

Hiding in Plain Sight: Pre-Service Teachers' Use of Web 2.0 Tools in Language Classes

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Abstract

In recent years, it has been witnessed that the incorporation of web-based tools for classroom instruction has brought several significant efficiencies in language classes. However, the research shows that even competent teachers may have difficulty coordinating these tools with specific learning goals and fail to reach the objectives of their lessons. Instructional gaps in lesson planning, delivery, and classroom management can be witnessed due to over-reliance on off-the-shelf digital materials or exercises. Therefore, this study aimed to figure out to what extent pre-service teachers use these tools, how much time they allocate to these implementations, which language skill they focus more on, and the perceived benefits of carrying out the courses. Thus, this study focuses specifically on 16 pre-service teachers' 12 week-long practicum days in which they were expected to deliver lessons once each week. The quantitative data were gathered by examining the frequency of digital materials used in classes, the time allocated for these materials in their lesson plans, and the actual time spent in the lesson delivery, and scores from the supervisor observation scale. The qualitative data were elicited from pre-service teachers' reflection notes for themselves and their peers, and structured open-ended questions regarding the use of digital tools in language classes. The results have shown that pre-service teachers rely heavily on vocabulary exercises through digital materials and use them until the end of the lesson without exerting extra effort into constructing knowledge together or engaging learners with more writing and speaking practices.

Keywords: Technology integration, pre-service teachers, teacher education, digital tools, teaching language skills.

Göz Önünde Gizlenmek: Öğretmen Adaylarının Dil Derslerinde Web 2.0 Araçlarını Kullanmaları

Öz

Son yıllarda, web tabanlı araçların sınıf içi etkinliklere dahil edilmesinin dil sınıflarında birçok önemli faydalar sağladığına tanık olunmuştur. Ancak araştırmalar, yetkin öğretmenlerin bile bu araçları belirli öğrenme hedefleri ile koordine etmekte zorlanabileceğini ve derslerinin hedeflerine ulaşamayabileceğini göstermektedir. Ancak, dijital materyallerin veya alıştırmaların sıkça kullanılması ders planlama, uygulama ve sınıf yönetiminde öğretim boşluklarına neden olabilir. Bu nedenle bu çalışma, öğretmen adaylarının bu araçları ne ölçüde kullandıklarını, bu uygulamalara ne kadar zaman ayırdıklarını, hangi dil becerisine daha fazla odaklandıklarını ve katılımcıların bu araçların kendi bakış açılarından olan yararlarını ortaya çıkarmayı amaçlamıştır. Bu nedenle, bu çalışma özellikle 16 öğretmen adayının haftada bir ders vermelerinin beklendiği 12 haftalık okul uygulaması günlerine odaklanmaktadır. Nicel veriler, derslerde kullanılan dijital materyallerin sıklığı, ders planlarında bu materyallere ayrılan süre ve ders işlenirken harcanan gerçek süre incelenerek toplanmıştır. Nitel veriler, üniversiteden gelen gözlemcilerin gözlem notlarından, öğretmen adaylarının kendileri ve akranlarına yönelik yansıtma notlarından ve dil derslerinde dijital araçların kullanımına ilişkin yapılandırılmış açık uçlu sorulardan elde edilmiştir. Sonuçlar, öğretmen adaylarının dijital materyaller aracılığıyla kelime alıştırmalarına büyük ölçüde dayandıkları ve bunları işlerken öğrencilerin farklı becerilerini geliştirmeye yönelmeye fazladan çaba harcamadan kullandıklarını göstermiştir.

Anahtar kelimeler: Teknoloji entegrasyonu, öğretmen adayları, öğretmen eğitimi, dijital araçları, dil becerileri öğretimi.

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INTRODUCTION

A typical teacher education context generally immerses students with theoretical knowledge and rationale behind technological pedagogical content knowledge by allocating less time to practice what they learn in classes (Johnson & Freeman, 2001), which gives rise to pre-service teachers' failure to translate theory into practice in the classroom (Bartels, 2005; Freeman & Johnson, 1998). Teacher learning has been viewed as front-loading, which means that they can be educated and be ready for all classroom demands at the start of their careers and keep using this knowledge throughout their career (Freeman, 1993). This perception has been proven wrong, with various research studies revealing that both pre-and in-service teachers fail to transmit their knowledge into practice in their classrooms. As Freeman and Johnson (1998) claimed, the real truth is that most teachers learn best when they start teaching with hands-on experiences, and less so in typical teacher education programs.

For the last two years, digital tools in language classes have become the center of teachers' classroom implementations due to distance and hybrid education in schools. Teachers can reach a plethora of authentic or ready-made instructional materials in the target language with a single mouse click. With the abundance of such sources, the efficient utilization of these sources to achieve course objectives calls for closer examination because technology should be incorporated into lessons with enough care and thought (Abbitt, 2011; Compton, 2009; Taghizadeh & Yourdshahi, 2020). Although recent research focuses on the benefits of technology in increasing students' engagement and motivation (Demirkan, 2019), some research studies reveal that only a few teachers can take advantage of technology applications by corresponding them with specific learning goals (Heitink, et al., 2016). Therefore, without connecting technology and learning goals, the expected profit from technology integration may not be driven appropriately, which means that let alone pre-service teachers, even experienced ones, may lose their time and energy with the wrong technology integrated instructions.

Several studies have shown that pre-service teachers integrate technology into their lesson deliveries (e.g., Beschorner & Kruse, 2016; Theiman, 2008; Tondeur et al., 2017). However, even experienced teachers still have insufficient knowledge about using them appropriately in their classrooms (Ertmer & Ottenbreit-Leftwich, 2010). As for pre-service teachers, the evidence from the literature indicates that the education they received on technology in classes cannot be transferred well into their classroom practices (Angeli & Valanides, 2009; Tondeur et al., 2013). In addition, some barriers such as lack of time, lack of ability to integrate content and digital tools in language teaching, and lack of professional development and experience in teaching have been reported to be debilitating factors in successful technology integration for pre-service teachers (Hutchison & Reinking, 2010). Although they are considered digital natives, it sounds interesting to hear that pre-service teachers feel inadequate when preparing lessons with technology (Sang et al. 2010). This feeling of insufficiency may come from their inexperience in integrating all technological pedagogical content knowledge into their teaching. Therefore, this chapter aims to shed more light on pre-service teachers' technology integration in their educational practices by answering the following research questions:

1. In which part of the lesson do pre-service teachers use digital tools most? In presentation, practice, or production part?
2. Is there any difference between the time allocated for digital tools in pre-service teacher's lesson plans and actual time spent on them in in-class activities?
3. Which language skills do pre-service teachers focus on most with digital tools? Vocabulary, Reading, Listening, Writing, or Speaking?
4. What do university supervisor observations reveal on their English lesson delivery?
5. What are pre-service teachers' perceptions on the use of digital tools in language classes?

METHOD

In the last decades, raising technology-literate teachers has consistently been emphasized, as teachers need to be sufficiently qualified to meet the demands of the twenty-first-century skills (Gudmundsdottir & Hatlevik, 2018; Foulger & Graziona, 2017; Rokenes & Krumsvik, 2016). In the early days of technology integration in classes, most teachers reported having computer anxiety, which was thought to be a debilitating factor in technology use in classes (McInerney et al., 1994). A very optimistic picture was drawn when digital natives, considered innovators and eager users of technology, started to be teachers at schools (Rideout et al., 2005). However, being proficient at technology use does not necessarily mean being able to use technology pedagogically in the classroom context. Teachers may sometimes fail to use technology critically or meaningfully by

demonstrating little understanding of the facilitative role of technological tools or materials. Therefore, more careful consideration should be given to the diversity of ICT tools and their classroom competencies (Lei, 2009). The pre-requisite for a complete and successful ICT integration in teacher training with which teachers' technological knowledge is enhanced to integrate it into their classroom implementations successfully. To achieve this, Göktaş, et al. (2009) emphasized the importance of redesigning teacher education programs, including instructional technology design courses that are continuously updated with current developments. By doing so, pre-service teachers will feel more qualified to teach with technology (Darling-Hammond et al., 2009; Hammond et al., 2011).

Effective technology integration in courses calls for a critical and wise combination of knowledge of content, technology, and pedagogy (Koehler et al., 2007). The relationship between these three knowledge types is introduced with a new framework called Technological, Pedagogical, and Content Knowledge (TPCK). To ease the memory and pronunciation of the acronym, TPCK was converted into TPACK in later studies (Koehler & Mishra, 2009; Thompson & Mishra, 2007). Many researchers have researched this construct (e.g. Archambault & Bernet, 2010; Chai et al., 2013; Crompton, 2015; Rosenberg & Koehler, 2015). Angeli and Valanides (2009) found that growth in one construct does not automatically lead to an increase in TPACK, which means that even experienced in-service teachers with some knowledge of computer programs may not perform well in their classes or a pedagogically qualified teacher may not carry out successful lessons with technology integration. However, it was found that when teachers are trained on how to teach with computers, teachers with stronger pedagogical skills, better content and student knowledge outperform teachers with less knowledge in the same areas (Angeli & Valanides, 2009). To shed more light on the components of TPACK and the relationship of each component to one another, Chai et al. (2013) examined the perceived development of pre-service teachers in each component and the synthesis of their knowledge. Their statistical analysis revealed that knowledge of all components is a predictor of pre-service teachers' TPACK, with pedagogical knowledge having the most significant impact. Therefore, field experiences, which are regarded as an essential preparation stage for teaching (Buck et al., 1992), should provide pre-service teachers with environments where they can transform what they have learned pedagogically into technology-integrated classes.

A review of recent teacher education research around technology shows various models which improve TPACK by providing teachers and teacher candidates with educational problems that must be solved by technology (Fulton et al., 2003; Hacker & Niederhauser, 2000). For instance, Koehler and Mishra (2005) developed an alternative approach to foster teachers' understanding of the interrelation of technological knowledge, pedagogical knowledge, and content knowledge. This approach is called "*learning by design*," which is philosophically and pragmatically related to constructivists and project-based approaches such as learning by design, problem-based learning, collaborative learning frameworks, etc. Koehler et al. (2007) state that this approach affords opportunities for teachers and teacher candidates to encounter rich connections between technology, content, and pedagogy as they learn more about these variables by actually using and designing educational technology to teach specific content; therefore, this approach teaches teachers how to be designers of technology instead of consumers of technology. Depending on this framework, particular emphasis has been given to create ICT design projects, which will enable pre-service teachers to develop the connection between technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK) (Mishra & Koehler, 2006).

METHOD

This is a descriptive mixed-method study that adopts a convergent parallel design. In such designs, both qualitative and quantitative data are gathered simultaneously but analyzed independently. As a result, overall results are combined for meaningful interpretation (Creswell & Plano Clark, 2011). The quantitative data was elicited from pre-service teachers' lesson plans (the number of technology-integrated materials and the duration given to them were elicited) and the actual time they allocated for technology-integrated materials in their lesson delivery (elicited from participants' after delivery reflections as they were specifically asked to write the time they occupied after lesson). Additionally, the information gathered from lesson plans showed, by using digital tools, which language skill (vocabulary, reading, writing, speaking, and listening) they focused on each week more. The numbers of digital materials, the duration given to them, and the actual time spent in the classroom and the supervisor scores in observation scale (two observation scales for each pre-service), which is given by the Ministry of Education in Turkey to university supervisors and school mentors to grade pre-service teachers' performance on specific descriptors, were computed to describe their tendencies in lesson delivery. Finally, descriptive statistics

were run to see which language skill they focused on more. The qualitative data were elicited from pre-service teachers' reflective journals (each week), and open-ended structured questions on the technology integration in language classes. Theme-based thematic analysis was done, and emergent themes were tabulated and discussed in detail.

Participants

In a language teacher education program, prospective teachers take four years of various theoretical courses, including English language, literature, and language teaching methods. In their final year in the program, these teacher candidates are expected to take a school experience course (practicum). They visit schools regularly and observe English classes in state or private schools. In total, they are expected to be in these schools at least 168 hours of class in a year in which they teach at least 24 times 40-minute lessons at primary and secondary levels. They are expected to write their lesson plans in advance and send it to both the mentor teacher and university supervisor. They are also expected to write reflections on their teaching and their peers' teaching by noting each detail of what went well and wrong in their lessons. At the end of the school experience, these candidates must submit a portfolio that includes all of their peer observations, self-reflection, and lesson plans. Each participant is expected to complete a compulsory practicum that aims to integrate the program content of their departments within the authentic teaching and learning environment.

The participants of this study (N=16, 14 female, 2 male) were assigned to give 6th and 7th graders English courses in a public school. The first two weeks of practicum were allocated to classroom observation in which participants closely examined their mentor teachers and wrote reflective journals. For the remaining 12 weeks, they had to teach at least one classroom hour each week. In addition, the practicum group was formed with at least two pre-service teachers to facilitate peer feedback. To gain more insights into their use of digital tools, they were asked to write their perceptions of digital tools in language classes through structured, open-ended questions at the end of the practicum.

Procedure

The procedure for data collection has been tabulated in Figure 1. All participants wrote their lesson plans paying specific attention to details requested by the researchers. During their course delivery, university supervisors observed some of their lessons and graded their performance according to descriptors provided in the observation scale (See Table 6). After they delivered their courses, they were asked to write reflective journals, including the actual time they spent on the use of digital tools, their perceptions, and peer observation notes. They followed these steps for each course delivery over 12 weeks, and they were asked to write their perceptions on the use of digital tools by answering open-ended questions.

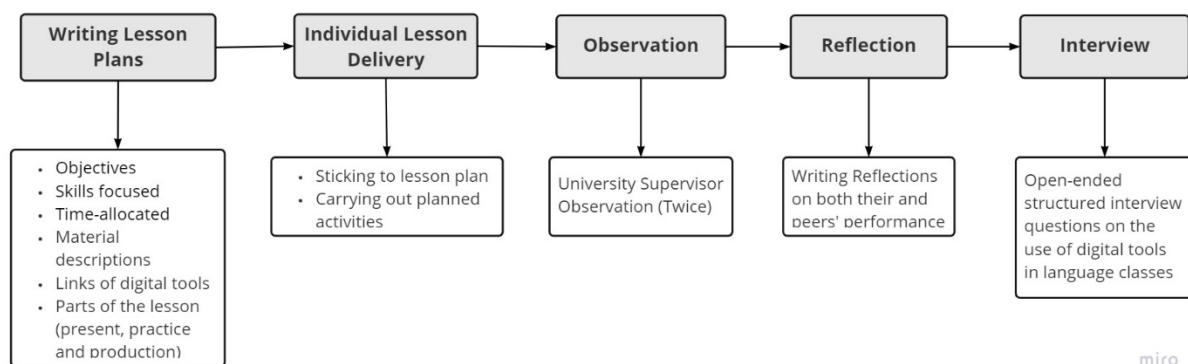


Figure 1. Procedure for Data Collection

FINDINGS

The purpose of the study was to shed more light on classroom implementations of pre-service teachers (in practicum days) who get the advantage of publicly available digital tools and materials. When lesson plans were analyzed in detail, the total number of digital tools used in classes of pre-service teachers was computed for statistical analysis. The findings showed that 50% of the digital tools were planned to be used in the "practice" part of the lesson, while only 9% were intended to be used in the "production" part. The "presentation" part consisted of 41% of the total digital tools. This finding shows that pre-service teachers in the current study mostly used digital tools to facilitate receptive knowledge of their students while not getting help from these tools to enhance productive knowledge of language items and structures. Table 1 demonstrates the descriptive statistics for each lesson part's number of digital tools.

Table 1. Parts of the Lesson in Which Digital Tools are Used

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Presentation	16	5	10	131	8,19	1,601
Practice	16	8	14	164	10,5	2,049
production	16	1	4	29	1,81	,981
Valid N (listwise)	16					

The second research question was about time management by using digital tools. When pre-service teachers' pre-conceived time management in their lesson plans and the actual classroom time spent on the planned materials were computed, it was found that digital tools take much more time than expected in classes. Table 2 demonstrates the number of digital tools used in classes, the time allocated for them (minutes), and the actual time spent in classes with these tools.

Table 2. Lesson Plan Analysis for Time Allocated for the Use of Digital Materials and Actual Time Spent in Class Course Delivery

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Number Digital Materials	16	14	26	333	20,81	3,600
Time Allocated for Them (Min)	16	120	260	2870	179,38	44,342
Actual Time Spent Class (Min)	16	170	300	3615	225,94	39,884
Class Hour (Min)	16	320	320	5120	320,00	,000
Valid N (listwise)	16					

The results show that the participants planned nearly 56% of their lessons with digital tools and spent 70% of the classroom hour on these tools. The gap between their planning time and actual classroom implementation can be attributed to their inexperience in teaching. They must have disregarded the classroom atmosphere while tending to use these tools. However, as teacher observation notes show, this delay led to less focus on productive skills, which were generally planned to be at the end of the lessons.

The study has also focused on analyzing language skills attempted to be taught in language classes. Details for each language skill are tabulated in Table 3.

Table 3. Skills Focused on with the Aid of Digital Tools

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Vocabulary	16	10	16	224	14,00	1,67
Listening	16	2	5	61	3,81	1,04
Speaking	16	0	0	0	,00	,00
Reading	16	0	2	8	,50	,73
Writing	16	0	0	0	,00	,00
Valid N (listwise)	16					

The analysis revealed that pre-service teachers mostly utilized digital tools (76.5 % of total digital tools) for decontextualized vocabulary exercises by asking learners to come and match list or play a game with target vocabulary items that are publicly available online. All these activities were reflected by the smartboard in classes. This tendency can be attributed to the easiness of finding these tools and implementing them in classes.

They can easily find many vocabulary practice sources online and ask students to complete them in a class hour, which helps them exert less effort to recycle target items in classes. Another common category that was primarily focused on was listening and reading. Just like vocabulary sources, there is a large number of reading and listening sources online. In addition, YouTube videos were computed under the listening category. In most cases, listening activities were used as icebreakers in language classes.

Supervisors' Observation Scale Results

The University supervisors observed each pre-service teachers' teaching English in practicum days twice and gave grades to them depending on descriptors written in the observation scale developed by the Ministry of National Education for Academic advisors and mentor teachers at schools. The observation scale included grades from 1 (the lowest) to 3 (the highest) for each descriptor. This observation scale consists of two sections, one of which is written for university supervisors and the other is written for mentor teachers. Therefore, only the first part demonstrated below was filled by the supervisor academicians twice, which means that the highest score obtained from each descriptor is 6. Table 4 illustrates the mean scores of each descriptor.

Table 4. Practice Student Evaluation Form

Subject Area and Field Education	Mean Scores of All participants	Std. Deviation
1.1 Content Knowledge		
1.1.1 Knows the basic principles and concepts related to the subject	5.88	,50
1.1.2 Uses the basic principles and concepts in the subject area logically.	4.88	1,02
1.1.3 Uses verbal and visual language required by the subject (shape, diagram, graphic, formula, etc.) appropriately	5.50	,89
1.1.4 Has the ability to associate the subject with other subjects in the field	2.63	,95
1.2 Pedagogical Knowledge		
1.2.1 Knows special education approaches, methods, and techniques	5,25	1,00
1.2.2 Benefits from instructional technologies	5,88	,50
1.2.3 Identifies wrongly developed concepts in students	3,25	1,00
1.2.4 Has the ability to generate appropriate and sufficient answers to student questions	4,88	1,02
1.2.5 Ensures the safety of the learning environment	5,88	,50

2.0 Teaching-Learning Process

2.1 Planning			
2.1.1	Has the ability to write the lesson plan in a clear, understandable, and orderly manner	6,00	,00
2.1.2	Has the ability to express purpose and objectives clearly	5,88	,50
2.1.3	Identifies appropriate methods and techniques for target behaviors	3,00	1,03
2.1.4	Selects and prepares suitable tools and materials	3,88	1,54
2.1.5	Identifies appropriate assessment forms for target behaviors	2,63	,95
2.1.6	Associates the subject with previous and next lessons	2,50	,89

In the content knowledge part, it was observed that teacher candidates fail to associate the subject with other subjects in the field. For example, when they teach the subject "chores" with "have to / has to", they avoided giving additional examples with other grammar forms. Although they knew that their learners were familiar with, for example, "is/are expected to", they did not give any additional sentences to revise previously learned topics. This finding can be attributed to the novice nature that keeps them engaged only with teaching whatever they wrote into their lesson plans. The other descriptors of content knowledge part did not seem to be problematic at all. When it comes to the pedagogic knowledge, it was observed that they failed to give appropriate feedback to their learners when they made mistakes. Most of these mistakes were mispronunciation of target vocabulary items. The most problematic part was observed to be the teaching-learning process part. They failed to match appropriate materials to reach target learning behaviors. For example, in their lesson plans, they included a production section; however, due to improper time management with other tools and materials, they could not move on to facilitating their productive knowledge. One of the most problematic aspects of their teaching practice was that they failed to recycle language structures and get the learners ready for the upcoming lessons. As the participants were concerned with course delivery in most cases, they did not do any summative assessment. The only assessment type observed in these classes was achieved by online exercises with students. However, even with these exercises, they gave very limited feedback or recasts.

Pre-Service Teachers' Perceptions of Using Digital Tools in Their Classes

Educators generally carry various beliefs and attitudes about the best classroom implementations that have the potential to increase learning conditions in their classroom contexts. These beliefs influence their classroom practices and shape their teaching experiences (Kagan, 1990). Therefore, eliciting their views on using these tools in their classes gives detailed insights into their metacognition to use digital tools in their classrooms. When examined thoroughly and subjected to content analysis, the interview data revealed some common themes that emerged from the data. These are written in detail below.

Table 5. Pre-service Teachers' Views Regarding of Digital Teaching Materials

Theme	Subthemes	Freq.	Sample Views
Advantages of Using Digital Tools for Lesson Preparation	Ease of use	16	<i>P 11 Online teaching tools have made our jobs easier. We can find many videos and interactive and ready-made worksheets on the target grammar rules and lexical items. When I plan my lesson, I try to add more digital tools that can help me explain new topics or recycle the previous ones.</i>
	Time Saving	13	<i>P 6 When I plan my lesson, I can quickly access many Web.2.00 digital tools to complement my materials. I don't spend so much time on searching for worksheets or developing my own activity. Readymade ones are there for us.</i>
	Less labor intensive	8	<i>P 14 I don't exert much effort to find appropriate web. 2.00 tools to write my lesson plans. I easily find interactive worksheets and use them in my classes.</i>

Advantages of digital tools in class applications	Engage more students	16	<i>P 8 We can create opportunities for learners to practice what they learned in the previous lesson by engaging them in meaningful language practice. The Web.2.0.0 tools that we have used in classes were life-saving and complimentary for our classroom practices. Based on my experiences, I can state that even the quietest students in the class who do not attend the classes frequently participate in the activities prepared with digital tools.</i>
	Overcome Boredom	10	<i>P 6 Digital materials brings fun and excitement to the classes. Learners do not get bored and time flies when we use these tools in classes.</i>
	Appeal to more senses	8	<i>P 5 Digital tools include visual and auditory facilities. These facilities are generally well selected and attracts interests of the learners. There are also funny videos, songs and listening tracks. Therefore, these tools appeal to more than one sense.</i>
	Motivates teachers more	7	<i>P 10 Since digital tools contribute to students' learning while having fun, their motivation for the lesson is also high. Therefore, in addition to their effects on students' motivation, I can say that digital tools also contribute to my motivation as a teacher candidate. Because thanks to these tools, when I observe that the students participate in the lessons willingly, I can say that my motivation as a teacher candidate has increased and that I tend to teach most of my classes using digital tools.</i>

Perceived Pedagogical Advantages of Digital Tools

When the participants were interviewed about using these tools, they reported many advantages of their use in language classes. One of the common themes that emerged from the interview data is the easiness of accessing these sources. Online tools have become increasingly available for use in the educational context. The internet serves great and sophisticated sites where teachers can create their own worksheets or use publicly available ones without much effort. Being aware of this fact, especially after the covid-19 outbreak, both in-service teachers and pre-service teachers witnessed the implementation of many materials in language classes. As such, their familiarity with these tools has increased, which resulted in more tendency to use such tools in their lessons. All of the participants reported that they could find whatever they wanted quickly by making queries from search engines. They said that the availability of such sources offers them unprecedented opportunities in their classes as they face fascinating options for using technology in their classes.

The second theme emerged based on the interview responses that these sources are time-saving and less labor-intensive. The participants received a material design course at the university. This course required them to create their own handmade materials that have the potential to be used in language classes. This philosophy was broken by the online tools which are available for everyone. The participants mentioned that using online tools saves their time (N=13) and energy (N=8). Instead of preparing their own materials, they report that many materials sources are online, which can easily be used or adapted for their classroom use.

Another common theme was that using digital tools helps teachers engage more students in classes. All participants mentioned the motivating aspect of online tools in language classes. They said they could create engaging experiences for learners by choosing complementary tools from various options and creating active learning spaces.

Ten of the participants said that the use of digital tools helps teachers overcome boredom in classes, which facilitates learners' participation in classroom activities. The interview data has also revealed that participants do not want to adhere to traditional teaching methods, which they consider boring and useless. The data showed that when they use interactive smart boards and ask learners to do some activities one by one, they can easily recognize the flash of interest in their learners' eyes, especially when they have a competitive task. In addition, all of the participants reported that using online tools keeps learners stimulated and craving for more exercises.

Another theme is the effect of the utilization of digital tools on increasing teachers' motivation. Seven participants mentioned that they observed how their students felt when using digital tools. The reason behind pre-service teachers' heavy dependence on using such tools can mostly be attributed to this fact. The more students get involved into class activities the better teachers feel as long as the concern of the teacher is to occupy classroom time. Thanks to all affordances of such tools, pre-service teachers get all advantage of these tools and do their responsibilities by depending on them too much.

One of the most frequently mentioned themes was the facilitative role that digital tools play on language skills. Having visual and auditory features that can be adapted or used following the learners' needs is believed to have the potential to increase learners' ability to memorize more words, understand reading passages better, and use the language in a more meaningful context.

Pre-service Teachers' Views on Using Digital Tools in Language Classes

Pre-service teachers shared their perceptions of using digital tools in classes by referring to their in-class experiences. As Table 6 demonstrates, thirteen participants touched on the importance of using these tools timely and effectively. Digital tools are seen to be effective complementary materials for pre-service teachers. Some participants reported that instead of depending heavily on these tools, pre-service teachers should use them timely and effectively to reach their course objectives. Admitting that spending all classroom hours for digital activities on some occasions, they failed to facilitate other skills such as speaking and writing.

Raising concerns about the choice of appropriate digital materials, half of the participants commented on their peers' teaching practices indicating that some of them didn't use appropriate exercises, or tools or didn't have enough technological skills to use in classes. These categories will be discussed in detail by complementing data from the quantitative findings.

Table 6. Pre-Service Teachers' Perceptions of the Use of Digital Tools

Theme	Subthemes	Freq.	Sample Views
Time Management	Effective planning	13	P 7 Sometimes, I failed to finish exercises with digital tools due to wrong time planning. Therefore, teachers should be more careful with lesson plans when integrating these sources into their lessons, as they take more time than expected.
	Appropriate activities for levels of learners	9	P 3 I once chose a video for my students. It was so long and included so many unknown words that most of the students failed to answer the following questions.
Technological, Pedagogical Content Knowledge	Appropriate materials	12	P4 Some of the ready-made materials included different lexical items so I had difficulty introducing the new words while helping them do the activities.
	Appropriate content	6	P16 teachers using digital tools should construct students' knowledge through active involvement into activities.
	Appropriate technological knowledge	14	P4 Some digital tools are easy to use, but when we tend to make our own online materials, we may feel inadequate as our knowledge on the process is limited.

DISCUSSION & CONCLUSION

The current study aimed to describe the existing practices of pre-service English teachers in the integration of digital tools aspect and sought to understand why these practices happened and what could be done better. Gaining deeper insights into pre-service teachers' educational practices is essential because their misconceptions or malpractices could be spotted to eliminate potential future problems in their teaching. The use of technology in instruction plays an important role; however, this use does not necessarily mean that the lesson can reach its objectives. Rather than what to use, how to use digital tools in classes should be questioned, and teacher education programs should provide more successful technology integration examples to their students. The literature has well documented that good performance in teaching requires teachers' knowledge about themselves, the knowledge of technology, pedagogy and content, and the knowledge of each context in which they do their job (Fulton et al., 2003; Koehler & Mishra, 2009; Johnson, 1999). Additionally, it is also acknowledged that teachers

must have a more critical eye on technological materials to ensure they complement their class activities and help reach the objectives of the courses (Waight & Abd-El-Khalick, 2007) and instead of occupying the whole classroom time with these digital tools, they need to use them as complementary tools that allow multimodal production.

The current study results showed that pre-service teachers' technology integration in their courses successfully motivated learners to participate in-class activities. However, when the big picture was analyzed in detail, it was found that the most effortless and straightforward approach was taken when integrating technology in their class deliveries. Commonly used vocabulary exercises with individual matching and multiple-choice word practices; they did not try to improve speaking and writing skills with digital tools. In recent years, the systematic and frequent use of computer-based tools may have left a misconception that teachers have to integrate technology in most parts of their classroom, with the notion that more technology equates to better education approach. Although their mentors and supervisors continuously informed them, they kept on depending on these tools to occupy lesson hours. Contrary to popular assumption, excessive utilization of technology does not always result in a better educational experience. Instead, it usually ends in a hasty adoption of digital materials without careful analysis of their educational practicality.

The logic behind teachers' lesson deliveries, choice of materials, and time allocation for specific tasks are reflected in their classroom practices (Ball, 2000). Therefore, the themes that emerged from the participants' interview data complement and explain the quantitative data findings. All perceived advantages of using these tools (ease of use, time and energy saver, student and teacher motivator, etc.) are the reason behind heavy dependence on these tools in their classes. It is a well-known fact that the development of technology-based materials has generated various choices for today's teachers. Using technology to deliver a part of a lesson or manage all parts of the lesson by depending on these tools is in the hands of the teachers. In that sense, the question of how teachers can find the best and the most effective tools; how and when to implement these tools should be known thoroughly to reach the objectives of the lessons. A good language lesson does not consist of a series of exercises or activities that the teacher brings to class to occupy classroom time; it requires a solid understanding of how a foreign language is taught by taking into account the needs of the learners in each aspect of language learning (Richards & Bohlke, 2011). In the case of the current study, the participants believed that these tools have varied benefits for learners; they overemphasized simple exercises and activities to facilitate learners' vocabulary knowledge. Instead of using these tools as mediators for overcoming boredom, they placed them at the center of their classes and felt responsible for opening and closing these tools till the end of the lesson. Paying less attention to other skills such as speaking and writing in classes can be attributed to the relative scarcity of easy and applicable digital tools for these skills. However, a sufficiently qualified teacher should implement their in-class activities to facilitate all language skills simultaneously _ be it a speaking skill, writing skill, reading skill, and listening skill.

The frequent use of vocabulary exercises by digital tools can best be explained by ease of finding and using them in classes. Asking only the meaning of the target item and moving to the next one must have been easier than helping students read, listen and comprehend a text or speak in the target language. That is, they occupy nearly most of the classroom time by recycling vocabulary items without taking a more active role in providing learners with the opportunities to take part in extended practice by producing the target language. This result can be seen from the finding that showed they, in most cases, use digital tools for practice leaving a very limited or nearly no place for the production part.

Hiding behind many advantages of using digital tools in classes, pre-service teachers in the current study failed to provide a coherent sequence of learning activities encompassing more than one language skill. This result can be attributed to their inexperience in language classes. In addition, they struggle to overcome barriers such as classroom management in crowded classes or choosing appropriate complementary materials.

The results have shown that pre-service teachers allocate most of the classroom time using online sources. They mainly focused on lexical items by finding repetition drills and matching exercises using some websites and digital tools. They sometimes integrated listening tools, but most of the time, they recycled vocabulary items. The study has also revealed a difference between their planned time for each activity and their actual classroom performances. However, this time difference seemed to decrease as they got more experienced using these tools.

The description of the overall picture of pre-service teachers revealed a problematic and worrisome scene. Teacher education faculties may have more goal-orientated instructional technology design courses in which pre-service teachers are educated to integrate all language skills and computer-based materials in their classroom settings. The results showed that additional attention should be given to speaking and writing, which were the least touched skills by pre-service teachers. Lastly, Hutchison and Woodward's (2014) technology integration planning

cycle (TIPC) can be adapted to the language teaching context to assist pre-service teachers when selecting appropriate digital tools to reach the instructional objectives of their lessons.

Researchers' Contribution Rate

Researchers' Contribution Rate							
Authors	Literature review	Method	Data Collection	Data Analysis	Results	Conclusion	(Other)
Author 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Author 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Conflict of Interest

The authors hereby declare no potential conflicts of interest with respect to research, authorship and/or publication of this article.

Statements of Publication Ethics

Authors hereby declare obeying the principles of publication ethics.

REFERENCES

- Abbitt, J. T. (2011). An investigation of the relationship between self-efficacy beliefs about technology integration and technological pedagogical content knowledge (tpack) among pre-service teachers. *Journal of Digital Learning in Teacher Education*, 27(4), 134–143. doi:10.1080/21532974.2011.10784670
- Archambault, L. M., & Bernet, J. H. (2010). Revisiting technological pedagogical content knowledge: Exploring the TPACK framework. *Computers & Education*, 55(4), 1656–1662.
- Angeli, C., & Valanides, N. (2009). Epistemological and methodological issues for the conceptualization, development, and assessment of ICT–TPCK: Advances in technological pedagogical content knowledge (TPCK). *Computers & Education*, 52(1), 154–168.
- Bartels, N. (2005). *Applied linguistics in language teacher education*. Springer
- Ball, D. (2000). Bridging practices: Intertwining content and pedagogy in teaching and learning to teach. *Journal of Teacher Education*, 51(3), 241-247, 2000.
- Beschorner, B. & Kruse, J. (2016). Pre-service teachers' use of a technology integration planning cycle: A case study. *International Journal of Education in Mathematics, Science and Technology*, 4(4), 258-271.
- Buck, G., Morsink, C., Griffin, C., Hines, T., & Lenk, L. (1992). Pre-service Training: The Role of Field-Based Experiences in the Preparation of Effective Special Educators. *Teacher Education and Special Education*, 15(2), 108–123. <https://doi.org/10.1177/088840649201500206>
- Chai, C. S., Koh, J. H. L., & Tsai, C. C. (2013). A review of technological pedagogical content knowledge. *Educational Technology & Society*, 16(2), 31–51.
- Creswell, J., & Plano Clark, V. L. (2011). Understanding mixed methods research. In J. Creswell (Ed.), *Designing and conducting mixed methods research* (pp. 1-19). Thousand Oaks, CA: Sage.
- Crompton, H. (2015). Pre-service teachers' developing technological pedagogical content knowledge (TPACK) and beliefs on the use of technology in the K-12 mathematics classroom: A review of the literature. In C. Angeli & N. Valanides (Eds.), *Technological pedagogical content knowledge: Exploring, developing, and assessing TPCK* (pp. 239–250). New York: Springer.
- Compton, L. (2009). Preparing language teachers to teach language online: A look at skills, roles, and responsibilities. *Computer Assisted Language Learning*, 22(1), 73–99. doi:10.1080/09588220802613831
- Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Dallas, TX: National Staff Development Council.

- Demirkan, O. (2019). Pre-service Teachers' Views about Digital Teaching Materials. *Educational Policy Analysis and Strategic Research*, 14(1), 40-60. doi: 10.29329/epasr.2019.186.3
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). *Teacher Technology Change*, *Journal of Research on Technology in Education*, 42 (3), 255-284.
- Foulger, T. S., Graziano, K. J., Schmidt-Crawford, D., & Slykhuis, D. A. (2017). Teacher educator technology competencies. *Journal of Technology and Teacher Education*, 25(4), 413–448.
- Freeman, D. (1993). Renaming experience/reconstructing practice: Developing new understandings of teaching. *Teaching and Teacher Education*, 94, 485-497.
- Freeman, D., & Johnson, K. E. (1998). Reconceptualizing the knowledge-base of language teacher education. *TESOL Quarterly*, 32(3), 397-417.
- Fulton, K., Glenn, A. D., & Valdez, G. (2003). Three pre-service programs preparing tomorrow's teachers to use technology: A study in partnerships. Retrieved May 5, 2022 from <http://www.ncrel.org/tech/preservice/>
- Göktaş, Y., Yıldırım, S., & Yıldırım, Z. (2009). Main Barriers and Possible Enablers of ICTs Integration into Pre-service Teacher Education Programs. *Educational Technology & Society*, 12(1), 193–204.
- Gudmundsdottir, G. B., & Hatlevik, O. E. (2018). Newly qualified teachers' professional digital competence: Implications for teacher education. *European Journal of Teacher Education*, 41(2), 214–231.
- Hacker, D. J., & Niederhauser, D. S. (2000). Promoting deep and durable learning in the online classroom. In R. E. Weiss, D. S. Knowlton, & B. W. Speck (Eds.), *Principles of effective teaching in the online classroom* (pp.53-64). San Francisco: Jossey-Bass.
- Hammond, M., Reynolds, L., & Ingram, J. (2011). How and why do student teachers use ICT? *Journal of Computer Assisted Learning*, 27, 191–203. doi: 10.1111/j.1365- 2729.2010.00389.x
- Heitink, M. C., Voogt, J., Verplanken, L., van Braak, J., & Fisser, P. (2016). Teachers' professional reasoning about their pedagogical use of technology. *Computers & Education*, 101,70-83. <https://doi.org/10.1016/j.compedu.2016.05.009>
- Hutchison, A. & Woodward, L. (2014). A planning cycle for integrating digital technology into literacy instruction. *The Reading Teacher*, 67(6), 455-464
- Hutchison, A. & Reinking, D. (2010). A national survey of barriers to integrating information and communication technologies into literacy instruction. 59th Yearbook of the National Reading Conference. Milwaukee, WI: National Reading Conference.
- Kagan, S. (1990). The structural approach to cooperative learning. *Educational leadership* 47(4). 12-16.
- Koehler, M. J., & Mishra, P. (2005b). What happens when teachers design educational technology? The development of technological pedagogical content knowledge. *Journal of Educational Computing Research*, 32(2), 131-152.
- Koehler, M. J., Mishra, P., & Yahya, K. (2007). Tracing the development of teacher knowledge in a design seminar: Integrating content, pedagogy and technology. *Computers & Education*, 49, 740-762.
- Koehler, M., & Mishra, P. (2009). What is Technological Pedagogical Content Knowledge (TPACK)?. *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70.
- Lei, J. (2009). Digital Natives as Preservice Teachers. *Journal of Computing in Teacher Education*, 25(3), 87-97, DOI: 10.1080/10402454.2009.10784615
- Johnson, K. E., & Freeman, D. (2001). Teacher learning in second language teacher education: A socially situated perspective. *Revista Brasileira de Linguística Aplicada*, 1, 53–69.
- Johnson, K. E. (1999). *Understanding language teaching: Reasoning in action*. Boston: Heinle and Heinle.
- McInerney, V., McInerney, D. M., & Sinclair, K. E. (1994). Student teachers, computer anxiety and computer experience. *Journal of Educational Computing Research*, 11(1), 27-50.
- Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054.

- Rideout, V., Neuman, R., Kitchman, M., & Brodie, M. (2005). E-Health and the elderly: How seniors use the Internet for health information. Key findings from a national survey of older Americans: Program for the study of media and health, 7223.
- Richards, J. C., & Bohlke, D. (2011). Creating Effective Language Lessons. Developing learner-centered teaching (pp. 25-34). New York: Cambridge University Press.
- Rokenes, F. M., & Krumsvik, R. J. (2016). Prepared to teach ESL with ICT? A study of digital competence in Norwegian teacher education. *Computers & Education*, 97, 1–20.
- Rosenberg, J. M., & Koehler, M. J. (2015). Context and technological pedagogical content knowledge (TPACK): A systematic review. *Journal of Research on Technology in Education*, 47(3), 186–210. doi:10.1080/15391523.2015.1052663
- Sang, G., Valcke, M., Braak, J. and Tondeur, J., 2010. Student teachers' thinking processes and ICT integration: Predictors of prospective teaching behaviors with educational technology. *Computer and Education*, vol. 54, pp.103-112.
- Taghizadeh, M., & Yourdshahi, Z. H. (2020). Integrating technology into young learners' classes: language teachers' perceptions. *Computer Assisted Language Learning*, 33(8), 982-1006. doi: 10.1080/09588221.2019.1618876
- Theiman, G. Y. (2008). Using technology as a tool for learning and developing 21st century citizenship skills: An examination of the NETS and technology use by pre-service teachers with their K-12 students. *Contemporary Issues in Technology and Teacher Education*, 8(4), 342-366.
- Thompson, A., & Mishra, P. (2007). Breaking News: TPACK Becomes TPACK! *Journal of Computing in Teacher Education*, 24(2), 38-64.
- Tondeur, J., Pareja Roblin, N., van Braak, J., Voogt, J., & Prestridge, S. (2017). Preparing beginning teachers for technology integration in education: ready for take-off? *Technology, Pedagogy and Education*, 26(2), 157-177.
- Tondeur, J., Roblin, N. P., van Braak, J., Fisser, P., M& Voogt, J. (2013). Technological pedagogical content knowledge in teacher education: In search of a new curriculum. *Educational Studies*, 39(2), 239–243.
- Waight, N., & Abd-El-Khalick, F. (2007). The impact of technology on the enactment of “inquiry” in a technology enthusiast's sixth grade science classroom. *Journal of Research in Science Teaching*, 44(1), 154-182.