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## Investigating Turkish Pre-service English Language Teachers' Virtual Teaching Dispositions

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### Abstract

The current study sought to investigate Turkish pre-service English language (EL) teachers' virtual teaching dispositions (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences) and the extent they are related to gender, age, and teaching status variables. The participants were 84 pre-service EL teachers drawn from a Turkish university, and data were collected through Welch and Napoleon's (2014) virtual teaching disposition scale (VTDS). The results indicated a significant difference between the scores of male and female pre-service EL teachers in both social and virtual/technical presences. However, the participants did not exhibit a significant difference between pedagogical and expert/cognitive presences. Consequently, a one-way ANOVA was run to explore the role of the age variable on the participants' virtual teaching disposition, with the results revealing a significant difference for only the pedagogical presence and expert/cognitive presence among the participants, whose ages ranged from 18 to 20, those aged 20-23, and those over the age of 24. Finally, the results revealed a significant difference between the scores in the expert/cognitive presence of the participants who teach English and those who do not. However, no significant difference was identified between the mean scores of the two groups in social presence, virtual/technical presence, or expert/cognitive presence.

**Keywords:** *Expert/Cognitive Presence, Pedagogical Presence, Social Presence, Virtual Teaching Disposition, Virtual/Technical Presence*

## **Introduction**

Over the last decades, live tutoring platforms and other social networking gadgets have enabled individuals, particularly language learners, to learn and practice the target language effectively. Online education and remote learning are becoming increasingly prevalent, providing students with alternative means of participating in language and academic courses at school, university, or different educational institutions. Admittedly, the current generation is digitally native, and technology is a path to achieve information, establish social networks, and access entertainment for the students of the new millennium (Yurtseven, 2021). Over the last decades, there has been an increase in technology integration in many educational institutions to facilitate the learning process and meet the current generation's requirements. Teachers, on the other hand, have to adjust to recent developments in both technology and online learning (Martins & Ungerer, 2015).

Notwithstanding the evident reality and growing need for online education, a limited number of teacher education programs offer well-prepared courses on remote learning and teaching (Alashwal, 2020). Even worse, many educators and ministries of education around the world do not possess the basic knowledge needed to provide operationally functioning online course structures and informed learning pedagogy (Watson, 2007). Indeed, teachers seem to have difficulty finding suitable pedagogical approaches and have difficulty compensating for their lack of information and communication technology (ICT) experiences (Brack et al., 2005). In fact, in online teaching, teachers' subject matter knowledge does not seem to suffice, and the development of ICT skills seems to be needed to perform their practices (Naidu, 2014) effectively. On the other, a very recent study revealed that pre-service English teachers' conception of online teaching was limited to the use of technology (Tarchi et al., 2022). On top of ICT skills, teachers need to be equipped with a new range of attitudes to be able to teach online efficiently (Rose, 2012). Hence, despite their paramount role, neither reliable internet speed nor powerful computers or a satisfactory level of content knowledge necessarily bring about effective online teaching (Welch & Napoleon, 2014). Indeed, performing as a teacher is far beyond promulgating content knowledge to students. Hence, demonstrating professional academic behaviors and attitudes in the name of promoting student learning and maintaining a positive image of the educational profession seems to be the prime responsibility on the part of the teacher. These patterns of conduct and behaviors are described as professional teacher dispositions.

Identified as teaching qualities or traits of individuals (Ripski et al., 2011) and essential skills that both online and face-to-face teachers need to have (Gruszczynska et al., 2013), the National Council for Accreditation of Teacher Education (NCATE) (2001, cited in Almerico et al., 2011) defines teacher dispositions as the commitments, ethics, and values that affect how teacher behave toward students, families, colleagues, and communities. Possessing a higher level of significance than content knowledge and pedagogical skills in teacher education (Wilkerson, 2006), teacher dispositions are associated with a prevailing set of values, such as responsibility, respectfulness, thoughtfulness, empathy, appreciation, honesty, caring, enthusiasm, sensitivity, and fairness, which can pave the way for a higher level of foreign language learning enjoyment

(Dewaele & Alfawzan, 2018; Dewaele & Li, 2021; Gabryś-Barker, 2016). Indeed, language students with lower levels of affective factors such as anxiety seem to demonstrate higher aptitude and more substantial achievement than students with higher levels of L2 anxiety (Sparks & Ganschow, 1991; Sparks & Patton, 2013), and this is something that has concerned language teachers for a long time (Sparks et al., 2004). The most apparent teacher dispositions in the classroom can be identified in class discussions, teacher and student questioning, and teacher verbal responses (Delceva-Dizdarevik, 2014). Teacher feedback on writing or email correspondences are other manifestations of academic dispositions.

In fact, teacher dispositions are a prerequisite for the efficient practice of teaching, and the development of teacher dispositions is often taken for granted in initial teacher education programs (Osguthorpe, 2013). However, even though they are fundamental in the development of future teachers (Kirwan & Roumell, 2015; Osguthorpe, 2013), the development and assessment of teacher dispositions as well as how they are reflected in classrooms are not clearly asserted in teacher education programs (Hindin & Mueller, 2016; Osguthorpe, 2013). This paucity in teacher education programs causes newly qualified teachers to lack the dispositions needed for effective online work (Edgington, 2015). Hence, teacher education programs need to identify "certain teacher dispositions as a part of their training programs" to determine and assess them (Shepherd & Alpert, 2011, p. 77).

With the paradigm-shifting from face-to-face to online education over the last years, prospective language teachers' virtual teaching practices have become a focal point of attention in teacher education programs (Hampel & Stickler, 2005). However, notwithstanding a bulk of studies on the effectiveness of online education in language learning (e.g., Grgurovic et al., 2013; Lin & Warschauer, 2015), little attention has been given to virtual teacher dispositions in language teacher education programs. The present study seeks to fill this research gap by identifying whether gender, age, and teaching status variables play differing roles in pre-service EL teachers' perceptions of virtual teaching dispositions.

## **Review of Literature**

Online education and remote learning, being identified as high-quality education" (Shepherd & Alpert, 2011, p. 76), have been investigated in respect of educator experiences (Duncan & Barnett, 2009), challenges (Sun, 2014), teacher training (Luo et al., 2017), learner autonomy (Lee, 2016), academic emotions (You & Kang, 2014), teaching skills (Ulusoy & Dedeoğlu, 2015), inquiry skills (Medwell & Wray, 2013; Mumford & Dikilitaş, 2020), scaffolding design thinking (Wu et al., 2019), and digital storytelling (Istemic Starčić et al., 2016).

As evident, despite the wealth of studies on online education and its association with varying educational variables, the virtual teacher disposition has only been scrutinized in a limited number of studies. Martins and Ungerer (2015), for example, have investigated the association of teacher dispositions with efficient remote teaching. Most academic staff were reported to be able to assert an expert/cognitive, social, and pedagogical presence, but not a virtual/technological presence. The study also indicated that the most recently appointed and the youngest educators

rated their ability to maintain a virtual/technology and pedagogical presence more positively than academic staff members with a longer length of service. In Shepherd and Alpert's (2011) study with four instructors' teaching practices on an online platform, higher teacher efficacy in virtual education and online teaching exhibited a positive correlation with several dispositions. Instructors' active involvement, tolerance, patience, enthusiasm, and friendliness in online instruction were reported to give rise to higher participation satisfaction on the part of the students.

Welch and Napoleon (2014) categorize virtual teaching dispositions into four subcategories: virtual/technological presence, pedagogical presence, expert/cognitive presence, and social presence:

- Virtual/technological presence refers to the teacher's remote presence and competence in integrating technology, relating to the teacher's innovations that will improve the design of the content, clarity of teacher explanations, and the teacher's competence in integrating technology. In the virtual/technological disposition, teachers need to possess the required motivation and desire for constant professional development in their aptitude to deliver high-quality content in online education. Hence, they need to integrate a wide array of user-friendly ICT tools to maintain an online presence effectively and also need to look for self-development and expertise in remote education.

- Pedagogical presence refers to the interactive demeanor that is likely to improve the design of the content in remote education, organization of lectures, management, effective feedback, and facilitation of active learning. So, this disposition aims at appropriately employing pedagogy in remote education.

- Expert/cognitive presence points to an interactive demeanor that can ease meaning-making, cater to content matter, provide explanation/clarification, and build ideas and understanding.

- Finally, social presence refers to the interactive behaviors that boost social relationships and communication between the students and the instructor, and it mainly aims at enhancing social ties in the learning environment.

In the present study, we sought to investigate Turkish pre-service English language (EL) teachers' virtual teaching dispositions (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences) and the extent they are related to gender, age, and teaching status variables. Thus, the current study is driven by the following questions:

**RQ<sub>1</sub>:** Are there significant differences between male and female pre-service EL teachers' teaching dispositions (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences)?

**RQ<sub>2</sub>:** Do EL teachers' virtual teaching dispositions (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences) significantly differ according to their age?

**RQ<sub>3</sub>:** Is there a significant difference between EL teachers' virtual teaching disposition (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences) according to their teaching status?

## **Method**

### *Research Design*

This quantitative study employs a descriptive survey design (Creswell, 2012) to investigate participants' dispositions through a scale. A survey design was selected to collect quantifiable information for statistical analysis of the population sample. In choosing this design, our primary goal was to evaluate a sample at one specific point in time without trying to draw conclusions or infer causality.

### *Participants*

The participants were 84 pre-service teachers of English as a foreign language. Of the 84 participants, 58 were female, and 26 were male. The participants were aged between 21 and 45 years. Thirty-three of the participants were teaching English in different institutions, while the remaining 51 were not teaching. At the time of the data collection, pre-service EL teachers had completed departmental courses, including instructional technologies, teaching principles, approaches to teaching a foreign language, and language skills.

### *Instruments*

The data was collected through Welch and Napoleon's (2014) Virtual Teaching Disposition Scale (VTDS), which was administered online. The scale (Appendix 1) consists of 25 items in total and four subcategories: social (6 items), pedagogical (5 items), expert/cognitive (6 items), and (4) virtual/technical (8 items) presences. The participants replied to the questionnaire on a 4-point Likert-type scale ranging from 1 (very untrue of me) to 4 (very true of me). In Welch and Napoleon's (2014) study, the scale indicated satisfactory descriptive statistics and internal consistency values of .89 for the entire instrument, ranging from .73 to .87 for the individual subcategories.

### *Data Collection*

First, descriptive summary statistics of participants' virtual teaching dispositions were analyzed. Then, the collected data were examined for independent samples t-test and Analysis of Variance (ANOVA) assumptions. After meeting related assumptions, the aforementioned tests were implemented using statistical analysis software SPSS 26. The data was collected by the authors through an online questionnaire in the fall semester of the 2020-2021 academic year. The online link to the survey was sent via email to the cohorts of pre-service EL teachers in the department. They were informed that the investigators were always available to respond to questions or offer explanations if prompted. This study followed informed consent procedures, and the participants were informed of how the data would be utilized. An online informed consent form was developed to provide participants with information about the study, as well as their rights to participate.

## **Results**

Prior to conducting parametric tests, normality of variances, as one of the assumptions of t-tests and ANOVA, was measured using Levene's Homogeneity of Variances Test, and we found data to be normally distributed with  $F(1.130)$ ,  $p = .328$ . The following sections present findings in relation to three research questions posed earlier.

*Gender*

At the outset, a t-test was conducted to identify whether pre-service EL teachers' virtual teaching dispositions (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences) differ significantly in terms of gender. Descriptive statistics for the two groups (Table 1) indicated that the female participants had a higher mean score in social presence ( $M = 3.67, SD = 0.33$ ), pedagogical presence ( $M = 3.40, SD = 3.24$ ), and expert/cognitive ( $M = 3.39, SD = 0.39$ ) in comparison to the male participants, while it was only in virtual/technical presence that the male participants scored a slightly higher mean ( $M = 3.55, SD = 0.38$ ) than female participants ( $M = 3.06, SD = 0.50$ ).

**Table 1**

*Descriptive Statistics for the Male and Female Participants' Virtual Teaching Disposition*

	Gender	N	Mean	SD
Social presence	Female	56	3,67	0,33
	Male	25	3,41	0,40
Virtual/technical presence	Female	56	3,06	0,50
	Male	25	3,55	0,38
Pedagogical presence	Female	56	3,40	0,39
	Male	25	3,24	0,53
Expert/cognitive presence	Female	56	3,39	0,39
	Male	25	3,30	0,49

The results obtained from the t-test run (Table 2) exhibited a significant difference between the scores of male and female pre-service EL teachers in social presence  $t(79) = 3.10, p > .003$  with a medium to high effect size  $d=.748$ , and virtual/technological presence  $t(79) = -4.28, p > .000$  with a high effect size  $d=-1.03$ . However, there was no significant difference registered between the mean scores of male and female participants either in pedagogical presence  $t(79) = 1.48, p < .142, d=0.07$  or expert/cognitive presence  $t(79) = 0.93, p < .352$  with a medium effect size  $d= 0.035$ .

**Table 2**

*T-Test Results Between the Male and the Female Groups' Virtual Teaching Disposition*

	F	Sig.	T	df	Sig. (2-tailed)	Cohen's d
Social Presence	3.94	.051	3,10	3,10	,003	.74
Virtual/Technical Presence	2.47	.119	-4,28	-4,28	,000	-1.03
Pedagogical Presence	2.80	.098	1,48	79	,142	.07
Expert/Cognitive Presence	2.04	.157	,93	79	,352	.03
Total Mean	3.61	.061	.381	79	.704	.09

*Age*

Consequently, we ran a one-way ANOVA to explore the potential difference between pre-service EL teachers' virtual teaching dispositions according to their age. Before conducting a

one-way ANOVA, descriptive statistics for age are given in Table 3 to provide an overview of the findings.

**Table 3***Descriptive Statistics for Age*

	Age Group	N	M	SD
Social presence	18-20	19	3,57	0,36
	21-23	35	3,65	0,33
	+24	27	3,53	0,42
	Total	81	3,59	0,37
Virtual/technological presence	18-20	19	3,19	0,66
	21-23	35	3,18	0,45
	+24	27	3,26	0,49
	Total	81	3,21	0,51
Pedagogical presence	18-20	19	3,14	0,43
	21-23	35	3,37	0,52
	+24	27	3,57	0,37
	Total	81	3,38	0,48
Expert/cognitive presence	18-20	19	3,17	0,39
	21-23	35	3,32	0,46
	+24	27	3,56	0,28
	Total	81	3,37	0,42

The results obtained from a one-way ANOVA for social presence indicated no significant difference between the scores of the participants who were between 18 to 20 ( $M = 3.57$ ,  $SD = 0.36$ ), those between 21 to 23 ( $M = 3.65$ ,  $SD = 0.33$ ), and those who were older than 24 years old ( $M = 3.53$ ,  $SD = 0.42$ ),  $F(2,78) = 0.75$ ,  $p < 0.47$ . Nor was there a significant difference in respect with virtual/technological presence among the scores of the participants who were between 18 to 20 ( $M = 3.19$ ,  $SD = 0.66$ ), those between 21 to 23 ( $M = 3.18$ ,  $SD = 0.45$ ), and those who were aged above 24 ( $M = 3.26$ ,  $SD = 0.49$ ),  $F(2,78) = 0.22$ ,  $p < 0.80$ . However, in contrast to the social presence and virtual/technological presence, the results exhibited a significant difference for the pedagogical presence among the scores of the participants who were between 18 and 20 ( $M = 3.14$ ,  $SD = 0.43$ ), those between 21 to 23 ( $M = 3.37$ ,  $SD = 0.52$ ), and those aged 24 and above ( $M = 3.57$ ,  $SD = 0.37$ ),  $F(2,78) = 4.81$ ,  $p > 0.01$ . There was also a significant difference for expert/cognitive presence among the scores of the participants who were between 18 to 20 ( $M = 3.17$ ,  $SD = 0.39$ ), those between 21 to 23 ( $M = 3.32$ ,  $SD = 0.46$ ), and those who were above the age of 24 ( $M = 3.56$ ,  $SD = 0.28$ ),  $F(2,78) = 5.83$ ,  $p > 0.004$ .

**Table 4***One-Way ANOVA for Age with Respect to Virtual Teaching Disposition*

		SS	df	MS	F	Sig.
Social presence	Between Groups	,21	2	,10	,750	,476
	Within Groups	10,94	78	,14		
	Total	11,15	80			

Virtual/technological presence	Between Groups	,12	2	,06	,220	,803
	Within Groups	21,48	78	,27		
	Total	21,60	80			
Pedagogical presence	Between Groups	2,05	2	1,02	4,81	,011
	Within Groups	16,60	78	,21		
	Total	18,65	80			
Expert/cognitive presence	Between Groups	1,85	2	,92	5,83	,004
	Within Groups	12,37	78	,15		
	Total	14,22	80			
Total	Between Groups	.079	2	.040	.366	.695
	Within Groups	8.467	78	.109		
	Total	8.548	80			

Following One-way ANOVA, the Games-Howell Post Hoc test was used to compare the virtual teaching disposition scores across age groups. There was a significant difference neither in social presence, virtual/technological presence, nor total categories. On the other hand, the Post Hoc tests revealed statistically significant differences in the pedagogical presence group between the age group of 18-20 and over 24, with a mean difference of  $-.428$  ( $p = .004$ ). Next, in the expert/cognitive presence category, the age group of 18-20 differed from the over-24 group, with a mean difference of  $-0.392$  ( $p = .003$ ). Similarly, the group aged 21-23 significantly differed from the over-24 group, with a mean difference of  $-0.244$  ( $p = .037$ ).

#### *Teaching Status*

The final research question addressed the difference stemming from pre-service English language teachers' teaching status in their virtual teaching disposition. Descriptive statistics for the two groups (Table 5) revealed that the participants who already teach had a higher mean score in social presence ( $M = 3.61$ ,  $SD = .37$ ), virtual/technological presence ( $M = 3.30$ ,  $SD = .49$ ), pedagogical presence ( $M = 3.51$ ,  $SD = .44$ ), and expert/cognitive presence ( $M = 3.55$ ,  $SD = .36$ ), in comparison to the participants who do not teach English. These findings do not necessarily refer to statistically significant differences between those who teach and those who do not. An independent samples t-test was run so as to determine that.

**Table 5**

#### *Descriptive Group Statistics*

	Teaching Status	N	M	SD	SE
Social Presence	Teaching	30	3.61	.37	.06
	Not Teaching	51	3.58	.37	.05
Virtual/Technological Presence	Teaching	30	3.30	.49	.09
	Not Teaching	51	3.15	.53	.07
Pedagogical Presence	Teaching	30	3.51	.44	.08
	Not Teaching	51	3.31	.49	.06
Expert/Cognitive Presence	Teaching	30	3.55	.36	.06
	Not Teaching	51	3.26	.42	.05
Total	Teaching	30	3.41	.33	.06
	Not Teaching	51	3.34	.31	.04



Results obtained from the t-test run (Table 6) indicated a significant difference between the scores in the expert/cognitive presence  $t(79) = 3.09$   $p < .001$ , with a large effect size  $d = .71$  of the participants who taught English and those who did not. However, there was neither a significant difference between the mean scores of who taught English and the ones who did not in social presence  $t(79) = .36$ ,  $p > .05$  with a negligible effect size  $d = .08$ , virtual/technical presence  $t(79) = 1.25$ ,  $p > 0.05$   $d = .28$ , nor the expert/cognitive presence  $t(79) = 3.09$ ,  $p > .05$  with small to medium effect size  $d = .28$ .

**Table 6***Independent Samples T-Test for Teaching Status and Virtual Teaching Disposition*

	F	Sig.	T	df	Sig. (2-tailed)	Cohen's d
Social presence	.09	.76	.367	79	.715	.08
Virtual/technological presence	.31	.57	1.25	79	.215	.28
Pedagogical presence	.98	.32	1.74	79	.086	.40
Expert/cognitive presence	1.36	.24	3.09	79	.003	.71
Total	.78	.37	1.00	79	.318	.23

**Discussion**

The focus of the study was threefold: We first investigated whether there is a difference between male and female pre-service EL teachers' virtual teaching disposition (i.e., social, pedagogical, expert/cognitive, and virtual/technical presences). The results indicated that the female participants had a significantly higher mean score in social presence than their counterparts. In contrast, that of the male participants was significantly higher than the females in virtual/technical presence. However, they exhibited no significant difference in either pedagogical or expert/cognitive presence.

Indeed, the theoretical and empirical overview of the literature review highlights the influence of affective factors on students' educational achievement (Botes et al., 2020; Sparks & Ganschow, 1991, 1995), and thereby the teacher's social and emotional competence can play a significant role in not only promoting developmental, academic outcomes among students but also enhancing students' social-emotional competence in the classroom (Jennings & Greenberg, 2009). Teacher dispositions, as aforementioned, are intricately connected to a set of values such as respectfulness, empathy, appreciation, caring, enthusiasm, and sensitivity, which are prerequisites for efficient emotional and social teaching (Demetriou & Nicholl, 2022; Hashim et al., 2019; Pianta et al., 2012; Solheim et al., 2018). Emotionally and socially competent teachers (i.e., the individuals with a high level of teacher disposition) are more likely to achieve encouraging and supportive relations with their students, design lessons based on student abilities and strengths, lay down behavioral guidelines to encourage student intrinsic motivation, build cooperative environment among students, and act as a role model for appropriate and respectful communication (Jennings & Greenberg, 2009). We also know from Spark's two-phased study that teachers are very competent in realizing and determining their students'

affective characteristics (Sparks et al., 2004). In fact, the application of empathy on the part of teacher candidates can help to understand students better (Warren, 2017) and is more likely to pave the way for more effective teacher communication (Peck et al., 2015).

In the present study, the results indicated that female participants possessed a higher level of social-emotional disposition to, say, coach students through conflict situations, be empathetic to their needs, and establish a pleasant learning environment. In fact, gender was found to play a significant role in teachers' social-emotional support in online education. The findings are in line with Kaya's (2016) study, by which the pre-service female teachers indicated a significantly higher level of emotional reactivity than their male counterparts. In fact, females tended to be more sympathetic and have higher levels of empathy (Eisenberg & Strayer, 1990) – supposedly stemming from a neurologic basis in the sense that the right hemisphere activation on empathy tasks has been found to be more correlated with females (Rueckert & Naybar, 2008).

Fitness and Curtis (2005) report that females possess greater empathy than men for interpersonal conflicts due to differences in the emotional quotient, empathy, attributional complexity, and self-control. In their study of empathic abilities among Turkish primary school teachers, Akbulut and Sağlam (2010) found that female teachers had a higher mean score for empathic tendency than their male counterparts. Duru's study (2002) suggested that a number of psychosocial variables affect pre-service teachers' empathic potential and that females have significantly different scores on this trait. In addition, higher empathic tendencies among pre-service teachers are constantly associated with females (Dereli & Aypay, 2012; Ekinçi & Aybek, 2010). In Kapıkıran's (2009) study of empathic tendency and self-monitoring in pre-service teachers, the scores of female participants were similarly higher than those of their male colleagues.

The male participants' outperforming in virtual/technical presence underlines the fact that they have more inclination to, say, obtain recent information on technology, adapt well to online delivery formats, maintain a visible presence in online formats, and utilize new technologies to enhance learning. In similar studies, male pre-service teachers and teachers of English were found to have higher associations with ICT than females (Birgin et al., 2010; Gudmundsdottir & Hatlevick, 2018) and higher ICT integration (Mahdi & Al-Dera, 2013), respectively. The findings also align with Lodhi et al.'s (2019) results, in which male students were reported to possess a higher positive attitude towards computer-assisted language learning than their female counterparts. In a study with Turkish pre-service teachers in initial teacher education programs, males similarly reported higher levels of ICT than females (Cuhadar, 2018). However, even though male teachers may exhibit higher levels of ICT competence, female teachers seem to incorporate it more effectively into their teaching practices (Balta & Duran, 2015).

Furthermore, the results indicated a significant difference in the pedagogical presence and expert/cognitive presence among the scores of the participants who were between 18 to 20, those between 21 to 23, and those who were older than twenty-four years old. Specifically, the youngest teacher candidates exhibited the lowest, while the participants aged 24 and above reported the highest level of pedagogical and expert/cognitive presence of teacher disposition. This might stem from the fact that older educators acknowledge the usefulness of technology in

the practice of teaching (Siddiq et al., 2016). The highest level of pedagogical presence is associated with varied traits such as being organized, having a schedule to follow, communicating effectively in writing, and responding to student inquiries in a timely manner. In a similar vein, in John's (2015) study, a group of pre-service teachers below the age of 20 showed a less positive attitude towards ICT and its implementation in the class. O'Bannon and Thomas (2014), on the contrary, concluded that older teachers possess fewer positive attitudes toward the integration of ICT in teaching practices.

In addition, in our study, virtual/technological presence scores did not differ among age groups. The older participants expressed slightly, but not statistically, higher virtual/technological presence. On the other hand, Martins and Ungerer (2015) found high virtual/technological disposition in younger educators. Cabero and Barroso (2016) also arrived at differing conclusions in relation to the age factor in information and communication technologies, stating that younger teachers' ICT skills excel their older counterparts. In the current study, similar to virtual/technological presence, the social presence of pre-service teachers of English did not significantly differ among age groups. In alignment with our findings, Kaya (2016) identified no significant differences in pre-service teachers' empathy under social skills and cognitive empathy for different age groups. In another study, empathic tendencies were found to be higher in senior pre-service teachers compared to first-year students (Ekinçi & Aybek, 2010).

Moreover, in our study, older participants reported significantly higher pedagogical presence. This is in alignment with Bassey's (2016) findings positing age as a determinant factor in classroom management skills, ability to motivate, assessment of learning, and general teaching effectiveness. Contrary to our findings, Martins and Ungerer (2015) found that younger educators rate their ability to maintain a pedagogical presence as higher than the older educator groups in the same context. In a similar fashion, older age groups in the context of our study reported possessing significantly higher expert/cognitive presence. The age of lecturers lies in their relationship with their knowledge of the subject matter (Bassey, 2016). Indeed, this is not related to age as a "fixed factor" (Ellis, 1994, p. 35) but rather to what age brings in terms of breadth of experience, awareness, self-consciousness, and self-regulation.

In our study, the participants who were teaching English at an institution at the time of the data collection also reported higher levels of expert/cognitive presence in online environments than those who were not teaching. The expert/cognitive presence category refers to content knowledge, in-class practices, and adaptation of learning strategies in the context of their subject matter. De Leon (2016) asserts that instructors need to possess certain dispositions to excel in online teaching, and these dispositions are being techno-savvy, organizer, facilitator, and creative. In fact, organizing the class practices and facilitating the lessons require some sort of teaching experience. Similarly, teachers with higher levels of teaching experience were found to have higher self-regulation skills (Karimvand, 2011; Partovi & Tafazoli, 2016). Similar to our findings, Prieto and Altmaier (1994) identified that teaching experience is a determining factor in educators' teaching self-efficacy. However, contrary to our findings, a group of scholars (e.g.,

Garrison et al., 2010; Shea & Bidjerano, 2009) found significant relationships between teaching status and social presence in online learning environments. They also identified that teaching status is associated with expert/cognitive presence corroborating our finding. In short, pre-service teachers of English who were teaching at the time of data collection exhibited higher levels of expert/cognitive presence, which have found support from the literature.

## Conclusion

Pre-service teachers of English should have more opportunities to practice teaching during their studies to be able to develop more effective teaching dispositions better. These teaching experiences should extend beyond face-to-face interactions, and to virtual environments, given the course, our current education system has taken. The online teacher, as De Leon (2016) asserts, should build a sense of community in which they interact with students by taking on the role of facilitator and "creating sufficient rapport with students" (p. 20). There is a strong correlation between teacher disposition and the quality of student learning (Almerico et al., 2011; Harme & Pianta, 2001; Scheuermann & Hall, 2008; Shook, 2012); an online teacher should possess digital skills that can facilitate diverse learning opportunities for students. Knowledge of educational technology tools, learning management systems, and digital problem-solving skills are some of the aspects of online teacher disposition (De Leon, 2016). In this study, we explored the phenomenon with a limited number of participants in a specific context. Further research with larger samples and in different settings is required to identify pre-service teacher dispositions. The associations of virtual teacher dispositions with positive affective variables such as foreign language enjoyment and well-being would be fruitful avenues for future research.

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## **Appendix**

### Virtual Teaching Dispositions Scale (VTDS)

#### Social Presence

1. I am empathetic to the needs of my students.
2. I relate with students as people.
3. I am tactful with students in emotionally stressful situations.
4. I am flexible in dealing with students' needs (due dates, absences, etc.).
5. I try to establish a welcoming learning environment.
6. I understand the needs of my students.

#### Virtual/Technological Presence

7. I adapt well to online delivery formats.
8. I maintain genuine and meaningful contact in online formats.
9. I project interpersonal skills in the online environment.
10. I strive to continually improve performance in the online classroom.
11. I maintain a highly visible presence in online formats.
12. I am intrinsically motivated to master new information technology.
13. I utilize new technologies to enhance learning.
14. I communicate comfortably almost entirely through writing.

#### Pedagogical Presence

15. I respond to student inquiries in a timely manner.
16. I return work to students promptly.
17. I create a schedule and stick to it.
18. I am organized.
19. I communicate clearly and effectively in writing.

#### Expert/Cognitive Presence

20. I demonstrate commitment to academic expertise.
21. I have a passion for education.
22. I make content meaningful for the learner.
23. I anchor learning strategies in the context of my subject matter.
24. I adapt learning strategies within the context of my subject matter.
25. I am very knowledgeable in my content area.

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