

An Examination on EFL Preservice Teachers' Development of Core Competencies Through Technology-Enhanced Language Learning

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Abstract—The use of technology in language teaching and learning has become more and more significant in recent years. Technology-enhanced language learning (TELL) has been highlighted due to the rapid changes in the field of education. This study investigated how TELL affected preservice teachers' perceived competencies in teacher education. Thirty-one preservice teachers at a medium-sized university in South Korea participated in this study. Survey questionnaires were the major data sources to check correlations between core competencies and see any differences in the participants' competencies through the TELL environment. The results showed that all the five core competencies (i.e., self-directed learning, challenge, convergence, communication, and problem solving) are correlated. Among them, the correlation between competencies in convergence and problem solving showed the strongest relationship. From the t-test analyses, All the core competencies except for self-directed learning were statistically significant, which indicates TELL was an effective instruction for preservice teachers. This study discusses the importance of developing TELL strategies to increase competencies in convergence and problem solving and promoting reflective practice in TELL.

Index Terms—technology-enhanced language learning (TELL), core competency, preservice teachers, teacher education

I. INTRODUCTION

Thanks to the rapid advancement of technology, various teaching and learning methods have possibly been attempted for effective language education. Technology has been used to assist with language learning. Language teachers have incorporated various types of technology to engage students in the learning process by presenting authentic examples of the target culture and connecting them to the classrooms. Furthermore, some technology tools enable teachers to adapt classroom activities, assignments, and projects, thus increasing students' language learning experiences. It also assists foreign language teachers in facilitating and mediating language learning for their students. The effectiveness of using technological tools relies on the expertise and knowledge of language teachers who can manage and facilitate the language learning environment along with the use of technology.

In particular, technology-enhanced language learning (TELL) has been spotlighted due to its many advantages (Carr, et al., 2011; Chirimbu & Tafazoli, 2013; Patel, 2014; Yang & Chen, 2007; Yeşilel, 2016). TELL provides an opportunity to connect diverse information and learning materials to education. These days, young people can freely use cutting-edge technology that is constantly and quickly changing and developing for effective communication and education. Therefore, it is effective to use technology connected to their real lives.

Today, societies place confronting demands on individuals in many parts of their lives. These demands imply core competencies that individuals need to acquire. A competency is more than just knowledge and skills. It involves the ability to meet complex demands by drawing on and mobilizing psychosocial resources, including skills and attitudes in a particular context (Docking, 1994; Mrowicki, 1986). For example, the ability of effective communication is a competency that may employ an individual's knowledge of language, practical communication skills, and attitudes towards others whom he or she is communicating. To keep up with the global trend, the Ministry of Education (2019) proposed a project for the 2021 Basic Competency Diagnosis and Assessment Plan in Higher Education. This project envisioned that core competencies should be set by each university according to its characteristics, which college students should be equipped with in higher education. Accordingly, the educational goal of the university is to nurture talents to reinterpret and use the learned professional knowledge to solve on-site problems and select the core competencies that the university pursues. In order to flexibly respond to the demands of prospective social changes, it is necessary to support college students' development of core competencies.

Therefore, this study examined correlations between core competencies presented by the on-site university and determined if there were significant differences in preservice teachers' perceived core competencies in TELL instruction. Two research questions guided this study:

1. Are there any correlations between core competencies?

2. Are there differences in preservice teachers' perceived core competencies in technology-enhanced language learning?

II. LITERATURE REVIEW

A. *Technology-Enhanced Language Learning (TELL)*

Technology-enhanced language learning (TELL) is the study of the application of technology in language learning and teaching (Yeşilel, 2016), suggesting an inclusive sense of technology and its impact on language teaching and learning (Bush, 1997). TELL refers to “the use of computers as a technological innovation to display multimedia as a means of complementing teaching [methods]” (Patel, 2014, p.1). Its main goal is to discover ways to use all kinds of technology, including computers, hardware, software, and the Internet, for the development and improvement of language learning (Golshan & Tafazoli, 2014; Hubbard, 2013; Yang & Chen, 2007; Yeşilel, 2016). Technology itself has several vital roles in language education. It can be used as instructional resources, a delivery system, or to increase productivity (Ghanizadeh et al., 2015). Technology provides scaffolds for students with special needs and interests, creating new learning experiences for students and significant learning gains (Pedersen & Liu, 2003). TELL is supportive of computer-mediated communication (CMC), which helps students speak and write in a foreign language (Kranthi, 2017).

TELL has both advantages and disadvantages. TELL offers many advantages regarding language teaching and learning (Carr et al., 2011; Chirimbu & Tafazoli, 2013; Patel, 2014; Yang & Chen, 2007). It provides a lot more flexibility than textbooks and in-depth learning experience for learners, addressing different learning styles and learner needs. TELL promotes learner autonomy and independence as students can control the pace of progress and the materials presented to them. Furthermore, it increases student engagement and motivation while facilitating communication and meaningful interactions in which technology-related tasks approximate more real-world contexts. Because the target language and culture are easily accessible, students can broaden their international perspectives, learn diverse language forms, and appreciate different cultures. Previous research (Lamy & Goodfellow, 1999; Ortega, 1997; Warschauer, 2000) has reported that technology provides an equal opportunity to all learners. For example, online discussion threads may encourage learners to voice their opinions and offer feedback through interactive conversations developed in the language learning context (Beauvois, 1998; Kivela, 1996). Despite a list of advantages, negative aspects of implementing TELL should also be considered (Jung, 2005; Lai & Kritsonis, 2006; Patel, 2014). First, both teachers and learners must understand basic technical knowledge before applying TELL to the classroom context. Teachers have to be familiar with the use of technology so that they can guide their students on how to apply technology to language instruction. Second, although there are various resources on the Internet, it is challenging to integrate them into an appropriate language curriculum and instruction. Third, students are often too focused on technological equipment and resources rather than the content of instruction. As a result, the consequences of using technology are the opposite of what the teacher expects. Lastly, technical issues can disrupt the flow of language lessons. Blackouts or other circumstances may hinder using digital technology, which cannot be backed up.

In brief, TELL motivates teachers and learners to actively engage in language learning and teaching. In particular, young learners are enthusiastic about the use of technological resources. In this regard, teachers should utilize them purposefully in their language classrooms and provide more authentic resources. Authentic language learning environments can be created through technology use.

B. *Competency-Based Education*

The concept of key competencies was first introduced by McClelland (1973), a social psychologist, in the early 1970s. McClelland (1973) defines competency as a characteristic that can predict high performance in a specific job. Mrowicki (1986) defines competencies as essential skills, knowledge, attitudes, and behaviors needed for effective performance of real-world tasks. According to Docking (1994), competency is an attribute of an individual who can successfully perform tasks or activities in either academic settings or the workplace. Competency involves specific knowledge, attitudes, thinking processes, and psychological and physical skills (Docking, 1994). Competency consists of the ability to mobilize social and psychological resources, including skills and attitudes, in a specific context to address complex needs and contribute to desirable outcomes for not only society but individuals as well. It can help individuals meet critical needs in a variety of contexts. Originally, the concept of competency started with the dictionary meaning of ‘the ability to do something’ and was used as a narrow concept of the ‘ability to successfully perform a specific job’ in the American vocational training field in the 1970s. Then, in 1997, the Organization for Economic Cooperation and Development (OECD) initiated a project called ‘Definition and Selection of Key Competencies (DeSeCo)’ in order to define and select competencies needed for the development of society and the successful lives of individuals (OECD, 2005). In the DeSeCo project, competencies are regarded as contributing elements to boosting productivity and market competitiveness, maximizing employment through a qualified labor force, and establishing an environment for innovation in the world. Competencies seem important because of increasing individual participation and social justice and maximizing autonomy and human rights. In modern society, the term “competency” has been extended to include a broader concept of the general ability to solve problems.

Universities and university graduates have perceived that major knowledge in books may not be used as a practical knack for problem solving in practice. As a result, there has been a trend to reconsider and utilize the knowledge they have learned to solve problems in the field, select core competencies that the university pursues, and implement a competency-based curriculum with the educational goal of nurturing talented individuals. Competency-based education is based on a curriculum that develops individual and social appropriateness with the aim of achieving individual learners' competency as the core goal (Park, 2008). It is crucial to nurture college students' talents and implement courses aligned with core competencies.

Language educators and researchers have also strived to follow the trend of competency-based education and apply it to language classrooms. Auerbach (1986) suggested eight key features as a framework for competency-based education in language learning and teaching, which are as follows:

- A focus on successful functioning in society
- A focus on life skills
- Task- or performance-centered orientation
- Modularized instruction
- Outcomes which are made explicit a priori
- Continuous and ongoing assessment
- Demonstrated mastery of performance objectives
- Individualized, student-centered instruction (Auerbach, 1986, pp. 414-415)

Basically, the goal of indicating these features is to enable language learners to become autonomous individuals capable of coping with the demands of the world. Rather than teaching a language in isolation, language teaching is considered as a function of communication regarding completing concrete tasks aligned with competency-based instruction (Richards & Rodgers, 2001). What counts is what learners can do as a result of competency-based instruction. The emphasis is on manifest behaviors rather than on abstract knowledge or the ability to talk about language skills. Learning objectives should be defined based on individual learner needs. Because we pursue individualized and student-centered learning, teachers should help students make progress at their own pace, paying attention to the areas in which they lack competence (Auerbach, 1986). Richards and Rodgers (2001) advocated competency-based language instruction due to several advantages. First, specific and practical competencies can be connected to learners' needs and interests. Second, learners can become responsible by judging whether the target competencies are relevant and useful. Third, competencies can be mastered one at a time; learners can see what has been learned and what still remains to be learned (Richards & Rodgers, 2001). McKay (2007) believes that competencies can provide information about individual learners' progress because they can be used as diagnostic feedback on learners' progress (Nunan, 2007). Despite several benefits of competency-based instruction, there are several drawbacks. Auerbach (1986) points out that competency-based education carries a hidden social order in reality. In other words, it prioritizes value in that it imposes its own norms, promoting social roles and underpinning the power structure in society. Secondly, teaching manifest behaviors may inhibit critical thinking, creativity, and innovation because the nature of language is unpredictable (Richards & Rodgers, 2001). (Auerbach, 1986, p. 425).

III. METHODOLOGY

A. *Participants and the Context*

The site of this study was a mid-sized university located at the southern tip of South Korea. Thirty-one (20 female and 11 male) preservice teachers majoring in English language education participated in this study. The age range was between 21 and 26. They were selected via convenience sampling and purposive sampling methods. The preservice teachers took a "Logic and Essay Writing in English Education" course. All participants pursued becoming English language teachers in Korean secondary schools.

The "Logic and Essay Writing in English Education" course was a required course for preservice teachers. The main objectives of the course were to comprehend the types of academic writing in English and to develop communicative competence in both spoken and written English. Students learned how to write academic essays that respond to different sources in texts. The course included three major writing assignments (narrative, comparison/contrast, and argumentative writing), presentations, and discussions on the assigned content regarding teaching writing.

B. *Technology-Enhanced Resources*

Multiple technology-enhanced resources were used in the instruction, including Learning Management Systems, Google Classroom, Google Docs, and Padlet.

1. *Learning Management Systems*

Technology materials can be distributed in many ways, including email and other communication platforms. Learning Management Systems (LMS) are the most popular in higher education. The LMS is "a server-based software program that interfaces with a database containing information about users, courses and content" (Piña, 2010, p. 1). These systems can distribute class materials, assess students' work, and facilitate communication with learners online. The LMS was the basis of the online course. All the announcements and assignment information were posted on the

LMS; therefore, the preservice teachers needed to check the LMS frequently for the updates on the course. A screenshot of the LMS used in the course is shown in Figure 1:

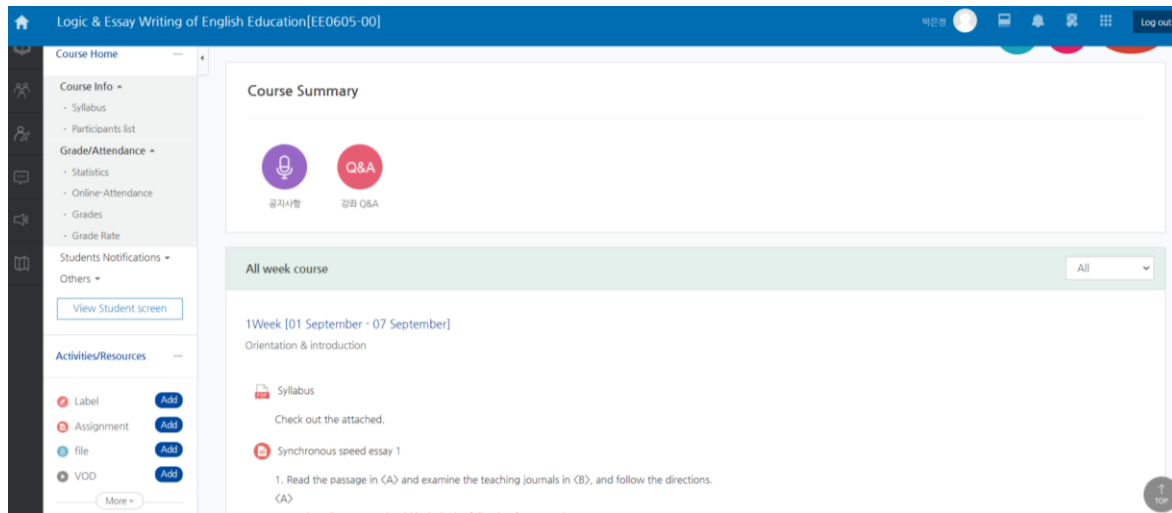


Figure 1 A Screenshot of the LMS Module

2. Google Classroom

Google Classroom is a free LMS service provided with Google G-Suite for education. According to Google Online Learning Resources for Educators (n. d.), Google Classroom “makes teaching more productive and meaningful by streamlining assignments, boosting collaboration, and fostering communication” (para. 1). The program is designed to integrate well with other Google online products, such as Google Docs, Google Slides, Google Forms, and Google Drive. Educators and teachers can easily create online classes, distribute assignments, and send feedback to students. Assignments and quizzes can be composed, distributed, and assessed on one platform. Google Classroom was used as the function of a weekly assignment dropbox. As the instructor created a folder of the assigned work, the preservice teachers posted their work by the deadline. A screenshot is shown in Figure 2:

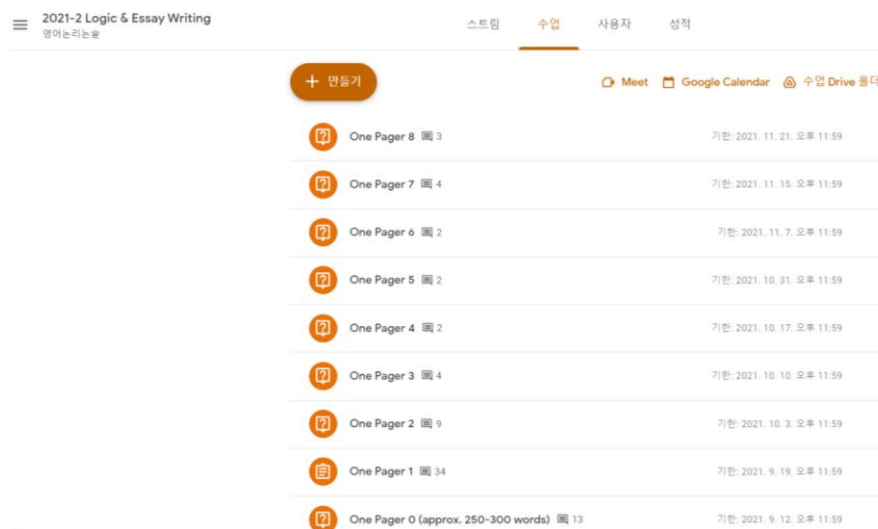


Figure 2 A Screenshot of Google Classroom

3. Google Docs

Google Docs is one of the major written communication tools in the Web 2.0 digital platform, which is a space where virtual users upload content and share it with others, enabling people to both understand and produce multimodal digital texts (Richardson, 2006). Semington et al. (2016) suggest that Google Docs is an innovative way to create new texts, share with others, and edit them with group members. Google Docs has several advantages for classroom use, such as easy access and group collaboration. Google Docs can be used to promote student inquiry through group collaboration and facilitate writing skills with editing and revision capacities (Demski, 2012). During the lecture, Google Docs were utilized as one of the technological tools in this study. Google Docs were used for group discussions and group writing. A sample of a Google Docs activity is shown in Figure 3:

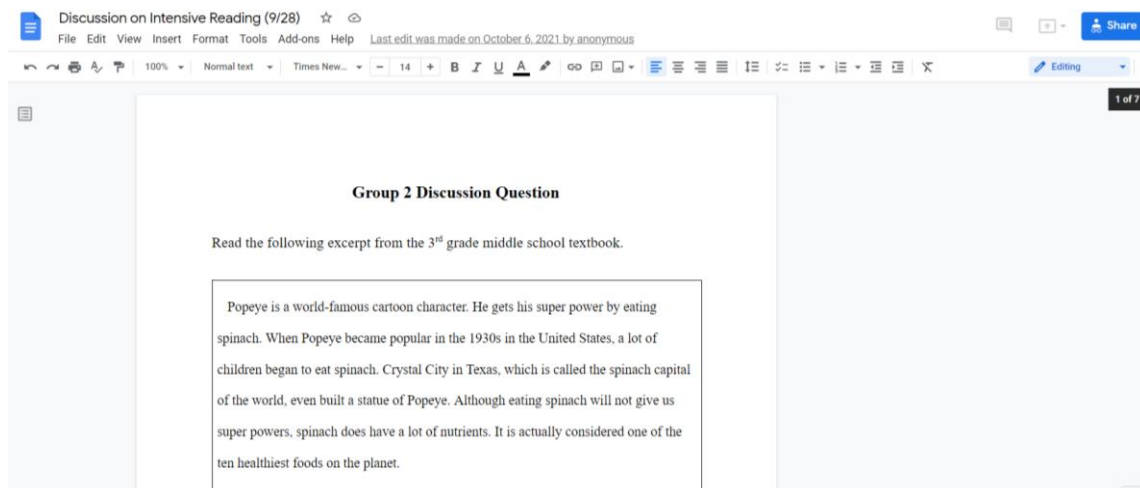


Figure 3 A Sample of a Google Docs Activity

4. Padlet

Padlet is a free virtual internet wall tool and online bulletin board. It can provide users a chance to express, share, and discuss their opinions on any kind of topic on this virtual wall. Users can also express their opinions with images, illustrations, videos, drawings, pictures, and all other possible visuals. Therefore, it supports collaboration among learners. Teachers can use it to activate learners’ background knowledge, to brainstorm and to share ideas while working on their projects (Warwick, 2017). In this technology resource, the preservice teachers wrote their reflections regarding what they learned from the class. It was used as a learning journal to reflect on their learning and teaching. The preservice teachers’ writing samples are shown in Figure 4:



Figure 4 Samples of Padlet Writing

C. Instrument

Survey questionnaires were used to understand the participants’ perceived competencies. Five different domains of competencies (i.e., self-directed learning, challenge, convergence, communication, and problem solving) were checked through the survey questionnaires. The survey questionnaires for each domain of competency contained 20 items, using a five-point Likert-scale (ranging from strongly disagree [1] to strongly agree [5]). The overall Cronbach’s alpha coefficient was 0.84 for the survey items. The reliability statistics indicated a high level of internal consistency. Sample items for each competency in the survey are shown in Table 1. According to the visions of the university (University, n. d.), competency in the domain of self-directed learning indicates the ability to make decisions without asking or waiting for an answer. Competency in the domain of challenges means encountering a difficult situation without any hesitation or reluctance. Competency in the domain of convergence is the ability to integrate two different things into one as a synergistic effect. Competency in the domain of communication refers to the ability to use a language effectively in various contexts. Competency in the domain of problem solving is the act of identifying, prioritizing, and selecting alternatives for a solution.

TABLE 1
SURVEY QUESTIONNAIRES OF CORE COMPETENCIES

Competency of self-directed learning
<ul style="list-style-type: none"> ● While studying the content, I can also think about how to remember it well. ● I can understand what I am studying in relation to real-life cases. ● I can think about how the new material I am studying relates to what I already know. ● I can organize the content in my own way so that it is easy to understand. ● I can study the content I did not understand during class again after class.
...
Competency of challenge
<ul style="list-style-type: none"> ● I can challenge a new culture or environment. ● I can take the initiative and take on new challenges with expertise. ● I can study about new content without hesitance. ● I can overcome any crisis situation. ● I am not afraid of failure.
...
Competency of convergence
<ul style="list-style-type: none"> ● I like to learn about fields other than my major. ● I can accept their point of view effectively when working with other students. ● I can seek help and advice from others. ● I can find relationships between different ideas. ● I am not afraid to ask for help from others.
...
Competency of communication
<ul style="list-style-type: none"> ● I can clearly communicate with the information or data I have. ● I can express my position or opinion clearly. ● I can explain my thoughts logically and persuasively. ● I can express it in an easy-to-understand manner. ● I can check whether the other party fully understands my message.
...
Competency of problem solving
<ul style="list-style-type: none"> ● I can identify the given information needed to solve the problem. ● I can investigate hidden information through the search process of the problem. ● I can recognize and explain the problem to be solved. ● I can select the information you need to solve the problem. ● I can organize selected information logically and select conflicting information.
...

D. Data Collection and Analysis

To answer research questions in this study, pretests and posttests of five dimensions of competencies were distributed in the first week and last week of the course, respectively. The Statistical Package for Social Sciences (SPSS, version 26) was used to analyze the collected data. First, correlation analysis was performed to reveal meaningful relationships between different competencies. Then, paired t-tests were conducted to compare and analyze the average values of the tests for pre-post comparison of the core competencies.

IV. RESULTS

A. The Results of Correlation Analysis

To address the first research question, a Pearson correlation coefficient was computed to assess the linear relationship between competencies. The correlation analysis results are presented in Table 2. As can be seen, there are a number of high correlations between several item responses of the competencies. All the five competencies were statistically positively related at the level of $p < 0.01$. However, the values of the correlation coefficients indicate moderately positive relationships between the competency of self-directed learning and the other competencies. The weak correlations showed that there are minimal relationships between the competency of self-directed learning and the other competencies in this study. All the four competencies (i.e., challenge, convergence, communication, and problem solving) were fairly positively related. The values of the correlation coefficients between the four competencies range between 0.72 and 0.83, which shows strong positive relationships. The results also showed the strongest positive relationship between competencies in convergence and problem-solving ($r(30) = 0.83$, $p < 0.001$). Figure 5 displays strong correlations between the competencies.

TABLE 2
CORRELATIONS BETWEEN CORE COMPETENCIES

		1	2	3	4	5
1. Self-directed learning	Pearson's <i>r</i>	1				
	<i>p</i> -value					
2. Challenge	Pearson's <i>r</i>	0.51**	1			
	<i>p</i> -value	0.003				
3. Convergence	Pearson's <i>r</i>	0.48**	0.75**	1		
	<i>p</i> -value	0.006	0.000			
4. Communication	Pearson's <i>r</i>	0.69**	0.77**	0.73**	1	
	<i>p</i> -value	0.000	0.000	0.000		
5. Problem solving	Pearson's <i>r</i>	0.57**	0.72**	0.83**	0.73**	1
	<i>p</i> -value	0.001	0.000	0.000	0.00	

** *p* < 0.01

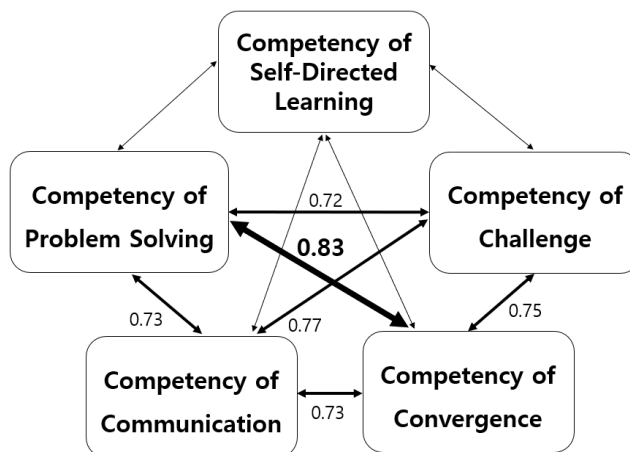


Figure 5 Strong Correlations Found Between the Competencies

B. The Results of T-tests

The results from the t-tests indicate that there were statistically significant increases in four competencies in the domains of challenge, convergence, communication, and problem solving. There was a significant effect for challenge competency ($t(30) = 2.53, p < 0.05$). The competency of convergence was statistically significant ($t(30) = 2.41, p < 0.05$). Furthermore, there were significant effects on the competency of communication ($t(30) = 2.35, p < 0.05$) and problem solving ($t(30) = 1.77, p < 0.05$). As shown in Table 3, however, the competency in self-directed learning was not statistically significant. The results indicate that technology-enhanced instruction is effective in increasing competencies for preservice teachers.

TABLE 3
INFERENTIAL STATISTICS OF T-TESTS

Competency	Test	N	Mean	SD	Mean difference	<i>t</i>	<i>df</i>	Sig.
Self-directed learning	pretest	31	3.73	0.46				
	posttest	31	3.89	0.43	0.16	1.45	30	0.158
Challenge	pretest	31	3.73	0.53				
	posttest	31	4.07	0.49	0.34	2.53	30	0.017*
Convergence	pretest	31	3.76	0.49				
	posttest	31	4.06	0.48	0.30	2.41	30	0.023*
Communication	pretest	31	3.90	0.56				
	posttest	31	4.22	0.41	0.32	2.35	30	0.026*
Problem solving	pretest	31	3.75	0.57				
	posttest	31	4.03	0.55	0.28	1.77	30	0.037*

* *p* < 0.05

V. DISCUSSIONS

The purpose of this study was to see the effect of TELL instruction for EFL preservice teachers. Based on the results, therefore, this section discusses two major points to promote TELL in teacher education: 1) Developing TELL strategies and 2) promoting reflective practice in TELL.

A. Developing TELL Strategies for Competencies in Convergence and Problem Solving

The results showed the strongest correlation between competencies in convergence and problem solving, which indicates that TELL may stimulate preservice teachers' abilities in problem solving and synergizing in teacher

education. Oxford (2017) categorized second language learning strategies into two sets of systems: (1) strategies for language skills areas (i.e., reading, writing, listening, and speaking) and (2) strategies for language subsystems including vocabulary and grammar. As for the first category, language skill integration can be matched to the competency of convergence for preservice teachers. Oxford (2001) argued that language learners should be exposed to a language environment where natural interactions arise. Through strategies of language skill integration, English becomes a means of interaction and communication as learners understand the dynamic characteristics of English. Integrated language learning improves the authenticity of language use and stimulates learners with varied backgrounds and ages to learn in a classroom environment (Oxford, 2001). Paul (2003) also maintained the integration of language skills in language classrooms. Several scholars (Davison & Dawson, 2003; McCarrier et al., 2000; Reimer, 2001; Williams & Lundstrom, 2007) argue that writing activities can be incorporated into other language skills as strategies of integrated skill education. Therefore, strategies for skill-integration instruction can help preservice teachers engage in language learning and teaching in TELL environments.

The competency of problem solving can be connected to Oxford's (2017) categorization of strategies for language subsystems such as vocabulary and grammar. To make it effective, gamification of learning can be applied to vocabulary and grammar TELL instruction (Smith et al., 2013). The interactive game-like interface enables students to learn target vocabulary and grammar more efficiently and recall them better. Game-like sentence writing can help students make inferences, focus on content, and check their comprehension of the instruction. Learning strategies with various web-based tools can also influence second language learners' success in language learning and mastering such vocabulary and grammar (Gallo-Crail & Zerwekh, 2002). In this sense, gamification of learning can promote preservice teachers' competency in problem solving and teaching skills.

B. Promoting Reflective Practice in TELL

The *t*-test analyses in this study found that the preservice teachers increased the four competencies in the domains of challenge, convergence, communication, and problem solving. However, the competency of self-directed learning was not statistically significant. This may reveal that TELL instruction in this study seemed to be teacher-directed, and the preservice teachers might have perceived that they had to follow all the procedures and guidelines for the activities and tasks offered in the class. In order to make TELL instruction learner-centered, student-initiated activities such as discussions and presentations should be necessary. All the technology-enhanced tools (i.e., the Learning Management Systems, Google Classroom, Google Docs, and Padlet) in fact involve student-directed learning. To make TELL instruction meaningful, engaging in more discussions and reflective activities is essential.

Reflective practice is an activity considered a key to teacher development (Mann & Walsh, 2013). Through reflection, preservice teachers can observe and evaluate their experiences and thoughts by conceptualizing them to increase their skills and awareness of their beliefs and assumptions of the experiences in their teaching practice. Self-directed learning means that learners establish learning plans and learning goals on their own and evaluate learning outcomes (Soisangwan & Wongwanich, 2014). The competency of self-directed learning can be promoted through reflection and self-evaluation.

VI. CONCLUSION

The rapid changes and pervasive presence of technology in the 21st century have extended language teaching and learning to any time and any place. New thoughts, strategies, and practices are essential in coping with the rapidly expanding new technologies and new learning environments (e.g., virtual reality, augmented reality, mixed reality, and artificial intelligence). TELL is promising in teacher education in that it benefits preservice teachers by developing the competencies required as 21st century skills. It is necessary to equip preservice teachers with TELL strategies for effective language learning and teaching. Furthermore, reflective practice would be considerably significant for preservice teachers to develop competency in self-directed learning.

Several limitations of this study need to be addressed. First, the scale of the study was rather small in the short term, which may be limited in terms of collecting and analyzing data. In addition, the results are not generalizable due to the non-probability sampling method used in this study. TELL instruction over longer periods of time seems to be suitable in future research.

The implications of this research are twofold. First, the availability of new technologies and language learning tools has developed much faster than the preparation of language teachers. Flexible and quick adaptation of technology is needed for preservice and inservice teachers to enhance their language teaching in TELL. This calls for a change in the curricula for preservice teacher education. In addition to knowing about teaching, which would eventually enhance their core competencies. Second, the correlation between competencies in convergence and problem solving was the strongest in TELL instruction. Emerging technologies (e.g., Web 2.0, artificial intelligence, and augmented reality) and learning environments (e.g., virtual reality, 3D, and mixed reality) have been designed and developed in collaboration with experts in diverse areas (e.g., art, computer engineering/programming, and languages). It is time to open up and accept initiatives for new forms of research. For example, investigations into language learning strategies and their effectiveness can be expanded and diversified along with different types of human-computer interactions and novel modes of learning.

In conclusion, rapidly growing new technologies and emerging learning environments call for a quick reaction from theory, research, and practice of language learning strategies. Researchers, educators, and practitioners (including preservice teachers) should reconsider the role and function of TELL and immersive interactive learning environments with heavy reliance on core competencies. It is crucial to prepare preservice teachers with core competencies in the 21st century.

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