

# Task-Based Technology: Portuguese Language Teaching Practices

Joana Carvalho, Sixto Cubo Delgado, and Inmaculada Sánchez Casado

Faculty of Education (UEX), Badajoz, Spain

Email: joanascarvalho@gmail.com, {sixto, iscasado}@unex.es

**Abstract**—As part of a PhD investigation, this presentation aims to reveal the findings on Portuguese as a Non-Native Language (PNNL) teaching practice when using technology to implement other language approaches such as Task-Based Language Teaching (TBLT). A mixed research was developed to explain if there was a relation between technology use and the implementation of different language methods and teaching strategies, and also holistic task development. Data was gathered from 101 PNNL teachers, with working experience in and out of Portugal. The results provided evidence that technology was not being used to engage students in active learning and holistic tasks, as TBLT sustains, nor was it being used to develop different language methods and teaching strategies. It has been concluded that PNNL teachers were not using technology in their teaching practice to better implement other language methods, such as TBLT.

**Index Terms**—second language acquisition, language teaching methodology, ICT literacies

## I. INTRODUCTION

Portuguese, the official language of nine countries, has, through the years, found itself involved in different contact situations and distinctive learning contexts [1], [2]. As a macro-system that gathers European, Brazilian, and African variants, it is surrounded by linguistic peculiarities (e.g., regionalisms, sociolects, dialects) and standards that influence its use, communication, and teaching, not to mention that it is spoken by a wide spectrum of speakers [3] which lead us to the concept of Portuguese as a Non-Native Language (PNNL), specific to the Portuguese context [4]. Teaching contexts assemble, therefore, diversity and heterogeneity [5]. When it comes to language method, the Communicative Approach is the most used amongst Portuguese teachers, and even though other methods are studied, teachers tend to struggle to put theory into practice; not to mention the fact that teaching is not acknowledged to be collaborative and experiential [6]. Involving students in communication and giving them the freedom to use the target language, as Task Based Language Teaching (TBLT) sustains, is still seen with some scepticism in certain educational contexts [7], based on the belief that teaching must ensure correct use of language from the beginning, i.e., teachers

are more focused on form [8]. TBLT, on the contrary, tries to find the balance between meaning and form [9]; engages students in doing things [10]; tasks are strongly connected to communicative needs of the real world [11]; and it appeases interaction via cooperation.

TBLT is attracting enormous interest, but there are few studies on TBLT in technology-mediated contexts [12]. If we already live in the era of the Internet of Things (IoT) [13], it is clear that the effects of technology on education are an undisputed reality. Likewise, its effects on the TBLT approach offer a great potential for language learning, as Web 2.0 technologies create excellent environments in which students can engage in active learning and holistic tasks [14]; and, supports meaning production with the use of technology [15]. As such, teachers must acquire new techniques and skills, as current technologies become obsolete [16]. A few studies of computer-mediated communication (CMC) related to PNNL are starting to be divulged [17], but there is little relating to teacher training for its pedagogical use [18]. As such, this presentation focuses on the following question: Are PNNL teachers using technology in their teaching practice to better implement other language methods such as TBLT? To answer our research question two general objectives have been compiled, namely: 1) Examine whether PNNL teachers adopt TBLT approach in their teaching practice; 2) Examine whether TBLT approach is mediated by technology. The specific objectives of this study intended to analyse whether technology use leads to: 1) implementation of different teaching methods; 2) development of holistic tasks; 3) diversification of teaching strategies.

Web 2.0 tools are foreseen to be a way to create digital educational resources, likely to be shared and distributed. Being a notable teaching and learning support, they should, furthermore, allow teachers to apply different teaching strategies and learning methods [19]. If teaching PNNL with technology is collaborative and experiential [6], and supports meaning production [15], teachers will, in this way, engage students in active learning and holistic tasks. As such, and to better answer this research question, three hypotheses were formulated, as follows:

**H1.** The use of digital educational resources increases the diversification of language teaching methods.

**H2.** The use of technology leads to holistic task creation.

**H3.** Teaching strategies diversification increases the use of Web 2.0 tools.

**H3.1.** Teaching strategies diversification increases the use of Prezi.

**H3.2.** Teaching strategies diversification increases the use of PowerPoint.

**H3.3.** Teaching strategies diversification increases the use of Google Drive.

**H3.4.** Teaching strategies diversification increases the use of Dropbox.

**H3.5.** Teaching strategies diversification increases the use of Audacity.

**H3.6.** Teaching strategies diversification increases the use of YouTube.

**H3.7.** Teaching strategies diversification increases the use of Vimeo.

**H3.8.** Teaching strategies diversification increases the use of Skype.

**H3.9.** Teaching strategies diversification increases the use of Facebook.

**H3.10.** Teaching strategies diversification increases the use of Gmail.

Following theoretical review, the methodology (II) of this study will be presented, followed by procedures (A) and results (B) of the investigation; and, ultimately, discussion (III) and conclusions (IV).

#### A. *Teaching Portuguese as a Non-Native Language (PNNL)*

PNNL covers Portuguese as a Foreign Language (PFL), Portuguese as a Second Language (PSL); and Portuguese as a Heritage Language (PHL), which is why it contains different types of acquisition, learning and domains. PNNL has developed from social, cultural, and political needs [4]. Much has been done to disseminate and promote Portuguese worldwide (e.g., Community of Countries with Portuguese as Official Language (CPLP); Academy of Science of Lisbon and the Brazilian Academy of Letters; *Camões*, I.P.; The Gulbenkian Foundation). Furthermore, several studies have been developed [7], [20]-[27]. In terms of teacher training, Portuguese universities have been developing important work related to didactics and interculturality [5], [28]. According to [29], such teacher training intends to investigate professional development through teacher preparation, and how content in didactical representations and use is transformed while teaching. However, in PNNL teaching, the dominant language approach is the Communicative Approach [4], [7], because, even though other methods are studied during training, Portuguese teachers tend to struggle to put theory into practice, possibly because teaching is not acknowledged as being collaborative and experiential [6], [30]. Involving students in communication and giving them the freedom to use the target language, as TBLT sustains, is still seen with some scepticism in certain educational contexts, since many teachers are accustomed to having main control over students' production [7]. This is based on the belief that teaching must ensure the correct use of language from the onset of learning, and adopt a presentation-practice-production approach, also known as the PPP approach [31].

#### B. *Understanding the TBLT Approach*

TBLT, on the other hand, tries to find the balance between meaning and form [9], where meaning-based approaches are, according to [31], "based on the belief that it is more effective to encourage learners to use the language as much as possible, even if this means that some of the language they produce is inaccurate" ("Starting with form and starting with meaning", para. 3); provide a learning that comes from real contexts; use tasks that have a pedagogical relationship with communicative needs of the real world [11]; and encourage interaction via cooperation. As [15] mentioned, TBLT has been established for quite some time as one "of the main approaches to language learning and teaching worldwide" (p. 17).

Even though there is a plethora of task designations [6], [32-34], to [8]:

a task is a work plan that requires learners to process language pragmatically . . . is intended to result in language use . . . to the way language is used in the real world. Like other language activities, a task can engage productive or receptive, and oral or written skills and also various cognitive processes. (p. 16)

#### C. *TBLT in PNNL Teaching Practice*

Little has been done either to introduce TBLT in educational institutions, or to develop manuals and other pedagogical material [35]. The TBLT approach to teaching PNNL is not common, and the same is reflected in published materials. Technology-mediated TBLT programmes should target not only tasks and language needs, but also technology needs and the intersection between them (tasks that require access and use of technology-mediated environments; technologies that would facilitate task realization, and would serve as ways of communicating for specific purposes) [23]. Appropriate tasks in a technology-mediated environment should foster electronic literacy in terms of technical use and approaches to learning, and support a gradual systematic increase in learners' competency in orchestrating the combined potential of different modes for communication.

Since multiple literacies are now a requirement, teachers must learn new techniques and skills, as current technologies become obsolete [28]. Since knowledge is the base of teaching, and given the dissemination of technology, it is highly important that teacher training actions include the appropriation of technological knowledge [36]. In fact, in PNNL teaching, some projects now exist that integrate technologies [24], but there is still a long way to go to make use of the benefits of such experiences in teacher training programmes [18], [37], which leads us to say that in PNNL there is not only a lack of technology use but also of its integration into pedagogical application [38].

## II. METHODOLOGY

This presentation is part of a mixed method research [39], a follow-up model, divided into two parts: first, quantitative method (F1); second, qualitative method (F2).

For each of them, procedures (A), and results (B) will be presented.

#### A. Procedures

##### 1) F1 procedures

PNNL teachers, with working experience in Portugal and/or abroad, took part in this study. These participants were contacted via email, specifically via *Camões, I.P.*, an institution under the Portuguese Affairs Ministry that aims to promote Portuguese. Teaching Portuguese Language and Culture is one of the areas *Camões, I.P.* relates to. A massive body of work is developed for students of higher education in various countries (Lectureships / Co-operation agreements); in places of logistical support for teaching, learning and researching (Portuguese Language Centres); in universities committed to researching and teaching in a wide range of subjects, including linguistics, literature and other arts, history and post-colonial studies (Academic Chairs established in foreign universities); in an international network of public and private institutions that teach Portuguese as a foreign language, each of which is dedicated to teaching and spreading the Portuguese Language and Culture in Portugal and overseas (Associated Schools and Centres); and in a network of professionals teaching Portuguese abroad who are based at Portuguese embassies and consulates around the world (Co-ordination units of Teaching Portuguese Abroad). As such, and because for this study it was determined to apply convenience sampling, emails were sent to every unit of *Camões, I.P.* linked to the area of Portuguese Language Teaching and Culture, in order to obtain data from teachers. Since the chosen investigational instrument for this part of the research (F1) was a questionnaire, on the email the link to access the online questionnaire was made available. The questionnaire's validity procedures were as follows: the first version of the questionnaire was submitted for validation by five expert teachers, whose comments and suggestions were incorporated into the second version. This was an Internet-based survey, using Google Forms, to obtain the largest possible number of participants from different locations. This questionnaire was sent by email to 375 institutions linked to *Camões, I.P.*, and subsequently to teachers, for a period of 75 days, in late 2016. 101 valid responses were received (Table I).

The questionnaire was divided into four dimensions (first, *Demographic Information*; second, *Teacher Training*, related to training for the creation of pedagogical resources, such as digital; third, *Digital Educational Resources*, related to the needs of the teachers regarding both creation and use of digital resources for pedagogical purposes; fourth, *Language Teaching Methods*, related to perceiving whether teachers apply TBLT approach). For this presentation, the focus is on the second and fourth dimensions, with a total of 20 and 4 questions, respectively. Different scales were applied: Dichotomic, and Lickert scale. To verify the existence of internal consistency, IBM SPSS Statistics 22.0 software was used:  $\alpha=.847$  (dimension 2) and  $\alpha=.652$  (dimension 4). The latter's consistency was lower,

most likely due to the reduced number of questions and/or low inter-relation between items [40]. SPSS software was also used for all data analysis: descriptive and inferential.

##### 2) F2 procedures

Qualitative sample (S2) (Table I), obtained using F1's questionnaire, was submitted to an online semi-structured interview.

TABLE I. DISTRIBUTION OF QUANTITATIVE AND QUALITATIVE SAMPLES

	S1 (N = 101)		S2 (N = 20)	
	f	%	f	%
Gender				
Male	25	24.8	7	35
Female	76	75.2	13	65
Age				
20-29	8	7.9		
30-39	53	52.5	13	65
40-50	25	24.8	5	25
>51	15	14.9	2	10
Qualifications				
Bachelor	39	38.6	5	25
Master	48	47.5	12	60
PhD	14	13.9	3	15

Note. S1=Quantitative Sample; S2=Qualitative Sample

Skype, Hangouts, and Gmail chat room were used, depending on the interviewees' preferences. All interviews were authorized to be recorded and interviewees' anonymity was guaranteed. The questions were developed taking the quantitative results into consideration. Nvivo 12 software was used to better analyse data: content analysis.

#### B. Results

The research results will be presented as follows: firstly, quantitative results (F1), i.e., descriptive (1) and inferential data (2); secondly, qualitative results (F2), i.e., data as result of content analysis (3).

##### 1) Descriptive data (F1)

For the two of the variables that were analysed, *Language method* and *ICT in PNNL teaching*, Table II presents the results of four of the questions. Table III lists the most representative Web 2.0 tools teachers use to develop communicative language skills, which were obtained from the following question: *Considering your teaching experience, which Web 2.0 tools do you mostly use to work the above-mentioned skills?*

##### 2) Inferential analysis (F1)

For inferential analysis, non-parametric chi-square tests were used. As an association between two variables was being tested (binary and categorical, with more than two non-ordinate categories), and since the asymptotic significance of chi-square test was not satisfactory (at least 20 per cent of the total number of cells in the contingency table contain fewer than five cases), non-parametric exact chi-square test was applied, for our formulated hypothesis.

For both H1 (Table IV) and H2 (Table V), cross-tabulation of both variables was used to find whether there was an association between them. Then Exact chi

square test (Table VI) was considered to be the most appropriate, for both hypotheses.

Exact chi-square test was the appropriate test to find if the 10 sub-hypotheses of H3 would be accepted or not, as shown in Table VII. Results reveal that groups do not differ regarding the use of Prezi (H3.1), PowerPoint (H3.2), Google Drive (H3.3), Dropbox (H3.4), Audacity (H3.5), YouTube (H3.6), Vimeo (H3.7), Skype (H3.8), Facebook (H3.9), or Gmail (H3.10), to develop communicative language resources. As such,  $H_0$  was accepted, and thus H3 rejected. However, results have shown that diversification of teaching strategies was almost achieved when teachers used Dropbox and Facebook to develop, respectively, vocabulary, and writing and socio-linguistic resources.

TABLE II. DESCRIPTIVE STATISTICS OF WEB 2.0 TOOLS AND LANGUAGE METHODS IN TEACHING PRACTICE

Question	Nominal scale (f)	Likert scale (f)				M	SD
	Y/N	D	A	TA	DK		
Q1 <sup>a</sup>	66/35					.65	.478
Q2 <sup>b</sup>		1	41	23	1	3.3	.545
Q3 <sup>c</sup>			42	57	2	3.6	.531
Q4 <sup>d</sup>	96/5					.95	.218

Note. Y=yes; N=no; A=agree; D=disagree; TD=totally disagree; DK=doesn't know.

<sup>a</sup>Do you use Web 2.0 tools for PNNL teaching and learning? <sup>b</sup>You use Web 2.0 tools because they allow the implementation of diverse strategies. <sup>c</sup> You defend the implementation of different language methods to satisfy students' needs. <sup>d</sup> When you create educational resources you try to adopt a holistic approach regarding the subject that is being studied.

TABLE III. DESCRIPTIVE STATISTICS OF WEB 2.0 TOOLS TO DEVELOP COMMUNICATIVE RESOURCES

Resources	Web 2.0 tools (f)					
	V	PP	G	F	Db	YT
Vocabulary	16	41	45	24	37	56
Grammar	7	36	34	13	25	28
Writing	2	23	40	12	30	14
Listening	21	4	15	13	15	76
Reading	4	23	35	18	34	8
Speaking	11	17	16	13	20	37
Sociolinguistic	13	20	28	25	19	42

Note. V=Vimeo; PP=PowerPoint; G=Gmail; F=Facebook; Db=Dropbox; YT=YouTube

TABLE IV. CROSS-TABULATION OF VARIABLES WEB 2.0 TOOLS AND LANGUAGE METHODS

		Do you use Web 2.0 tools for PNNL teaching and learning?		
		No	Yes	Total
You defend the implementation of different language methods to satisfy students' needs	Agree	19	23	42
	Totally agree	15	42	57
	Doesn't know	1	1	2
	Total	35	66	101

TABLE V. CROSS-TABULATION OF VARIABLES HOLISTIC APPROACH AND USE OF WEB 2.0 TOOLS ON PNNL TEACHING

		Do you use Web 2.0 tools for PNNL teaching and learning?		
		No	Yes	Total
A holistic approach regarding the subject that is being studied is adopted.	No	2	3	5
	Yes	33	63	96
	Total	35	66	101

TABLE VI. H1 AND H2 STATISTICAL TEST RESULTS

Hypotheses	Pearson Chi-Square			
	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)
H1.	4.036 <sup>a</sup>	2	.133	.126
H2.	.066 <sup>b</sup>	1	.797	1.000

<sup>a</sup>2 cells (33.3%) have expected count less than 5. The minimum expected count is .69. <sup>b</sup>2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.73.

TABLE VII. EXACT CHI SQUARE RESULTS FOR H3 SUB-HYPOTHESES

SH	Activities						
	V	G	W	L	R	S	SL
3.1 <sup>a</sup>	.643	1.000	.503				
3.2 <sup>b</sup>	.30	1.000	.884		1.000	.657	.764
3.3 <sup>c</sup>	.452				.339		
3.4	.090	.799	1.000	1.000	.493	.764	.868
3.5 <sup>d</sup>				.691		.623	
3.6 <sup>e</sup>	.241	.478	.811	.843		.361	.724
3.7 <sup>f</sup>	1.000			1.000		1.000	.657
3.8 <sup>g</sup>	.580			.815		.438	
3.9 <sup>h</sup>	.684	.657	.073		.234		.073
3.10	1.000	1.000	.167	.811	.612	.390	.806

Note. SH=Sub-Hypotheses; V=Vocabulary; G=Grammar; W=Writing; L=Listening; R=Reading; S=Speaking; SL=Socio-Linguistic

<sup>a</sup>Listening ( $n = 5$ ), Reading ( $n = 9$ ), Speaking ( $n = 7$ ), and Sociolinguistic ( $n = 9$ ) activities were not considered as their frequency was under 10. <sup>b</sup>Listening ( $n = 4$ ) was not considered as its frequency was under 10. <sup>c</sup>Vocabulary ( $n = 9$ ), Grammar ( $n = 9$ ), Listening ( $n = 5$ ), Speaking ( $n = 8$ ) and Sociolinguistic ( $n = 9$ ) activities were not considered as their frequency was under 10. <sup>d</sup>Vocabulary ( $n = 6$ ), Grammar ( $n = 3$ ), Writing ( $n = 2$ ), Reading ( $n = 2$ ) and Sociolinguistic ( $n = 4$ ) activities were not considered as their frequency was under 10. <sup>e</sup>Reading ( $n = 7$ ) was not considered as its frequency was under 10. <sup>f</sup>Grammar ( $n = 7$ ), Writing ( $n = 2$ ) and Reading ( $n = 3$ ) were not considered as their frequency was under 10. <sup>g</sup>Grammar ( $n = 7$ ), Writing ( $n = 5$ ), Reading ( $n = 3$ ), and Sociolinguistic ( $n = 8$ ) activities were not considered as their frequency was under 10. <sup>h</sup>Listening ( $n = 9$ ) and Speaking ( $n = 9$ ) were not considered as their frequency was under 10.

### 3) Content data (F2)

Given the results obtained through F1 analysis, it was intended to identify the language method(s) that PNNL teachers adopt and what sort of activities they develop in their teaching practice, according to the Web 2.0 tools they use. Also, it was intended to understand the reasons why these teachers use ICT during their teaching practice.

As such, two questions were formulated: Q1. *Depending on the language method used, what sort of activities do you develop given the digital tools you use, namely the ones you mentioned in the questionnaire, in order to improve their language skills?;* and, Q2. *Why do you use ICT in your teaching practice?*

For Q1, three categories were formulated: 1) Language Method; 2) Web 2.0 tools used; and, 3) Activities. While analysing the 7 segments for the category *Language methods*, teachers tend to apply the Communicative Approach (Fig. 1), as stated by teacher “Amelia”: “I apply communicative approach, mainly. And... here the Portuguese language teaching system, in the country where I work, demands it”. For category *Web 2.0 tools used* (Fig. 2), 32 segments were analysed, where: *email* is mostly used to send information or material, or even students’ homework; *YouTube*, used to find music; *Moodle*, to upload documents; PowerPoint, mainly for content presentation, in class; and Facebook, to share materials, as stated by teacher “João”: “As students are great fans of Facebook, I created a group to share some information of what is considered interesting or useful for class or for language and culture learning”. Finally, for category *Activities*, the most representative words (Fig. 3) (subcategories) were *music* (teacher “Maria” mentioned “the only thing I send, audio, is music, and I ask them to pay attention to the lyrics, to confirm if they can decipher them”); *comprehension*, which, according to the analysed segments, is related to oral comprehension (teacher “Cláudia” stated “because we needed to make production... eh... create oral exams, oral comprehension, etc.”); and *grammar* (teacher “Paula” stated “normally it’s for them to understand a certain grammar issue, within an authentic context, used by people who actually use that... But mainly for grammar purposes”).



Figure 1. Language Method PNMT teachers adopt.



Figure 2. Web 2.0 tools mostly used by PNMT teachers.

For Q2, three categories were formulated (Fig. 4). Results have shown that the category *Material* contained more segments, mostly related to material *development*, *search*, and to make material *available*. Material *development* is related to the lack of material, especially for those whose proficiency level is more advanced (teacher “Teresa” said “I normally teach C1 and C2 levels and for that materials have to be created by me. There is no material for them, it has to be things that are up to date and for that I use Internet, media, etc., to find reports, news and what is actually happening in Portugal”); and, to create authentic material, to develop reading, oral comprehension and production skills (teacher “Rita” said “I use these tools because I like using authentic materials and I could not do it another way. I use online newspapers, texts, but also videos”). Teachers tend to *search* for materials to use in class, off or online, as stated

by teacher “Maria”: “imagine, we start with a literature theme in which I give a list of authors and if I have an equipped classroom I can ask them to find some more information. It’s merely informative, so that they can prepare a presentation about that poem, that author, and so on”.



Figure 3. Mostly developed activities when using Web 2.0 tools.



Figure 4. Analysed categories for Q2.

The other subcategory is related to making materials *available*: “What I do with Moodle, in class, is basically... that is a platform where I leave something that I want them to read, see or print, and to inform that the class has been changed or that I am going to miss class”, teacher “Clarisse” stated. As for the category *Language skills*, teachers tend to use Web 2.0 tools mostly to develop oral comprehension and production (teacher “Eduardo” mentioned “These tools are very effective, very up to date, very important. In a Portuguese class we can use them mainly to practise listening”, and teacher “Pedro” stated “I work ideas that have to do with Portuguese, to practise oral production”); and reading skills (“I use digital tools to work language skills, such as oral production and to collect texts”, teacher “Rita” mentioned). Finally, Web 2.0 tools are said to be used as a *self-study*, to be used out of class, as homework, as teacher “Amelia” stated: “Yes, but mainly for them to do that at home. In class, I never use them”.

### III. DISCUSSION

Descriptive data have shown that more than half of the teachers confirmed they have used Web 2.0 tools for PNNL practice. The majority of teachers said they adopt a holistic approach while creating resources; defend the implementation of different language methods to satisfy students’ needs [41]; and use Web 2.0 tools to implement different strategies, all of which lead to the assumption that they might be adopting TBLT mediated by technology in their language teaching practice [14]. However, when analysing the Web 2.0 tools that were mostly used by the teachers, it was interesting to verify that the most utilised tools are those that are used to develop resources for vocabulary, followed by grammar, writing, reading, and socio-linguistic purposes. Only YouTube was mostly mentioned to be used to develop speaking skills. These results have prompted the realisation that teachers are mainly focused on form [7],

and, therefore, are not balancing form and meaning, as TBLT sustains [9].

For H1 it was interesting to find that both groups (agree and totally agree) that said they used Web 2.0 tools throughout their teaching practice, did not diverge regarding the implementation of different language methods. Such results might be associated with the fact that teachers perceive language teaching as something that must focus on form [7], [31], and not balancing it with the meaning [9], [42]. One of the reasons might be that they do not acknowledge teaching as something that should be collaborative and experiential [30], and, as professionals, they could be expected to change direction, finding a framework that better adjusts to students' needs [43]. Also, these results might be related to Portuguese teachers' lack of preparation for the use of technology [44], probably justified by the fact that teacher training in Portugal is still too "attached" to traditional practices and models [45].

The findings in H2, related to teachers' strategies, have shown that this hypothesis was rejected. It is believed that this is because teachers do not receive any technological preparation with pedagogical purposes, as previous studies have suggested [36], [46], [47]. Teachers are not applying different teaching strategies, nor are they adopting alternative teaching approaches to the communicative approach.

As for the third hypothesis of our study, H3, results have shown that it was rejected as groups do not diverge regarding the use of Web 2.0 in their teaching practices in order to embrace a holistic attitude while creating tasks, as mentioned in [14]. Teachers seem not to perceive teaching as being collaborative and experiential, and, thus, tend to adopt a static, atomistic and hierarchical attitude, rather than embracing a holistic attitude towards the subject matter [6].

F2 data confirmed that teachers tend to apply only communicative approach in their teaching practice, and the use they make of technology does not change their teaching practice. According to data, the activities they tend to develop do not seem to take advantage of the Web 2.0, i.e., they do not seem to use them to develop collaborative enrollment nor to develop materials and activities mediated by technology to teach Portuguese language balancing form and meaning, as TBLT sustains. Activities tend to be focused on written production and comprehension, and also oral comprehension. Interaction is left behind. Also, the same can be found when analysing the reasons why they use technology tools, mainly for sending and searching materials (texts or music), or to create materials mostly based on reading and oral comprehension skills. These findings seem to confirm F1 hypotheses, i.e., teachers seem not to perceive teaching as being collaborative and experiential, and, thus, tend to adopt a static, atomistic and hierarchical attitude, rather than embracing a holistic attitude towards the subject matter.

Overall, findings confirm that PNNL teachers are not using technologies to better embrace other language methods, nor even the TBLT approach. They seem to use

digital technology, but very much linked to the presentation-practice-production approach [31].

#### IV. CONCLUSION

The present study examined PNNL teachers' technology use as a resource to implement different teaching methods and strategies to engage students in active learning and holistic tasks. Data has shown that teachers seem to use technology in a traditional and conservative way, as digital educational resources are not interpreted to promote different language methods. Furthermore, teachers are not using digital tools to implement different teaching strategies. The use that teachers make of digital tools reflects a language teaching mainly based on a weak or moderate version of the Communicative Approach and on form focused approaches in general. Technology is not being used as meaning production, and thus teachers are not implementing a TBLT approach mediated by technology, as they do not seem to adopt a holistic approach while developing tasks mediated by technology. That is to say that teaching is not being acknowledged as being collaborative and experiential.

Teachers are expected to gather reviewing, scientific, intercultural, linguistic-communicative, pedagogical-didactic, personal/interpersonal, and digital skills [48]. Teacher training is foreseen to be an embracing training in order to face the challenge of answering the variety of students' needs, and consider the fact that we live in a networked world. As such, teachers are supposed to reunite a combination of knowledge that works in constant and coherent symbiosis.

We believe that the framework such as Technological Pedagogical and Content Knowledge (TPCK) [16] would be not only a good model for PNNL teachers to teach with technology, but also a training model that may provide a definition of a new didactics for teaching on the social web, based on scientific and pedagogical knowledge, and allows one to plan, conceive and use Web 2.0 tools effectively in the process of teaching and learning.

As such, future research could analyse how PNNL teachers perceive domain-general TPCK, as there is little research about this matter. Variables such as age, experience, or time, could also be analysed for their effect on the use of technology in teaching practice, in parallel to teaching training analysis. We believe this study needs to be replicated with a larger number of teachers and within a larger number of different instructional contexts.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

#### AUTHOR CONTRIBUTIONS

Joana Carvalho conducted the research, analyzed the data and wrote the paper. Both Dr. Inmaculada Sánchez and Dr. Sixto Cubo supervised the entire research. All authors had approved the final version.

## REFERENCES

- [1] I. Leiria, "Portuguese second language and foreign language: Research and teaching," *Idiomático*, vol. 3, pp. 1-11, December 2004.
- [2] F. Pessoa, "Teaching and learning portuguese foreign language," in *Teaching and Learning Portuguese as Foreign Language – Beginners Manuals*, A. Tavares, Eds., Lisboa: Lidel, 2008, pp. 25-32.
- [3] C. Flores, "Portuguese non-native language: Discussing concepts in a linguistic perspective," in *Portuguese Non-Native Language: Investigation and Teaching*, R. Bizarro, C. Flores, and M. Moreira, Eds., Lisboa: Lidel, 2013, pp. 35-46.
- [4] A. D. Pinto. (November 2007). Institutionalization of Portuguese Non-Native Language in Portugal. *Revista ProFORMAR online* [Online]. 21. pp.1-20. Available: [http://proformar.pt/revista/edicao\\_21/pag\\_6.htm](http://proformar.pt/revista/edicao_21/pag_6.htm)
- [5] J. B. Carvalho, "Portuguese as a non-native language didactics – second language and foreign language," in *Portuguese Non-Native Language: Investigation and Teaching*, R. Bizarro, C. Flores, and M. A. Moreira, Eds., Lisboa: Lidel, 2013, pp. 146-154.
- [6] D. Nunan, *Task-based Language Teaching*, UK: Cambridge University Press, 2004.
- [7] C. Castro, *Task Based Language Teaching – from Theory to Practice*, Lisboa: Lidel, 2017.
- [8] B. Tomlinson, "Materials Development for Language Learning and Teaching," *Language Teaching*, vol. 45, no. 2, pp. 143-179, April 2012.
- [9] R. Ellis, *Task-based Language Learning and Teaching*, Oxford: Oxford University Press, 2003.
- [10] J. Dewey, *Experience and Education*, NY: Touchstone, 1997.
- [11] G. Crookes and M. Long, "Three approaches to task-based syllabus design," *University of Hawai'i Working Papers in ESL*, vol. 10, no. 1, pp. 1-36, 1991.
- [12] R. Ellis, "Foreword," in *Task-Based Language Learning and Teaching with Technology*, H. Reinders and M. Thomas, Eds., London: Continuum International Publishing Group, 2010, pp. 6-18.
- [13] P. Christen, D. Georgakopoulos, C. Perera, and A. Zaslavsky, "Context aware computing for the internet of things: A survey," *IEFE Communications Surveys & Tutorials*, vol. 16, no. 1, pp. 414-454, January 2014.
- [14] M. González-Lloret and L. Ortega, "Towards technology-mediated TBLT," in *Technology-mediated TBLT: Researching Technology and Tasks*, M. González-Lloret and L. Ortega, Eds., UK: John Benjamins Publishing Company, 2014, pp. 1-22.
- [15] A. Muller-Hartmann and M. S. Dittfurth, "Research on the use of technology in task-based language teaching," in *Task-Based Language Learning and Teaching with Technology*, M. Thomas and H. Reinders, Eds., U.S.A.: Continuum, 2010, pp. 17-40.
- [16] M. Koehler and P. Mishra, "What is technological pedagogical content knowledge?" *Contemporary Issues in Technology and Teacher Education*, vol. 9, no. 1, pp. 60-70, 2009.
- [17] M. H. Araújo e Sá and S. Melo-Pfeifer, *Electronic Communication in Portuguese Foreign Language Class*, Lisboa: Lidel, 2013.
- [18] M. J. Marçalo and A. A. Silva, "Portuguese foreign language: Adapting materials to Web 2.0," in *Theories and Linguistic Use – Applied to Portuguese Non-Native Language*, P. Osório and F. D. Bertinetti, Eds., Lisboa: Lidel, 2015, pp. 212-245.
- [19] P. Tchounikine, *Computer Science and Educational Software Design. A Resource for Multidisciplinary Work in Technology Enhanced Learning*, London: Springer, 2011.
- [20] M. H. Ançã, *Education in Portuguese and Migrations*, Lisboa: Lidel, 2010.
- [21] M. J. Grosso and A. P. Cleto, *Portuguese in China*, Lisboa: Lidel, 2013.
- [22] S. Lourenço, *A Framework to Teach Portuguese in East Timor*, Lisboa: Lidel, 2011.
- [23] S. Melo-Pfeifer, *Portuguese Heritage Language Didactics*, Lisboa: Lidel, 2016.
- [24] S. Melo-Pfeifer and M. H. Araújo e Sá, *Electronic Communication in Portuguese Foreign Language Class*, Lisboa: Lidel, 2013.
- [25] P. Osório, *Theories and Linguistic Use – Applied to Portuguese Non-Native Language*, Lisboa: Lidel, 2017.
- [26] P. Osório and R. M., Meyer, *Portuguese Second Language and Foreign Language: from Theory(ies) to Practice(s)*, Lisboa: Lidel, 2008.
- [27] A. Tavares, *Teaching and Learning Portuguese as Foreign Language – Beginners Manuals*, Lisboa: Lidel, 2008.
- [28] R. Bizarro and F. Braga, "PNNL teacher training in FLUP: Intercultural aspects and inclusive teaching of portuguese as a second language," in *Portuguese Non-Native Language: Investigation and Teaching*, R. Bizarro, C. Flores, and M. A. Moreira, Eds., Lisboa: Lidel, 2013, pp. 156-172.
- [29] A. Bolívar and R. B. Ruano, "Teacher training," in *Portuguese Non-Native Language: Investigation and Teaching*, R. Bizarro, C. Flores, and M. A. Moreira, Eds., Lisboa: Lidel, 2013, pp. 100-110.
- [30] V. Kohonen, "Towards experiential foreign language education," in *Experiential Learning in Foreign Language Education*, R. Jaatinen, P. Kaikkonen, V. Kohonen, and J. Lehtovaara, Eds., London: Routledge, 2001, pp. 8-60.
- [31] D. Willis and J. Willis, *Doing Task-Based Teaching*, UK: Oxford University Press, 2007.
- [32] G. Crookes, "Task classification: A cross-disciplinary review," Technical Report, May 1986, pp. 1-47.
- [33] J. Lee, *Tasks and Communicating in Language Classrooms*, Boston: McGraw-Hill, 2000.
- [34] N. S. Prabhu, *Second Language Pedagogy*, Oxford: Oxford University Press, 1987.
- [35] H. B. Dias, "Euporean portuguese non-native language: Task based initial course," Ph.D. dissertation, Dep. Languages, Open University, Lisbon, Portugal, 2008.
- [36] L. A. Alberti, J. Colling, and A. Richit, "Teachers initial training for technology use: Technological knowledge evidenced in teaching plans," in *Ata do IV Congresso Internacional TIC e Educação 2016 – Tecnologias Digitais e a Escola do Futuro*, Lisboa, 2016, pp. 1388-1397.
- [37] I. Ogando, "Computers and internet to teach portuguese literature and culture in a context of portuguese foreign language," in *Electronic Communication Class of Portuguese as a Foreign Language*, S. Melo-Pfeifer and M. H. Araújo e Sá Eds., Lisboa: Lidel, 2013, pp. 184-198.
- [38] C. Y. Ersanli, "Improving Technological Pedagogical Content Knowledge (TPACK) of pre-service english language teachers," *International Education Studies*, vol. 9, no. 5, pp. 18-27, 2016.
- [39] L. Cohen, L. Manion, and K. Morrison, *Research Methods in Education*, 6th ed., New York: Routledge, 2007.
- [40] M. Tavakol and R. Dennick, "Making sense of cronbach's alpha," *International Journal of Medical Education*, vol. 2, pp. 53-55, June 2011.
- [41] M. González-Lloret, "The need for needs analysis in technology-mediated TBLT," in *Technology-mediated TBLT: Researching Technology and Tasks*, M. González-Lloret and L. Ortega, Eds., UK: John Benjamins Publishing Company, 2014, pp. 23-50.
- [42] R. Ellis, "Task-based language teaching: Sorting out the misunderstanding," *International Journal of Applied Linguistics*, vol. 19, no. 3, pp. 221-246, October 2009.
- [43] F. A. Costa, E. Cruz, S. Fradao, and C. Rodriguez, *Rethinking ICT in Education: Teacher as a Transformative Agent*, Carnaxide: Santillana, 2012.
- [44] F. A. Costa and M. H. Felizardo, "Teachers' perception about ICT training quality," in *Ata do IV Congresso Internacional TIC e Educação 2016 – Tecnologias Digitais e a Escola do Futuro*, Lisboa, 2016, pp. 1388-1397.
- [45] F. A. Costa and S. Viseu, "Training-Action-Reflection: A framework to prepare teachers for ICT integration in the curriculum," in *ICT in Portuguese Education: Conceptions and Experiences*, F. A. Costa, Peralta, H., and S. Viseu, Eds., Porto: Porto Editora, 2008, pp. 238-259.
- [46] A. Gonçalves, "New approaches in teacher training. School projects with ICT contexts," presented at the 2nd International Meeting of ICT and Education, Lisbon, November 30-December 2, 2012.
- [47] R. H. Nakashima and S. C. Piconez, "Technological Pedagogical Content Knowledge (TPACK): Explanatory model of teachers action," *REVEDUC - Revista Eletrônica de Educação*, vol. 10, no. 3, pp. 231-250, 2016.
- [48] M. S. Bastos, "Intercultural education in continuous training of language teachers," Ph.D. dissertation, Dep. Education, Aveiro University, Portugal, 2014.



Copyright © 2020 by the authors. This is an open access article distributed under the Creative Commons Attribution License ([CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/)), which permits use, distribution and reproduction in any medium, provided that the article is properly cited, the use is non-commercial and no modifications or adaptations are made.

**Joana Carvalho**, Portuguese, is a PhD student in teacher training and ICT at the Faculty of Education at Extremadura University (UEX), Badajoz, Spain. She is an invited lecturer at the Higher School of Social Sciences and Education, Polytechnic of Leiria, Portugal, and since 2008 she has been teaching Portuguese as a Foreign Language. She has developed digital contents for language teaching, and integrated a blended learning course of Portuguese for ERASMUS students, also at Polytechnic of Leiria. She worked in China (2015-2017), at Beijing Language and Culture University, where she gained a teaching award. Her fields of research center on foreign language teaching, language methods and ICT.

**Sixto Cubo Delgado**, Spanish, received a PhD in Psychology. He is a Senior Lecturer at the Faculty of Education at Extremadura University (UEX), Spain, where he coordinates the research master “Teacher

training and ICT” and the PhD Program “Innovation in Teacher Training. Counselling, analysis of educational practice and ICT in education”. Responsible at the University of Extremadura for the European Project “International research network for study and development of new tools and methods for advanced pedagogical science in the field of ICT instruments, e-learning and intercultural competences (IRNET)”. Orcid: [orcid.org/0000-0001-8802-9980](https://orcid.org/0000-0001-8802-9980)

**Inmaculada Sánchez Casado**, Spanish, completed the doctoral thesis on the training of professionals in the field of communication and language: hearing and language teachers, speech therapists, interpreters and mediators in communication. She is a senior Lecturer at the Faculty of Education at Extremadura University (UEX), Spain, in the fields of Psychology and Education. She is the ex-director of the training course for teachers specialized in hearing and language, sign language interpreters and alternative augmentative communication, and also the ex-director of the University Cooperation International Office for Development and Volunteering at UEX. Her research interests are sign language, teacher training and alternative augmentative communication. Orcid: <https://orcid.org/0000-0001-5165-8003>