

PRE-SERVICE LANGUAGE TEACHER TRAINING FOR DISTANCE EDUCATION FORMAÇÃO PRÉ-SERVIÇO DE PROFESSORES DE LÍNGUA PARA EDUCAÇÃO A DISTÂNCIA

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ABSTRACT: This research questions whether English language teaching courses offered by Brazilian public universities equip the next generation of teachers with the necessary skills to teach via distance learning through online environments. The methodology used is quantitative in nature and considers 118 universities that offer English Language and Literature courses. Their curricula were analyzed solely to investigate if the courses offered any modules related to distance learning. Only four institutions propose entire modules that deal with distance education although they are elective. In order to propose an alternative to this issue, a suite of three modules related to technology, distance teaching and learning are presented. TPACK model was used as a guide to analyze the proposed modules. The development of the modules could establish a more solid and holistic pre-service teacher education, so that pre-service teachers can be prepared to teach in online and blended environments.

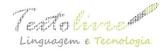
KEYWORDS: pre-service training; distance education; TPACK; public universities.

RESUMO: Esta pesquisa questiona se os cursos de ensino de inglês oferecidos por Universidades Públicas Brasileiras equipam a próxima geração de professores com as habilidades necessárias para ensinar via educação a distância através de ambientes online. A metodologia utilizada é de natureza quantitativa e considera 118 universidades que oferecem graduação em Língua e Literatura Inglesa. Os respectivos currículos foram analisados unicamente para investigar se os cursos ofereciam módulos relacionados ao ensino a distância. Apenas quatro instituições propõem módulos inteiros que lidam com educação a distância, embora sejam eletivos. Para propor uma alternativa a essa questão, é apresentado um conjunto de três módulos relacionados à tecnologia, ensino a distância e aprendizado. O modelo TPACK foi utilizado como um guia para analisar os módulos propostos. O desenvolvimento dos módulos pode estabelecer uma formação de professores pré-serviço mais sólida e holística, para que os professores possam estar preparados para ensinar em ambientes online e híbridos.

PALAVRAS-CHAVE: formação pré-serviço; educação a distância; TPACK; universidades públicas.

1 Introduction

This research will ask whether English language teaching courses offered by Brazilian public universities equip the next generation of teachers with the necessary skills



to teach distance learning through on-line environments.

English is the second most spoken language among natives and non-natives around the world (ETHNOLOGUE, 2017). It has been taught in Brazilian schools since Imperial years and has become a mandatory subject in recent years, taught at secondary schools (LAW 13.415, 2017). Brazil is the largest country in South America and according to population estimates presented by the Brazilian Institute of Geography and Statistics, its population has exceeded two hundred and eight million people in February 2018 (IBGE¹, 2018). Nevertheless, according to 2017 Education First (EF) English Proficiency Index (EPI), Brazil is classified with a low proficiency level of English in the forty-first ranked position out of eighty investigated.

With such a vast population and territory, education plans to strengthen the English language learning could be implemented to improve Brazilians language proficiency. One option is to expand English learning distance courses. In order to do so, teacher education programs could offer specific training for on-line teaching and learning.

It is desirable that teachers understand the differences between teaching face-toface and on-line, and that they develop specific skills to be able to combine knowledge of content, technology and pedagogy to design and/or manage on-line environments.

The methodology used to answer the key question of this article is quantitative in nature. It begins with an analysis of 118 public universities in Brazil that are listed in the 2018 Folha University Ranking (RUF) as offering degrees described as "Letras" courses. Their curriculum was analyzed in order to investigate if the courses offered any modules related to distance learning.

The next section of this article will discuss distance education and pre-service training. In addition, data that contextualize the situation of Brazilian Universities regarding teacher training in distance education will be discussed. After that, a suite of modules will be presented to propose an alternative to the issue found.

2 Distance Education and Pre-Service Training

Digital Information and Communication Technologies (ICT) are present in the daily lives of a large part of the world population, especially in educational projects (ARCHAMBAULT; CRIPPEN, 2009). As part of this backdrop, research has shown that distance education, either exclusively on-line or delivered through blended learning, is part of secondary education (BORUP; GRAHAM; DRYSDALE, 2014; MIRON; GULOSINO; SHANK; DAVIDSON, 2017; MOORE-ADAMS; JONES; COHEN, 2016), tertiary education (ARINTO, 2013; DORNER; KUMAR, 2016; IGNOU, 2017; TURCSÁNYI-SZABÓ, 2012) and postgraduate degrees (HOFER; GRANDGENETT, 2012; KENNEDY, 2015).

Distance Education (DE) is increasing rapidly (RIENTIES; BROUWER; LYGO-BAKER, 2013). Many have argued (CHARBONNEAU-GOWDY; SALINAS; PIZARRO, 2016; KEENGWE; KANG, 2013) that to make education accompany the constant technological innovation of the 21st century, it is important that pre-service training be established in teacher education institutions.

- 1 Brazilian Institute of Geography and Statistics
- 2 Language, Literature and Linguistics Courses.



Offir (2010) attests that when technologies are implemented in schools, the focus should be on the teacher, whose role is to connect the pedagogical objectives of the classroom with the use of technologies. However, a lack of specific training to teach in online environments often leaves teachers to apply prior face-to-face class knowledge in distance learning contexts (BARAN; CORREIA; THOMPSON, 2011). Researchers report that educators typically begin their experience with on-line education without previous training and thus, most of the time, they learn on the basis of trial and error during the development of their careers (ARCHAMBAULT; CRIPPEN, 2009; HAWKINS; GRAHAM; BARBOUR, 2012).

Online instruction has been shown to be as effective as face-to-face education (HAWKINS; GRAHAM; BARBOUR, 2012). However, teaching on-line courses requires the acquisition of roles, responsibilities and teaching strategies, many of which are different from those required in face-to-face teaching (HAWKINS; GRAHAM; BARBOUR, 2012). The on-line and face-to-face classroom environments differ from one another, and each demands the development of its own pedagogies in order to build effective and meaningful learning spaces (BARAN; CORREIA; THOMPSON, 2011). Wengrowicz (2014) attests that to achieve pedagogical goals, teachers make different decisions according to the environment in which they teach, whether it is face-to-face or on-line instruction.

Innovation must be constant in public education aiming to establish a generation that can acquire the requirements of the job market of the future (DÍAZ; HORIGUERA, 2016, TURCSÁNYI-SZABÓ, 2012). It is understood that with the advancement of the internet and Digital ICTs, and with the increasing possibility of the language teacher entering the DE work environment, it is essential that concepts related to the area be addressed in their pre-service training. Archambault and Crippen (2009), when describing the reality of virtual schools in the United States, attest that with the increasing demand of teachers to work in on-line education, educators will be recruited directly from undergraduate programs.

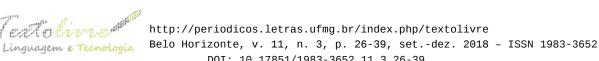
In Brazil, the 9057 Decree (2018), updated the legislation that regulates DE and increased the possibility of offering this modality for secondary and higher education. The inclusion of aspects related to DE in pre-service teacher courses can mean the development of better prepared professionals when facing the job market.

Therefore, preparing teachers to teach on-line and expanding English on-line courses, could provide Brazilians, especially the ones who live in remote areas, with the opportunity to improve their language proficiency and to be able to interact more actively with the world.

3 Context of online teacher training in public Brazilian universities

To investigate the curricula of public Brazilian universities that offer English Language and Literature Courses or Portuguese-English Language and Literature Courses³, the 2018 RUF was used to obtain an exhaustive list of pertinent universities in

In Brazil one can choose to undergo two different branches of the Language and Literature Courses. "Licenciatura" includes a practice component and students are ready to teach when they finish it. In "Bacharelado" the student will graduate as a bachelor. If one wishes to be a teacher, they would need to



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Brazil. The respective rankings of the universities were not taken into account for the purposes of this research.

RUF was compared with two other rankings, the 2018 OS World University Ranking and the 2017 Times Higher Education (THE) World University Ranking. The objective was to increase the scope of the analyses to include the majority of language and literature courses offered by public Brazilian universities.

To achieve the 2018 RUF list of universities, the website was accessed, and a search was made choosing pre-established fields that included: courses, state, city and administrative nature. For course, the closest option was Language and Literature. All states and cities where included in the search and the choice for administrative nature was the public option.

The first result included 133 establishments. Some institutions were considered only once in the ranking but are constituted of more than one campus and sometimes present different curricula, so the different campuses were added to the list. Nonetheless, universities that offered only bachelor's degree courses, the ones that did not offer English courses and distance courses were disregarded. The final list of institutions from RUF was compared to QS World University Ranking and THE World University Ranking. All public universities listed in the two rankings are part of the ones listed in RUF. The final number of universities investigated was 118.

The universities websites were searched and the Pedagogical Project and/or the curricular matrix of the courses were collected. The missing information was obtained by emailing the course organizers. Considering the documents gathered, syllabus modules related to teaching and technology and, more specifically, distance learning and teaching were analyzed to determine which institutions offer modules that deal with on-line learning and teaching.

Considering the 118 universities investigated,48 offer modules related to technology, half of them compulsory. Three institutions offer elective modules that include discussions about distance learning and three others offer compulsory ones. These modules have a workload that vary between 45 to 60 hours. Discussions include, among other topics, digital literacies, digital genres, teacher and student's roles in computer mediated learning environments, teaching English on-line, teacher training and distance education. Nevertheless, since the modules do not exclusively deal with distance education, the amount of time dedicated to work with these topics can be relatively small considering that their overall objectives are to discuss teaching English and technology, in general.

Only four universities propose entire modules that deal with distance education. They have a workload from 30 to 45 hours and are all electives. They deal with fundamentals of distance education, legislation related to the topic, main theories and approaches to distance learning, planning, designing and managing courses, materials and evaluation, challenges related to student's evasion and teacher and tutor training. Even though they cover some important aspects they are electives and there is no guarantee that students will choose to take them during their studies.

Considering the data presented, it is understood that distance education is a peripheral subject in teacher education in public Brazilian universities. Pre-service courses

complement their education. This research focus on "licenciatura" courses.



do not appear to prepare teachers to teach on-line. Nonetheless, it is of the utmost importance that student-teachers discuss the specificities of teaching and learning in online environments.

In order to do so, this article proposes a suite of three modules that will be incorporated into the curriculum reformulation of a Brazilian federal university in the south-eastern region of the country. As an addition to the proposal, the modules were analyzed considering the Technological Pedagogical Content Knowledge model (TPACK). The next section will bring considerations about TPACK, following the modules proposal and their respective analyses.

4 What is TPACK?

For Mishra and Koehler (2006) technology cannot be understood as an isolated component when considering areas of knowledge for the development of quality education. Rather, it should be connected and integrated with the content and pedagogical components of the knowledge being worked on. The authors defend the relationship and articulation of this knowledge as shown in Figure 1.

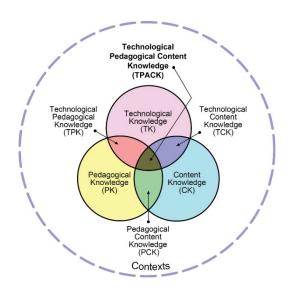


Figure 1: TPACK model. Reproduced by permission of the publisher, © 2012 by tpack.org

The TPACK model, extended from the idea of Shulman's Pedagogical Content Knowledge (1986), "attempts to identify the nature of the knowledge required by teachers for technological integration in their teaching, addressing the complex, multifaceted and situated nature of teacher knowledge" (KOEHLER, 2017, p.1).

The seven bases of knowledge, according to Koehler (2012), Koehler and Mishra (2009), Koehler, Mishra and Cain (2013) and Mishra and Koehler (2006) are: Content knowledge (CK), Pedagogical Knowledge (PK); Pedagogical Content Knowledge (PCK), Technological Knowledge (TK), Technological Content Knowledge (TCK), Technological Pedagogical Content Knowledge (TPACK).

The authors explain that CK is the knowledge of the subject to be taught and



learned. PK is the teacher's knowledge of teaching, learning practices, approaches and methods. PCK is related to specific pedagogical knowledge. It encompasses teaching, learning, curriculum, evaluation and the interconnection of these elements. It also incorporates class planning, management and evaluation. TK is the knowledge about working with technologies, their tools and resources. It goes beyond basic computing, and entails being able to productively apply technology in daily life. TCK is the way the subject being taught can be changed by technology.

When it comes to TPK, it is the knowledge of how technologies can be used in teaching and learning and what different results can be reached with them. In addition, it is the ability to choose the most appropriate tool and strategy to reach learning objectives; not to mention in-depth knowledge of technology resources and constraints.

TPACK goes beyond the combination of the four components (pedagogy, content and technology),

TPACK is the basis of effective teaching with technology, requiring an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge to develop new epistemologies or strengthen old ones (KOEHLER; MISHRA, 2009, p. 66).

The authors argue that for technology to be successfully integrated into teaching, both in practice and in theory, interaction must occur between content, pedagogy and technology. Teachers should not only develop fluency to work with each of the three elements but above all they must know how to interconnect them to promote effective learning outcomes (KOEHLER; MISHRA, 2009).

Despite its widespread acceptance, criticisms have also been directed towards the TPACK model. Brantley-Dias and Ertmer (2013) state that the model is very large and vague, and even though several researchers have used it, there is still no simple and precise definition of its components and constructs. Reyes, Reading, Doyle and Gregory (2017, p. 2) comment on other issues:

Graham argues that TPACK suffers from 'conceptual complexity' (2011, p. 1955). Gess-Newsome contends that the theoretical moorings of TPACK are questionable since it is built on Shulman's PCK which has been described as plagued with a 'substantial degree of overlapping of ideas' highlighting 'the fuzzy borders between knowledge domains' (Gess-Newsome, 2002, p. 6). Perhaps, one of the most serious criticisms has been what Angeli and Valdines claim about how 'the framework does not make explicit the connections among content, pedagogy and technology' (2009, p. 157) in relation to the theorisation of TPACK' (REYES; READING; DOYLE; GREGORY, 2017, p. 2).

Nevertheless, several studies advocate the use of TPACK for preparing teachers to deliver on-line teaching. Herring, Koehler and Mishra (2016) defend that the TPACK



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should be used according to specific teaching and learning contexts, considering the complex integration of the three knowledge fields. Therefore, the TPACK model is considered appropriate for the purposes of this research and will serve as support to the development of a suite of modules for on-line teaching.

Additionally, the research of Moore-Adams, Jones and Cohen (2016), presents a detailed table of types of knowledge and skills by TPACK knowledge domain. These domains that should be dealt with in teacher education will also be used to complement the critical analyses of the modules.

5 Suite of Modules for Pre-service language teacher training for distance education

In 2015, the Brazilian Ministry of Education and the National Council of Education defined the National Curricular Guidelines for teachers' initial training in undergraduate courses throughout Brazil (Resolution CNE/CP n.2, 2017). As a result, the curriculum of a Language and Literature Course in a Brazilian Federal University was reformulated.

Discussions about the curriculum reformulation began in 2016, during meetings held by the institute of English Language and Literature undergraduate course. Work groups were defined among the teachers who were in charge of structuring modules that would be part of the topics of specific training, pedagogical, academic-scientific-cultural and elective components of the course.

One of the elements that guided the entire project was to consider the profession that the students would consider upon completion of the course. It was determined that the new curriculum would seek to empower students to work in secondary and tertiary education. Moreover, they would be able to work for language schools or become private language teachers. These professionals should be able to deal with technologies in other to build a school in harmony with the advancements of the twenty first century (GUILHERME et al., 2017).

In order to create an environment where digital literacy can be developed, one was responsible for suggesting and building modules related to digital communication technologies and information technology in teaching and learning languages.

The initial premise suggested by this specific group was that technology should be integrated throughout all subjects of the course so that students would familiarize themselves with it during the entire course. Additionally, three compulsory modules where incorporated into the curriculum: "English language teaching and digital technologies", "Teaching English on-line: theoretical-methodological approaches" and "Placement". A description of each module and its analyses will be presented.

5.1 English language teaching and digital technologies

This module was articulated so that the undergraduate student could have a first contact with the use of digital ICTs in teaching and learning face-to-face. It has a workload of 75 hours and will be taught during the fifth term of the undergraduate course. It has, as its main objectives, to discuss digital technologies for teaching and learning English as a



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foreign language; to reflect critically on global aspects of the English language in digital technology-mediated social life; and to analyze digital technologies that can be used in teaching and learning English in the contemporary world.

Some of the topics to be discussed include the theoretical aspects of teaching English with digital technologies, multi-modality, digital tools, pedagogical mediation, task design, global and local English and digital technologies for enhancing respect for language in its social functioning and the difference between cultures.

Addressing these elements students will be practicing varied aspects of TPACK. For instance, TK by using and choosing technology, its tools and resources to deliver content; CK by discussing and building knowledge on theoretical aspects; PK and PCK by working on pedagogical mediation; TCK and TPK by designing tasks "[...] that are collaborative, highly interactive, and motivating, while encouraging engagement with the content" (MOORE-ADAMS; JONES; COHEN, 2016, p. 340).

It is important to highlight again one of the keys concepts of TPACK, that content, pedagogy and technology must be integrated. So, different elements are being dealt concomitantly and repeatedly throughout the course in different modules, discussions and tasks.

After concluding this module, it is expected that students will have had the opportunity to discuss the impact of technology on teaching and learning and how to use such theories and tools in their pedagogical practice.

Teaching English on-line: theoretical-methodological approaches 5.2

This second module is designed as blended learning so that students can experience learning in an on-line environment as part of their instruction. According to Wolf (2006, p. 57), "By forcing the teacher to take the role of student, the teacher finally learns to understand students' fears, stress, frustrations and joys in learning in the Web-based environment".

The module has a workload of 75 hours and it is planned to take place in the sixth term of the course. Its general objective is to reflect, experience, and critically discuss proposals related to the distance teaching and learning of English, and their particularities. Its specific objectives include knowing distance education history and its legislations, discussing skills and abilities of teachers and students needed on the virtual learning environment, exploring aspects related to pedagogical mediation, feedback and course design.

Subjects as teaching and learning experiences, critical-reflexive education for language teachers in virtual environments, roles of teacher, tutors and apprentices in online courses, on-line assignments, on-line teaching environments and massive open online courses (MOOCs) are also part of the syllabus.

This module is essential when teacher pre-service education is considered because it deals with the idiosyncrasies of virtual modality, as they differ from face-to-face approaches. In the planning stage learners should understand the distance learning context by studying its history, public policies and how it can be used as an inclusive tool.

Moreover, focus is needed towards teaching-learning experiences in virtual modality and critical-reflexive teaching, so educators can continuously analyze and critique their



pedagogical practice throughout their careers. By addressing the role of teachers, tutors and learners, as well as issues related to interaction, feedback and virtual mediation, the specificities of distance teaching and learning are dealt with. Calling the attention to how important these elements are, allows teachers to build and deliver a meaningful and quality environment to learners.

Other topics relate to course design, learning platforms, assignments and didactic material. Furthermore, learners will have the opportunity to apply the knowledge built during the semester by designing a course plan and lessons, making decisions about assignments, didactic material, tools, feedback and mediation. This way, students will be able to experiment on-line teaching and learning platforms, such as Moodle Cloud.

Concerning TPACK, different elements are present throughout the course such as getting in contact with on-line environments (TK), building knowledge on content and technology (CK), providing "online leadership in a manner that promotes student success through regular feedback, prompt, response and clear expectations" (MOORE-ADAMS; JONES; COHEN, 2016, p. 339) (PK), building knowledge integrating technologies (TCK), discussing "knowledge of language learning theories for online language learning" (MOORE-ADAMS; JONES; COHEN, 2016, p. 340) (TPK) and the monitoring of students interactions (TPACK).

It is intended that by the end of the second module, students will be exposed to online environments where they will have a great deal of opportunities to build knowledge on theories of on-line teaching practice. To introduce a more practical approach to their education, a third module called "Placement" was proposed.

5.3 Placement

During this module, students are expected to design and teach virtual or blended workshops or English courses for the local community using the Moodle platform. It is comprised largely of pedagogical practice for distance education. Teacher-learners will have the opportunity to create real courses and understand, exchange and build knowledge through their own experiences.

The module has a workload of 105 hours and its syllabus consists of planning courses for distance and blended learning, class planning, didactic material preparation for virtual learning environments, on-line English teaching and diversity, distance learning, assessment and reflective practice. They will spend most of the time planning, designing and teaching the course.

Adding up the knowledge built in the two previous modules, students will be able to deal with TK skills by using technology, different software, creation of curriculum design and evaluation. Considering CK they will "continually extend their content and technological knowledge" (MOORE-ADAMS; JONES; COHEN, 2016, p. 338). They will have opportunities to develop PK skills and knowledge like monitoring "student interaction and communication, balance structure and flexibility, establish presence on the course to motivate students, model and participate in students discussion" (MOORE-ADAMS; JONES; COHEN, 2016, p. 339) and much more. They can also provide different opportunities for learning using different media (TCK and TPK), monitor students interaction and learning, promote opportunities for communication, interaction, cultural



exchange, on-line learning and be part of a community of practice (PCK and TPACK). Nonetheless, elements of TPACK are supposed to have been dealt with in previous moments during the undergraduate course. For instance, CK would be dealt with in modules that focus on English language learning, PK in pedagogical modules and TK in all subjects during the course.

With the implementation of the new curriculum and the suite of modules described above, students should have sufficient theory and practice to develop meaningful work in on-line environments. Furthermore, as in-service teachers, qualified professionals should "focus on updating their knowledge of new teaching methodologies and approaches" (KELLY; GRENFELL, 2017, p.14). That applies as well to new technologies on teaching and learning.

6 Final considerations

The objective of this article was to investigate if English language teaching courses offered by Brazilian public universities equip the next generation of teachers with the necessary skills to teach distance learning through on-line environments.

The data presented reveals that the majority of Brazilian public universities curricula still do not address teacher training for distance education. This fact could be changed so that pre-service education of language teachers accompanies the educational and technological transformation of today's world. According to Comas-Quinn (2011, p. 218) "The shift goes beyond the acquisition of ICT skills and requires a pedagogical understanding of the affordances of the new medium and an acceptance by the teacher of his or her new role and identity."

In order to achieve this goal, a suite of modules related to technology and distance learning was presented. The syllabuses of the modules were associated with the TPACK model to illustrate knowledge and skills that can be built throughout the three terms.

The way teachers, pre-service or in-service, perceive on-line teaching is directly associated with the approaches and techniques they are going to put into practice and interferes in the "student learning processes and outcomes" (BADIA; GARCIA; JULIO, 2017, p. 1193). The development of the modules could establish a more solid and holistic pre-service teacher education, so that students can be prepared to teach in on-line and blended environments.

The education system has to accompany the technology revolution that has been established during recent years and teacher education must take it into consideration how to prepare teachers for work in different fields.

It is not the intention of this article to provide a descriptive model to be reproduced in other contexts. Its aims are to portray the reality of a specific university. However, this research is expected to contribute to discussions that could result in considerable changes to pre-service teacher education considering local and global contexts.

It is understood that on the process of data collection, all information was gathered on-line and/or requested via email or telephone contact, but not all institutions replied to it. Furthermore, there is no guarantee that the data collected was up to date or complete on the universities' websites.



To complement this research, a longitudinal investigation could be done to analyse students' knowledge and skills at the end of each college term. This research can be conducted from the moment the new curriculum is implemented using TPACK surveys and assessments that are found in several published studies (ABBITT, 2011; DEYA; KOPCHA; OZDEN, 2015; KARTAL; ULUAY, 2016; KENNEDY, 2015; SCHMIDT, BARA; MISHRA; KOEHLER; SHIN, 2009).

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