ATU PRESS

ISSUES IN LANGUAGE TEACHING (ILT)
VOL. 14, NO. 2, 39-72, December 2025
https://doi.org/10.22054/ilt.2026.69638.728 Document Type: Research Paper

The Relationship between English Language Teachers' Personality Types and Attitudes toward Technology

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Received: December 19, 2024**; Revised:** August 15, 2025**; Accepted:** September 05, 2025

Abstract
The growing importance of technology for teaching during the Covid-19 pandemic urges educators to become technology-proficient teachers and use technology to run their classes. Meanwhile, teachers with different traits may have various perceptions of using technology. This study explores the relationships between teachers' personality types and attitudes toward adopting technology in English Language Teaching (ELT). Thus, it is aimed to determine if personality types would predict teachers' attitudes toward technology (ATT) in ELT. An online questionnaire with 92 participants (English language teachers) using the Big Five Inventory (John et al., 1991) for personality domains and Kessler's (2007) questionnaire for measuring ATT were utilized. After analyzing the data, it was uncovered that the personality types could predict ATT in ELT. Additionally, there was a significant relationship between personality factors and ATT among English language teachers. The results showed a significant positive relationship between *extraversion*, *agreeableness*, *conscientiousness*, *openness to experience* on one side, and ATT. Additionally, Neuroticism was not found to be significant in the ATT. The Findings indicated that teachers' negative ATT might have a detrimental effect on its implementation in the classroom. This study's findings might shed new light on the relations between types of personalities and their priority for running technology-oriented classes.

***Keywords**:* Big Five theory, Personality traits, Teacher Attitude, Technology, ELT

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INTRODUCTION

Since the past decades, technology and computers have become significant issues in our daily lives. The growing use of technological instruments in society has affected education and provoked considerable changes in its process. These changes are penetrating many aspects of education, and computer-related technology are becoming central to teaching and learning (Pham & Ho, 2020). However, for most teaching stockholders, the importance of technology in teaching has not yet become a reality. Even though current technological advancements have prompted an increased demand for and expectation of engaging teachers with (TBT) (Chauhan, 2017; Yenkimaleki & van Heuven, 2019), and the conditions for successful technology adoption appear to be in place, instructors' actual professional use of technology appears to be insufficient (Ertmer, 2005). The source of this issue could be found in different sources, one of which may be teachers' ATT and computer. In general, attitude (someone's negative or positive feelings, opinions, or behaviors on any circumstances, events, or things) is of paramount importance in teaching and learning (Palardy & Rumberger, 2008; Koballa & Crawley, 1985), and it has intrigued the interest of many researchers in various fields, including Mathematics (Reed et al., 2010), Science (Hacieminoglu, 2016), and Physics (Palardy & Rumberger, 2008; Fidan & Tuncel, 2019). Furthermore, as technology advances, it has become more and more the focus of scholars' attention; consequently, over the last few decades, researchers have discussed various components and features of TBT, such as the importance of technology (Pham & Ho, 2020), engaging teachers with TBT (Chauhan, 2017; Yenkimaleki & van Heuven, 2019), as well as the effectiveness of TBT (Chapelle, 2005), and barriers to using technology (Lin & Hsieh, 2001; Ozer et al., 2017). The relationship between TBT and other factors, such as pedagogical beliefs (Tondeur et al., 2016) and students' academic outcomes (Lei, 2010), has also been studied. With a glance at the studies in this respect, it could be understood that, surprisingly, not much research has focused on English language teaching (ELT), attitude, and

personality altogether. Accordingly, this study attempts to offer a nuanced understanding of the relationship between the mentioned factors.

Many academics have been interested in technology integration with English as a foreign language (EFL) teaching in recent years, and as a result, various aspects of it have been studied, including tools (Koltovskaia, 2020), testing (Zhyhadlo & Zaiarna, 2025) positive and negative effects (Christensen, 2002), motivation (Azarmi et al., 2025; Sosin et al., 2024), artificial intelligence (Renfeng et al., 2025), and feedback (Ebadi & Bashiri, 2020; Lailika, 2019; Shintani & Aubrey, 2016).

These days, governments and educational systems amplify technology infrastructures in order to encourage and motivate teachers to incorporate technology into the classrooms. At the heart of technology employment is the personal attitude toward it (Burge, 2000). In this regard, Rogers (1995) holds that new and contemporary innovations often offer people new alternatives to solve problems; however, their probability of employing the innovation usually depends on their attitude. This impact of attitude in the actual use of technology, either favorably or unfavorably, necessitates investigating this issue and finding its possible relationship with different factors, such as personality traits, which is the focus of this study.

According to Hogan et al. (1996), personality traits are stable individual difference attributes explicating an individual's disposition to a particular model of behavior, emotions, and cognitions. Personality, in a sense, could be illustrated apropos of five central dichotomous factors, commonly referred to as the "Big Five" (McCrae & Costa, 1987; John, 1990; Digman, 1990; McCrae & John, 1992). "Big Five" is a term that Goldberg (1993) created for the first time and made relevant to personality factors. This personality model is a prevalent model to measure personality in psychological studies. The labels for the so-called big five dichotomous factors are (1) Extraversion versus Introversion, (2) Emotional Stability versus Neuroticism, (3) Agreeableness versus Hostility, (4) Openness to Experience versus Closeness to Experience or Intellect versus Lack of Intellect, and (5) Conscientiousness versus Lack of Conscientiousness (Bakker et al., 2006).

As mentioned earlier, in spite of the appropriate satiation for teachers to employ technology, some instructors are disinclined to use it (Zhao & Frank, 2003), which will negatively affect their attitude toward it. Consequently, they may not be high-quality technology-proficient teachers. The question here is whether ATT is a social event or is more associated with people's characteristics and personalities. To answer this question, the present study sheds light on attitude and personality to determine if personality type predicts teachers' ATT. Moreover, it presents us with a vivid perspective on how instructors with differing personality types may embrace technology in their classrooms, which provides some insight for stakeholders of the computer-assisted language learning (CALL) field of study (i.e., a new and developing field of study in English language teacher education) by shedding light on which types of personalities are more suitable to be employed as the prospective teacher for teaching CALL and technology-related courses. The findings of the present study are further expected to assist us in having a more in-depth knowledge of the interaction among the individual disparities leading to the efficacious use of technology, to expand the theoretical borders of technology acceptance as a field of study, and to present further evidence that may guide future investigations on individual disparities in user's behavior. Accordingly, this study seeks an answer to the following research question: "Does personality type predict teachers' attitudes toward technology in English language teaching?"

LITERATURE REVIEW

Technology and Teachers' Attitudes

Literature is inundated with investigations about attitude and technology. Attitude, affecting behavior and performance (Jung, 2015), is deemed a key factor in education and learning (Botero et al., 2018). Pajares (1992) discussed that instructors' attitudes and beliefs are essential to educational investigations, as 'the things and ways teachers believe' (p. 307) could assist them in understanding performances and behaviors deeply. Instructors'

attitudes, a key disabling/enabling factor, strongly predict teachers' technology adoption (Isleem, 2003). On a similar line, Christensen (2002) argued that instructors' perception of technology impacts their practices and the learners they instruct. Indeed, it has been argued within the literature that perception and ATT impact instructors' use of technology in the classroom, which, in turn, can have a facilitating or debilitating effect on training (Kluever et al., 1994).

While instructors may keep positive ATT, they may be prevented from using it by other factors such as time and institutional obstacles (Piotrowski & Vodanovich, 2004), lack of supplementary materials (Young, 1991), and lack of skill to infuse it into the curriculum (Baylor & Ritchie, 2002). It is believed that the time devoted to prepare instructors to employ technology is less than necessary (Piotrowski & Vodanovich, 2004), and even if teachers are inclined to utilize technology, they may not be prepared to employ it. One reason, in addition to time, and among others, is that they are not well-prepared to integrate it into the curriculum. Because as Baylor and Ritchie (2002) emphasized, technology will not be utilized unless instructors possess the knowledge, skill, and attitude required to integrate it into the curriculum. One more challenge is the fact that computer is introduced to the instructors as an end, not as a mean; this technology is also offered by no supplementary materials; thus, teachers are not able to employ it in their classes (Young, 1991).

Nevertheless, overcoming common barriers which might discourage stakeholders from employing computers and technology for teaching needs a highly positive attitude (Kadel, 2005).

Big Five Inventory and Technology

This part scrutinizes the literature of the big five personality notably Extraversion versus Introversion, Emotional Stability versus Neuroticism, Agreeableness versus Hostility, Openness to Experience versus Closeness to Experience, and Conscientiousness versus Lack of Conscientiousness.

Extraversion is characterized by an inclination to be active, energetic, self-confident, talkative, and emotionally expressive. Extroverts are inclined to develop their personal interactions and make many friends. Moreover, extraversion is accompanied by a propensity to be optimistic (Costa & McCrae, 1992). Individuals with this type of personality concentrate on the positive and good sides of their experiences. This may be explained by their sanguine temperament (Watson & Clark, 1992). Additionally, extroverts are inclined to be rational and use problem-solving strategies with positive reappraisal (Watson & Hubbard, 1996). On the opposite side, there are introverts, who, in Costa and McCrae's (1992) words, are reserved, even-paced, and independent. Extraversion is believed to be the one, among others, that is more correlated with many facets of human-computer interaction (Caci et al., 2014), that explains why individuals with a high level of this trait have promising attitudes towards technological developments (Svendsen et al., 2013).

Agreeableness is characterized by nurturance, altruism, and caring; that contrasts with indifference to others, hostility, noncompliance, and self-centeredness (Hooker et al., 1994). It represents the propensity to be gentle, kind, trustworthy, friendly, warm to others, and get along with others (Poropat, 2009). On the other hand, disagreeable individuals are competitive, egocentric, and skeptical of others' purposes (Costa & McCrae, 1992). Agreeable people are cooperative, helpful, and affectionate. Individuals with a high score on this trait tend to show positive experiences in social situations (Hayes & Joseph, 2003). These individuals are willing to believe that others are voracious and honest, and in general, they rarely experience social rejection (Bierman, 2004). In the literature, some evidence shows a linear positive relationship between beliefs about technology use and agreeableness (Zhou & Lu, 2011). Therefore, cooperative and considerate individuals consider technological developments valuable as long as the latter increases teamwork and strengthen social connections (Devaraj et al., 2008).

Traits such as irritability, social anxiety, helplessness, depression, fear, moodiness, lack of self-esteem, and poor inhibitory control of impulses

(Costa & McCrae, 1987) characterize **neuroticism**. Individuals who score higher on neuroticism are inclined to set big aims for themselves and then underestimate whatever they do *(*Eysenck, 1947*)*. Costa and McCrae (1992) remark that these people are expected to experience feelings of embarrassment, sadness, fear, guilt, confidence, and anger, which might challenge the cognitively demanding duty needed for technology use. Henceforth, those who are nervous and tense may be more inclined to interpret technological developments as strenuous and threatening (Devaraj et al., 2008). On the opposite side, individuals with lower scores tend to be relaxed, calm, and even-tempered. Bolger (1990) and Heppner et al. (1995) associate neuroticism with ineffective coping strategies. In addition, people with a high score in this factor may experience more physical illnesses (Van Heck, 1997).

Curiosity and intelligence are associated with ***Openness to Experience / Intellect***. People of this type tend to experience different things and learn something valuable from their experiences (Goldberg, 1993; Costa & McCrae, 1992). This factor is characterized by the willingness to take a risk, creativity, innovativeness, broad-mindedness, curiosity, diversitism, sensibility, reflexivity, and eagerness to adjust activities according to new notions (Watson & Hubbard, 1996; Poropat, 2009). Research has shown that individuals with a high score in this trait are more likely to be tolerant of diversity (McCrae, 1996) and consider a particular technology beneficial and effortless (Uffen et al., 2013). Consequently, they may be more open to accept technology.

Watson and Hubbard (1996) associate ***conscientiousness*** with problem-solving. Paperno (1988) conceptualizes it as the extent to which a person cares about others when making decisions. This trait is characterized by dutifulness, self-discipline, competence, and achievement (McCrae & Costa, 1986), and those who get higher scores in this trait represent a degree of diligence, persistence, organization, and determination (Zhao & Seibert, 2006). They further reflect on the matter that whether or not a particular technology offers them a chance to be more competent or effective (Devaraj et al., 2008). Along

with that, Landers and Lounsbury (2006) revealed that learners with a high level of this trait are more expected to employ the Internet for academic purposes.

Hamburger and Ben-Artzi (2000) found a relationship between personality and internet use. They reported that neuroticism and extraversion are related to Internet employment. This study was limited to investigating only two aspects of personality, namely extraversion and neuroticism. Additionally, regarding the demographic issues of the sample, unlike our study, which investigates teachers, their study concentrated on the student population. An already same attempt was made by McElroy et al. (2007), who concluded that openness and extraversion predict internet employment. They noted that neuroticism predicts selling on the Internet, while openness to experience predicts buying. The focus of this study, like the previous one, was on students. Mark and Ganzach (2014) found that neuroticism, conscientiousness, and extraversion positively correlate with global Internet use. They added that the strongest predictors of internet employment are neuroticism and extraversion. The data of this study were collected in 2008, and technology, from that point on, has undergone a dramatic change. Consequently, if we replicate this research, we presumably might have different results.

In another effort, Walczuch et al. (2007) delved into the effect of technology-specific personality on technology adoption among site financial service providers. The findings of their investigation delineated the involvement of personality traits in the process of information technology adaption. That optimism seemed to have the most potent effect on technology adoption. Their personality traits, unlike ours, consisted of optimism, innovativeness, discomfort, and insecurity. Using the site service providers of a company as the sample of this study may establish biased results because an internet service company might show different results, particularly for innovativeness. Barkhi and Wallace (2007) considered the effect of personality on the behavioral intention and technology acceptance model concerning online buying. The findings of their study illuminated that

personality affects technology acceptance, that is, online buying in their case. They found a positive relationship between the Introversion–Extraversion dimension, judging–perceiving dimension, and intuitive–sensing dimension.

In a similar vein, Ozbek et al. (2014) scrutinized the effect of personality on the acceptance of technology by smart phone users; they adopted smartphones as the symbol of technology. They concluded that personality is about the technology acceptance model. This study and the previous one, namely Barkhi and Wallace (2007), focused on a sample of students. Students are a specific population whose level of technology adoption is probably superior to other layers of society in terms of their education level, age, and the fact that this population is a prominent group of smartphone and technology users. Accordingly, the results of this study and their correlations might be affected by this issue.

METHOD

Participants

This study selected 92 participants, 47 females and 45 males, based on convenience sampling from English language teachers in institutions (68 cases) and Teaching English as a Foreign Language (TEFL) students (24 cases) at Razi university in Kermanshah, Iran The researchers recruited TEFL Ph.D. and Master of Arts (MA) students who had some teaching experience in the English language. Regarding age, the sample mean age was 31 years, representing a young layer of teachers in this field of study. The first language of the participants was Persian, and they had learned English as a foreign language. In terms of education, 70 of the participants held MA degree, and 22 of them were PhD holders. The proficiency and homogeneity of the teachers were taken for granted by taking into account the claim that the number of semesters the learners have spent studying a language demonstrate their proficiency level in that language (Poehner, 2005). As our participants were at MA and Ph.D. levels, we considered them proficient language users who could easily understand the English version of the questionnaires.

Instruments

An online survey, consisting of three sections was delivered to the participants. It included a demographic questionnaire, Kessler's (2007) questionnaire for measuring ATT (see appendix A.), and a self-report 44 items version of the Big Five Personality Inventory (John et al., 1991) for measuring personality type (see appendix B.). Both questionnaires were in English. The participants were asked to determine their gender, age, and field of study in the demographic part. In what follows, the other two sections are discussed.

Personality Traits

There is no general conformity regarding the "best" method for measuring personality; nevertheless, the Five-Factor Model has presumably become the most popular. Big Five Personality Inventory is a common instrument employed in different studies, with acceptable validity and reliability for measuring personality (e.g., Wang et al., 2012; Srivastava et al., 2003). The Five-Factor Model, in general, has shown considerable test-retest reliability, internal consistency, discriminant, and convergent validity, as well as clear factor structure (John & Srivastava, 1999; Benet- Martínez & John, 1998). The scale, additionally, has shown a considerable agreement between peer- and self-reports (Benet- Martínez & John, 1998). Accordingly, our participants took a 44-item version of the Big Five Personality Inventory (John et al., 1991), which measures five qualities of personality: Conscientiousness, neuroticism, extraversion, openness to experience, and agreeableness. The questionnaire has a five-point Likert scale ranging from 1 (Extremely agree) to 5 (Extremely disagree).

Kessler's Questionnaire

This is an 11-item questionnaire developed by Kessler (2007), which many researchers have employed for years (Kinzie, Delcourt, & Powers, 1993) to

measure ATT. Kessler modeled this instrument from previously developed questionnaires (Race, 2001) and modified the instrument for measuring English teachers' ATT. This modernized version, which includes a five-point Likert scale ranging from 1 (Extremely agree) to 5 (Extremely disagree), was designed explicitly by integrating more modern technologies into the old ones.

Data Collection Procedure

The inventories in the present study were administered online via sending a link to the participants. A five-point Likert scale, ranging from highly agree (1) to highly disagree (5), was employed to measure participants' responses. Depending on the respondent's endorsement of each item, a particular score (1, 2, 3, 4, 5) was rendered. The total score for every factor or trait was calculated by adding the scores of related questions or items to that trait. Participants were asked for their voluntary participation in the study. Additionally, the participants were assured that their identities and information would be kept anonymous.

RESULTS

Multiple regression was conducted to verify the study's research question in exploring whether personality type predicts the ATT in ELT. The details of the analyses are presented in the following tables. Table 1 provides the extent to which all independent variables (personality types) account for variability in the dependent variable (ATT in ELT).

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.461[a]	0.213	0.167	6.05199

a. Predictors: (Constant), Openness, Neuroticism, Conscientiousness, Extraversion, Agreeableness

As Table 1 illustrates, the coefficient of multiple correlations is displayed in the "*R*" column. *R* is the measure of the prediction of the dependent variable; in this case, ATT in ELT. A value of 0.46 denotes a good level of prediction. The *"R Square*" or R^2 value is the variance proportion in ATT in ELT, which could be explained by the independent variables (i.e., personality types). It suggests that ATT in ELT can explain 21% of the variability of personality types.

In order to understand whether the rendered model (personality types as independent variables and ATT as dependent variable) is a good fit for the data, a one-way ANOVA was performed. The results are presented in Table 2.

Table 2: ANOVA of regression model

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	851.794	5	170.359	4.651	.001[b]
	Residual	3149.891	86	36.627		
	Total	4001.685	91			

a. Dependent Variable: Attitude Toward Technology in ELT

b. Predictors: (Constant), Openness, Neuroticism, Conscientiousness, Extraversion, Agreeableness

The *F* value in Table 2 denotes the fitness of the overall regression model for the data. The result explicated that (F= 4.65, $p < 0.05$) *p-value* is lower than the assumed level of significance (i.e., 0.05); accordingly, the personality types can significantly predict ATT in ELT (i.e., the regression model is fit for the data). Thus, the research question of the study is verified.

Table 3 presents information regarding the model coefficients. The general form of the model is to predict ATT in ELT from personality types.

Table 3: Coefficients of the model

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.194	5.502		-.035	.972
	Extraversion	.103	.183	.068	.565	.574
	Agreeableness	.296	.157	.239	1.881	.063
	Conscientiousness	.435	.163	.322	2.675	.009
	Neuroticism	.207	.090	.259	2.313	.023
	Openness	.004	.160	.003	.023	.982

a. Dependent Variable: Attitude Toward Technology in ELT

When the second independent variable is constant, the unstandardized coefficients in Table 3 show how much EFL teachers' personality types differ with their ATT in ELT. As seen in the Table, the teachers' conscientiousness ($b = 0.32$, $t = 2.67$, $p < 0.05$) is the most significant predictor of their ATT in ELT.

In order to find the relationship between different personality types and English language teachers' ATT, a series of Pearson correlations was conducted. The results are shown in the following tables.

Table 4: Correlations between attitude toward technology and extraversion

		Attitude Toward Technology	Extraversion
Attitude Toward Technology in ELT	Pearson Correlation	1	.239*
	Sig. (2-tailed)		.022
	N	92	92
Extraversion	Pearson Correlation	.239*	1
	Sig. (2-tailed)	.022	
	N	92	92

Note. * indicates that correlation is significant at the 0.05 level (2-tailed).

The results in Table 4 indicated a significant relationship ($r = 0.23$, $p < 0.05$) between EFL teachers' extraversion and their ATT in ELT. The Table shows a positive correlation between these factors (i.e., the more extrovert, the more positive ATT). Conversely, the more introverted the teachers, the less positive their ATT.

Table 5: Correlations between Attitude Toward Technology and Agreeableness

		Attitude Toward Technology	Agreeableness
Attitude Toward Technology in EL**T**	Pearson Correlation	1	.264*
	Sig. (2-tailed)		.011
	N	92	92
Agreeableness	Pearson Correlation	.264*	1
	Sig. (2-tailed)	.011	
	N	92	92

*. Correlation is significant at the 0.05 level (2-tailed).

The results above delineate a significant relationship ($r = 0.26$, $p < 0.05$) between EFL teachers' agreeableness and ATT. This relationship is positive: The more agreeable, the more positive ATT. In contrast, the more self-center, the less positive ATT.

Table 6: Correlations between Attitude Toward Technology and Conscientiousness

		Attitude Toward Technology	Conscientiousness
Attitude Toward Technology in ELT	Pearson Correlation	1	0.387**
	Sig. (2-tailed)		0.000
	N	92	92
Conscientiousness	Pearson Correlation	0.387**	1
	Sig. (2-tailed)	0.000	
	N	92	92

Note. **indicates that correlation is significant at the 0.01 level (2-tailed).

The statistics in the above table show a significant positive relationship ($r = 0.38$, $p < 0.05$) between EFL teachers' conscientiousness and ATT in ELT. It could imply that when we have a high level of conscientiousness, we should expect a more positive ATT. On the other hand, a teacher with a high level of emotional stability will be expected to have a less positive ATT.

Table 7: Correlations between Attitude Toward Technology and Neuroticism

		Attitude Toward Technology	Neuroticism
Attitude Toward Technology in ELT	Pearson Correlation	1	0.032
	Sig. (2-tailed)		0.760
	N	92	92
Neuroticism	Pearson Correlation	0.032	1
	Sig. (2-tailed)	0.760	
	N	92	92

Regarding the relationship between Neuroticism and ATT, the results illustrated that there is not any significant relationship ($r = 0.03$, $p > 0.05$) between these two factors.

Table 8. Correlations between Attitude Toward Technology and Openness

		Attitude Toward Technology	Openness
Attitude Toward Technology in ELT	Pearson Correlation	1	0.234*
	Sig. (2-tailed)		0.025
	N	92	92
Openness	Pearson Correlation	0.234*	1
	Sig. (2-tailed)	0.025	
	N	92	92

*. Correlation is significant at the 0.05 level (2-tailed).

Finally, as it can be seen in Table 7, the results show a significant positive relationship ($r = 0.23$, $p < 0.05$) between EFL teachers' openness and their ATT in ELT. This means the more open to new experiences, the more positive ATT, and on the other side, the closer to experience new things, the less favorable ATT.

An overall summary of the data and statistics is presented in the following Table to give a more vivid perspective on the mentioned issues.

Table 9. Correlations between Attitude Toward Technology and Big five personality traits

		Attitude Toward Technology	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Attitude Toward Technology in ELT	Pearson Correlation	1	.239*	.264*	.387**	.032	.234*
	Sig. (2-tailed)		.022	.011	.000	.760	.025
	N	92	92	92	92	92	92
Extraversion	Pearson Correlation	.239*	1	.251*	.501**	-.200	.521**
	Sig. (2-tailed)	.022		.016	.000	.056	.000
	N	92	92	92	92	92	92
Agreeableness	Pearson Correlation	.264*	.251*	1	.429**	-.510**	.524**
	Sig. (2-tailed)	.011	.016		.000	.000	.000
	N	92	92	92	92	92	92
Conscientiousness	Pearson Correlation	.387**	.501**	.429**	1	-.280**	.483**
	Sig. (2-tailed)	.000	.000	.000		.007	.000
	N	92	92	92	92	92	92
Neuroticism	Pearson Correlation	.032	-.200	-.510**	-.280**	1	-.330**
	Sig. (2-tailed)	.760	.056	.000	.007		.001
	N	92	92	92	92	92	92
Openness	Pearson Correlation	.234*	.521**	.524**	.483**	-.330**	1
	Sig. (2-tailed)	.025	.000	.000	.000	.001	
	N	92	92	92	92	92	92

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

In sum, the results show that personality types can predict ATT. Based on the findings, although the relationship between *Neuroticism* and ATT is not significant, however there is a significant positive relationship between *extraversion, agreeableness, conscientiousness*, and *openness to experience*.

DISCUSSION

Covid-19 pandemic has posed challenges for teachers worldwide. One possible way to continue education under Covid and similar circumstances is employing technology and computers to hold remote online classes. A crucial factor in technology employment is teachers' attitudes toward it. Given that different personalities might possess various perspectives toward technology, the present study attempted to shed light on the relationship between English teachers' personality traits and their ATT. After analyzing the data, the personality types were shown to be able to predict ATT in ELT. Additionally, it was revealed that there is a significant relationship between personality factors and ATT among English language teachers, which is in line with the findings of McElroy et al. (2007) and Svendsen et al. (2013). Our study's results indicated a significant positive relationship between *extraversion, agreeableness, conscientiousness*, and *openness to experience* on one side and *ATT* on the other side; However, *Neuroticism* was reported not to be significantly related to *ATT*.

Based on these results, *Extraversion* can be a trait that predicts English language teachers' ATT. It could be claimed that extrovert English teachers would possibly hold positive ATT employment in their classes. Conversely, introverted teachers would probably be disinclined to employ technology in their classes. Given that individuals high in openness to experience are eager to try different new things, they may be familiar with various technologies (Terzis et al., 2012); that is to say, they consider technology easier to employ. The findings verified other studies demonstrating that extraversion is positively related to technology acceptance (Chua & Chua, 2017; Ross et al.,

2009; Ryan & Xenos, 2011; Sindermann et al., 2020). It could be explained by McCrae and Costa's (1999) model, in which extroverts seek social interactions with other people. In the present study, extroverted teachers seek to keep in touch with students through technology and computers. This is what Socio-Cultural Theory (Vygotsky, 1987) argues for; extroverts attempt to find a mediation to feed their social nature of themselves. While extroverts are more open to fostering innovation and technology to expand their social status, reserved introverts are consequently disinclined to find a way to interact with others (Costa & McCrae, 1992).

This study further illustrates a significant positive relationship between ATT and *agreeableness*. In this sense, an agreeable EFL teacher would likely welcome technology in their classes; on the contrary, a teacher with a high level of hostility may resist using technology in the classes. This is in line with Keeton's (2008) findings, which show that the more agreeable individuals are, the more technology they embrace; and it contrasts other findings (Correa et al., 2010; Ross et al., 2009), which suggest that agreeableness is unrelated to the usage of the Internet and social media. Other research has highlighted that individuals high in agreeableness pay considerable attention to the positive aspects of technology, which could improve their attitudes toward its employment (Devaraj et al., 2008; Zhou & Lu, 2011). According to Costa and McCrae (1992), agreeable people have a cooperative and pleasant spirit and are receptive to the views of others, and since technology empowers them to involve in interpersonal activities and teamwork, they are expected to have positive ATT.

In the same vein, *conscientiousness* was reported to have a positive relationship with ATT in ELT. This is in contrast with the findings of Ryan and Xenos (2011) and Wilson et al. (2010), who found a negative relationship between this trait and ATT (Facebook in their case). Given that people with a high level of conscientiousness are organized and determined in pursuing their goals, they are expected to avoid using technology because it can lead to distraction and procrastination from the issues that they consider important (Butt & Phillips, 2008). Additionally, organized and careful individuals are

more likely to carefully ponder the advantages of a given technology prior to agreeing on its employment (Zhou & Lu, 2011). Accordingly, teachers who have a high level of conscientiousness are estimated to possess a negative ATT. Nevertheless, this study showed that a positive correlation between conscientiousness and ATT. The root of this discrepancy is unclear, so prospective researchers are invited to have a further exploration of this aspect.

Moreover, *openness to experience* was positively related to EFL teachers' ATT. Based on the results and in congruence with the previous research (e.g., Butt & Phillips, 2008; Keeton, 2008; Correa et al., 2010; Amichai-Hamburger & Vinitzky, 2010; Svendsen et al., 2013), teachers with a high openness feel positive about technology. According to Goldberg (1993) and Costa and McCrae (1992), people who have this quality—openness to experience—are more likely to try new things and thus are innovative and curious to engage in activities that align with new experiences. Accordingly, teachers who are open to change are expected to use technology, which is a type of innovation, in their teaching process. On the contrary, those close to experience are not eager to embrace technology as a new phenomenon.

Regarding the relationship between *Neuroticism* and ATT, the results illustrated no significant relationship between these two factors. This result supports the findings of Chua and Chua (2017), who found no relationship between this trait and attitude toward Facebook. As mentioned in the literature, neurotics are characterized by irritability, social anxiety, helplessness, depression, fear, moodiness, lack of self-esteem, and poor inhibitory control of impulses (Costa & McCrae, 1987). Individuals high in neuroticism experience stressful moments when dealing with new technology, and, thus, they are less likely to hold favorable attitudes toward this acceptance (Devaraj et al., 2008), that is a negative correlation. However, since these people are moody and their mood changes from time to time, finding a fixed pattern for predicting their attitudes is difficult. Hence, it is

suggested that future research examine this trait with a larger sample size to find out if there is a relationship between *Neuroticism* and *ATT*.

CONCLUSION AND IMPLICATIONS

The findings of this study highlighted whether ATT is a type of social event or is more associated with people's characteristics. These findings provide new insights into how English teachers with different personality types welcome technology in their classes, which offers implications for CALL's stakeholders to choose their prospective teachers with open eyes. When recruiting new teachers to use technology in CALL classes, it is recommended that personality types get considered. One of the limitations of this study is related to the sample size. Because the participants' average age was not particularly high, generalizing the findings to older teachers should be exercised with caution. Future research could shed further light on the relationship between personality type and technology use by investigating English instructors' actual use of technology in their classes and how that relates to their personality types.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix A

My Feeling about Technology

1. Technology makes my professional work more difficult.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

2. Using computers for learning takes learners away from important instructional time.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

3. Computers should be as important and available to students as pencils and books.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

4. I am confident using technology as a learning resource.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

5. I feel out of place when confronted with technology.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

6. I do not believe the quality of English education is improved by the use of technology.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

7. I am concerned that technology might interfere with student interactions.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

8. There is no enough time to incorporate technology into the subjects I teach.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

9. I really enjoy using computers and the internet instructionally.
   1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

10. Students should be able to use computers to help them solve problems in English.
    1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

11. Students can use computers and technology to help make informed decisions.
    1. Extremely agree 2. Agree 3. Uncertain 4. Disagree 5.Extremely disagree

Appendix B
The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly 1
Disagree a little 2
Neither agree nor disagree 3
Agree a little 4
Agree strongly 5

I see myself as someone who...

____1. Is talkative
____2. Tends to find fault with others
____3. Does a thorough job
____4. Is depressed, blue
____5. Is original, comes up with new ideas
____6. Is reserved
____7. Is helpful and unselfish with others
____8. Can be somewhat careless
____9. Is relaxed, handles stress well
____10. Is curious about many different things
____11. Is full of energy
____12. Starts quarrels with others
____13. Is a reliable worker
____14. Can be tense
____15. Is ingenious, a deep thinker
____16. Generates a lot of enthusiasm
____17. Has a forgiving nature
____18. Tends to be disorganized
____19. Worries a lot
____20. Has an active imagination
____21. Tends to be quiet
____22. Is generally trusting
____23. Tends to be lazy
____24. Is emotionally stable, not easily upset
____25. Is inventive
____26. Has an assertive personality
____27. Can be cold and aloof
____28. Perseveres until the task is finished
____29. Can be moody
____30. Values artistic, aesthetic experiences
____31. Is sometimes shy, inhibited
____32. Is considerate and kind to almost everyone
____33. Does things efficiently
____34. Remains calm in tense situations
____35. Prefers work that is routine
____36. Is outgoing, sociable

____37. Is sometimes rude to others
____38. Makes plans and follows through with them
____39. Gets nervous easily
____40. Likes to reflect, play with ideas
____41. Has few artistic interests
____42. Likes to cooperate with others
____43. Is easily distracted
____44. Is sophisticated in art, music, or literature

Scoring:

BFI scale scoring ("R" denotes reverse-scored items):
Extraversion:
1, 6R, 11, 16, 21R, 26, 31R, 36
Agreeableness:
2R, 7, 12R, 17, 22, 27R, 32, 37R, 42
Conscientiousness:
3, 8R, 13, 18R, 23R, 28, 33, 38, 43R
Neuroticism:
4, 9R, 14, 19, 24R, 29, 34R, 39
Openness:
5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44