The Difficult Mission of Its Effective Use in the Classroom

The insertion of technologies in educational institutions, specifically in public schools in Brazil, occurred in 1997. Proinfo was a project of the Federal Government, in partnership with state and municipal governments, which aimed to subsidize public schools and teachers with new information and communication technologies in Brazil, intending to improve teaching and learning.

This Ministry of Education project was very important for solidifying the need for the use of new technologies in schools. Information and Communication Technology, which stands for the acronym ICT, is a subject that is part of the curriculum of many state schools.

From this perspective of the constant transformation and innovation of technologies that open the way for collaborative learning (Moran, 2014), there is undoubtedly a wide variety of literature that addresses the use of technologies in the classroom in order to engage students in the proposed activities. Truly, the relationship between technology and education enables a broad range of considerations that benefit teachers in applying digital mechanisms in traditional learning environments.

Thus, authors such as Alan Collins and Richard Halverson (2009) confirm the fact that the presence of technologies in our daily lives is high:

> All around us people are learning with the aid of new technologies: children are playing complex video games, workers are interacting with simulations that put them in challenging situations, students are taking courses at online high schools and colleges, and adults are consulting Wikipedia (Collins, Halverson, 2009).

Andrade (2014) assumes that the relationship that people establish with technology is visible. The mission, therefore, is to transfer the combination: technology gadgets and young people connected to the digital world into the classroom environment.

Faced with technological advances, and its insertion in education as a pedagogical tool. They are present at every moment of our lives, at home, work and leisure. We live in a society where we have access to the world's information through one click, and these changes change the way we relate to people and consequently influence the intentions that occur within the school and the educational process (Andrade, 2014, p. 24). [1]

When we discuss the issue of effective use of technology in the classroom, we are aware that there are difficulties surrounding English language teachers in public schools. One of these problems is the infrastructure of the school environment that is not enough to allow the teacher to use basic technological devices such as computer, projector, speaker, stereo and internet connection. On the infrastructure issue, Matt Britland (2013) says that:

Schools will only need one major thing to be prepared for the future. They will not need software installed, servers or local file storage. Schools will need a fast robust internet connection. Infrastructure is paramount to the future of technology in education (Matt Britland, 2013).

Matt Britland (2013) mentions one of the biggest obstacles for teachers who plan lessons using technology resources. The internet, which has a poor connection in schools, makes it difficult to use basic tools like videos and access websites that provide online activities and games, focusing on a more dynamic and collaborative learning of the English language.

Consequently, it is impossible to use applications on the computers, or even the students' mobile phones, for teaching and learning the foreign language in the school context. It is up to teachers to point out these powerful learning tools for students to download and use in other spaces to ensure their good use.

Lopes (2012) collaborates with the discussion by addressing the issue of infrastructure from a broader perspective. The author considers that technologies can really only contribute as a facilitating element of teaching and learning if we take into account the number of students, the available technologies and the duration of classes.

In turn, the aspect of teacher education in technology is a subject that needs attention. We emphasize that many universities still have traditional teaching methods. Future teachers, if they do not have the individual initiative to pursue improvement in the digital world, they will surely be one of the many teachers who have not acquired digital literacy (Andrade, 2014).

In this regard, Serafim and Sousa (2011, p. 20) agree that "it is essential that the teacher appropriates a range of knowledge that comes from the presence of digital information and communication technologies so that they can be systematized in their pedagogical practice."

Thus, it is clear the importance of English language teachers to be aware of the relevance of using basic technologies in the development of classes that contribute to better teaching and learning.

Combined with an earlier factor, it is important to consider the deficiency of the technological structure of schools and the training of English language teachers in the digital perspective. Therefore, considering all the before mentioned, it is necessary to raise discussions and reflections on these issues throughout this study.

3. Methodology

The research consisted of a qualitative-quantitative study in which the procedure adopted was a data collection, using the field as the research source. Thus, the state public schools of Itapipoca were the space where the study was conducted. The English teachers of these schools were the respondents of the questionnaire.

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[1] Our translation.

The questionnaire consisted of ten questions, nine of which were multiple choice and one open. The multiple-choice questions were followed by blanks, with indication for participants to justify their answers.

After data collection, we proceeded to tabulate, with the support of the Microsoft Office Excel 2013 program. Thus, in possession of the research results, we began presenting them in the discussion section, analyzing the results based on the theoretical assumptions that guide the research.

4. The Work Carried Out: Outcome and Discussion

Survey results will be shown based on the responses collected. Thus, for each question presented throughout the text, analysis and discussion will be made based on the ideas of the authors mentioned previously in this paper.

It is important to note that there are five state schools in Itapipoca. We obtained the participation of teachers from all schools, except the one where the author of this paper works. It is a total of eight respondents. We will analyze the questions that will clarify the research.

In the school context, technological tools such as projector, stereo, speaker, CD, notebook computer and internet are important pedagogical tools for teaching and learning.

In this regard, our research found that 100% of English teachers in Itapipoca state schools are aware of the importance of using these technological tools for more dynamic teaching and learning of the English language.

From the perspective of the practice of using technological devices in the classroom, respondents were asked about how often they used the technologies. The result is shown in the graph below in Figure 1.
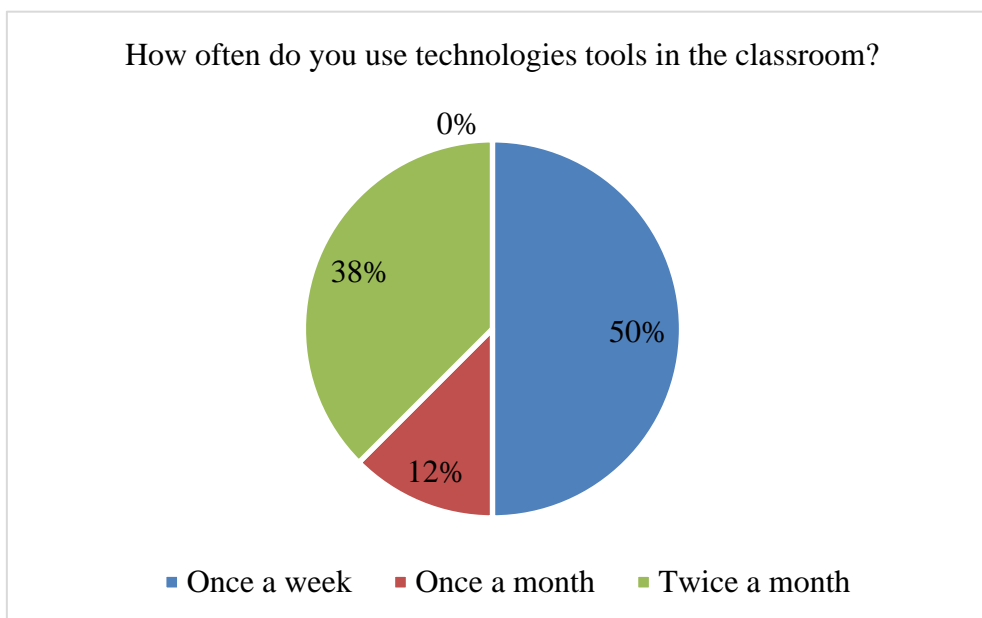

How often do you use technologies tools in the classroom?

0%

38%

50%

12%

■ Once a week   ■ Once a month   ■ Twice a month

Figure 1   Research Data
Source: Research questionnaire

The data reveals that 50% of teachers use technology tools once a week. 38% of them use the technology twice a month and only 12% use it once a month.

Teixeira (2013) states that many teachers today are still attached to using the whiteboard to teach their classes, eventually closing their eyes to modernity linked to technology.

However, the data obtained about the frequency of use of basic technologies is very motivating, as it reveals

the pedagogical view of teachers about the use of tools available.

Although we noticed a considerable number of teachers who frequently use their notebook computers, projectors, CDs, speakers and stereos, we can identify that only 11% of teachers can use the internet at school to perform video activity, music and online activities. Thus, the other teachers need to prepare, in advance, digital materials with contents that can be used in class without the help of the internet.

We should point out that the teachers who made possible the collection of the data being presented are all graduated in English at public and private universities. Moreover, they have experience as state public school teachers, ranging from two to fifteen years of work.

Like all people who are connected using new technologies, teachers have the important insight that technology tools are allies of great relevance in teaching English despite the challenges that teaching presents.

The study results also presented a different view regarding the difficulty that teachers, in general, have regarding the handling of technological instruments: notebook computers, DVDs, CDs, projectors, stereos, speakers and internet connection. When they were asked about this issue, we found out that 88% of them do not face problems dealing with these technological devices and only 12% have some difficulty in using them.

Previous data has raised the discussion that many teacher education centers do not fit into teaching patterns using technology. Therefore, if they do not seek technology education individually, future education professionals may face difficulties in managing current technological tools. To illustrate that, we asked the teachers again if they had already taken a technology course on their own. The result is that 50% have already done a technology course to teach English. In this research, there was no specification of the duration and place where these teachers took the course.

The other 50% of teachers explained that they did not take a course in the area of technology because this kind of course is not available in the city.

However, many teachers overcome the lack of training courses in town through the knowledge acquired with the basic computer course they took. Besides that, day-to-day tool handling and self-study also provide teachers with the experience they need to use classroom technologies.

Serafim and Souza (2011) discuss the importance of the teacher being immersed in this range of information that comes with the digital world, and seeking to transfer the knowledge acquired in the digital area to their pedagogical practice. In fact, we realize that teachers have often used technologies and that, with individual dedication, they are successful in using technological tools despite some limitations on technological support and more specific training in the area.

From the perspective of the teacher's technological training and infrastructure of the school, as complementary elements, we highlight that the technological revolution is continuous. As such, schools face the enormous challenge of keeping pace with this development by improving school infrastructure for teachers' effective use of technology (Staresina, 2011).

Matt Britland (2011) corroborates the discussion of deficient school structure by stating that infrastructure is very important for the future of technology in the educational environment.

In this manner, we understand that educational environments must provide basic technology tools such as a projector, speaker, stereo, DVD, CD, notebook, and internet connection so that teachers can develop their classes in a more stimulating way for students.

Thus, the present work wanted to know from teachers how they evaluate the infrastructure of the schools where they teach. The graph below, Figure 2, shows us the results.
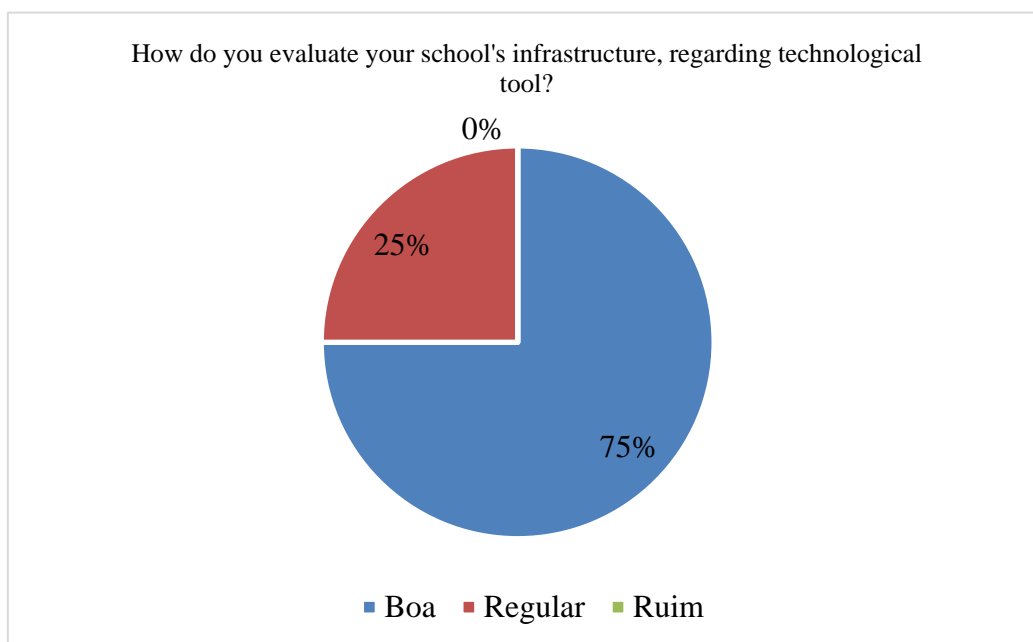
How do you evaluate your school's infrastructure, regarding technological tool?

0%

25%

75%

■ Boa ■ Regular ■ Ruim

Figure 2   Research Data
Source: Research questionnaire

The study showed that 75% of these teachers agree that the infrastructure of the schools where they work is good. 25% thought it was regular and 0% of teachers considered the infrastructure bad.

We saw previously that Matt Britland (2013) and Staresina (2011) question the difficulties related to technological infrastructure in educational environments. However, previous data on English teachers' analysis of technology infrastructure in schools present a positive perspective of these tools in the context of state schools in Itapipoca. Nevertheless, this research has revealed an important question about the position of teachers regarding the infrastructure of the schools where they work.

When we asked the teachers what they were doing to circumvent the obstacles that arose when using the technologies in the classroom, 50% of teachers responded that they had their own technological materials such as projector, notebook computer and stereos.   In turn, 33% mentioned that there is a high demand for technology by all teachers in the school, making it difficult to access them, and 17% of respondents said they intend to purchase their own devices to avoid problems.

This information confirms that while most teachers consider the school technology infrastructure to be good, there are still problems regarding the availability of technology devices to serve all teachers. This, in turn, leads a portion of teachers to use part of their income to acquire equipment that is needed to promote more playful, interactive and collaborative classes.

5. Conclusion

This paper aimed to discuss the situation of basic technological infrastructure such as projector, notebook computers, DVDs, CDs, stereos, speakers and internet connection in four state schools of Itapipoca.

In addition, this research focused on the existence or not of a technological education of teachers to use these tools that enable more attractive and dynamic classes for students in the English language subject.

The study showed that all English teachers are often using technology in English classes. The data shows that these teachers, although universities failed in the technological training of education professionals (Serafim & Souza, 2011), they do not present difficulties in managing the technologies available in their respective workplaces. This proves that professionals strive to follow the technological revolution and use it as a pedagogical tool in the classroom.

Regarding the issue of infrastructure in the context of poor quality, the research presented a perspective of teachers about their schools that differs from some authors such as Matt Britland (2013) and Staresina (2011) who talk about the structural fragility of technology in educational spaces.

The data showed that most teachers, precisely 75%, agree that schools have good technology material, 25% think it is regular, and none of them think it is bad. Therefore, it was a different result for the context of the four state public schools of this city.

Still, we found that many teachers feel compelled to purchase technological devices with their own resources. Such an attitude happens because schools do not have sufficient technological tools for all teachers.

Hence, this study allowed us to reflect, inquire, interact and find out important information related to the use of technologies in English language teachers' classes, in a more digital perspective, in the context of state public schools in Itapipoca.

However, from this study, we noticed the possibility of deepening the theme by conducting future research in the teacher's classes. The goal is to ascertain whether the use of available technologies and structural conditions is being productive in the teaching-learning process, as well as in the production and implementation of different English activities from the perspective of the digital world.

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