

# Teacher communication and learner willingness to communicate in English as a foreign language: a structural equation modeling approach

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## Abstract

**Purpose** – This study aims to propose and test a model that examines the potential connections between two teacher situational variables (teacher immediacy and credibility) and three learner affective factors (motivation, attitudes and communication confidence) and to examine how such associations predict learners' L2WTC (Foreign/second language willingness to communicate) in a language class via a comprehensive communication model to structurally verify the theoretically based associations among these variables.

**Design/methodology/approach** – In total, 214 females and 198 males took part in the study with age range between 19 and 38 years. Participants filled in a verified, translated Arabic version of the questionnaires using an online questionnaire. Data were gathered using questionnaires and were analyzed using descriptive statistics, confirmatory factor analysis, path analysis and sequential mediation analysis using bootstrapping methods to identify and verify direct and indirect paths in the model.

**Findings** – The initial L2 communication structural model showed acceptable goodness of model fit. Teacher credibility and immediacy behaviors only indirectly predicted L2WTC through the mediation of affective variables. Motivation and communication confidence mediated the relationship between credibility and L2WTC, while the association between immediacy and L2WTC was mediated by communication confidence.

**Originality/value** – The findings of this study have important pedagogical implications globally for professions related to communication instruction, especially with regard to teacher credibility behaviors and particularly for practitioners and beneficiaries in EFL contexts where learners are widely acknowledged for their unwillingness to communicate in foreign language classes.

**Keywords** Willingness to communicate, Communication confidence, Immediacy, Credibility, Motivation

**Paper type** Research paper

## 1. Introduction

A vast body of research in the field of second/foreign languages emphasized that fostering a learner willingness to communicate in another language is one of the most ultimate goals of English as a foreign language (EFL) teaching and learning process (Khajavy *et al.*, 2018; MacIntyre *et al.*, 1998). Past research has also acknowledged that learner willingness to communicate in English (L2WTC (Foreign/second language willingness to communicate)) is closely linked with the language teacher interpersonal behaviors of immediacy (Fallah, 2014; Hsu, 2010; Sheybani, 2019; Tormey, 2021; Yu, 2009; Zheng, 2021) and credibility (Lee, 2020; Myers, 2004). In addition, the influence of such behaviors on language learner affective factors is well documented, in that teacher immediacy has been found to be positively



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associated with learner motivation, attitudes and confidence (Christophel, 1990; Gregersen, 2005; Henning, 2012; Hsu, 2010); similarly, teacher credibility is also positively linked to these learner affective variables (Tibbles *et al.*, 2008; Zheng, 2021). While the predictive effect of teacher immediacy has been tested in previous models of L2WTC (Fallah, 2014; Sheybani, 2019), the role of teacher credibility in learner L2WTC has not been given due consideration to date. Additionally, the collective impact of teacher interpersonal behaviors and learner affective factors has not been sufficiently investigated via a comprehensive model following structural equation modeling approaches. For this reason, this study aims to propose and test a model that examines the potential connections between two teacher situational variables (teacher immediacy and credibility) and three learner affective factors (motivation, attitudes and communication confidence) and to examine how such associations predict learners' L2WTC in a language class via a comprehensive communication model to structurally verify the theoretically based associations among these variables. The study's findings are anticipated to unveil the complex interrelationships between teacher communication behaviors and learner affect as well as the collective predictive power of these variables in predicting EFL learners' L2WTC and to add to the growing research on L2WTC in EFL contexts (Fallah, 2014; MacIntyre and Charos, 1996; Öz *et al.*, 2015; Yashima, 2002; Yu, 2009).

## 2. Literature review

### 2.1 Foreign/second language willingness to communicate (L2WTC)

Maftoon and Amiri (2011) referred to the global concept of WTC as the degree to which students are determined to initiate communication when they have a choice. On the other hand, the learner WTC in an L2 has been conceptualized by MacIntyre *et al.* (1998) as "a readiness to enter into discourse at a particular time with a specific person or persons, using a L2" (p. 547).

Past research has acknowledged WTC as a very important determinant of L2 use and success (Clément *et al.*, 2003; Öz *et al.*, 2015). In this respect, Yashima *et al.* (2018) argued that WTC helps to form a global picture of how psychological variables interrelate and affect the learners' stable tendency to communicate in an L2. Research in second language acquisition (MacIntyre, 2020; Öz *et al.*, 2015; Pawlak *et al.*, 2016) indicates that there are many factors that determine the learner willingness or unwillingness to communicate in L2. These factors range from trait-like individual factors (motivation and communication competence), as established by Yashima (2002) and Peng and Woodrow (2010), to situation-specific contextual factors such as teacher behaviors like immediacy and credibility (Lee, 2020; Zheng, 2021), as well as dynamic and situated perspectives like the shared influences of both personal and contextual factors (Dewaele, 2019), in addition to other wide range of cultural, political, social, identity, motivational, emotional, pedagogical issues (MacIntyre, 2020).

The link between WTC and L2 education was initially established in the 1990s (Lee, 2019). This concept was introduced to the L2 context by MacIntyre and Charos (1996), and was then heavily investigated worldwide starting from the West (Clément *et al.*, 2003) to China (Peng, 2007; Peng and Woodrow, 2010; Yu, 2009), Japan (Hashimoto, 2002; Yashima, 2002), Turkey (Bektas-Cetinkaya, 2009; Öz *et al.*, 2015) and Iran (Fallah, 2014; Ghonsooly *et al.*, 2012; Khajavy *et al.*, 2016; Riasati, 2018; Sheybani, 2019). These investigations aimed chiefly at constructing structural models of L2WTC that disclose the interrelationships among learners' L2WTC and the other related factors. According to Dewaele (2019), MacIntyre's *et al.* (1998) multilayered pyramid model of WTC constitutes the theoretical basis of recent work on WTC. The many interrelated factors represented in this model, such as learner personality, intergroup climate, intergroup attitudes, intergroup motivation, L2 self-confidence and communicative competence, were found to influence L2WTC and L2 use; the thing that thoroughly demonstrates the complexity and dynamic nature of the L2WTC concept.

In Yashima's (2002) model of L2WTC, which attempted to combine MacIntyre and Charos' (1996) WTC model with Gardner's (1985) socio-educational model to examine the relations among variables underlying L2WTC and L2 affective factors, motivation indirectly affected L2WTC through self-confidence in L2 communication. In addition, international posture (i.e. willingness to go overseas to live or work, readiness to interact with intercultural partners or a non-ethnocentric attitude toward different cultures) directly influenced WTC in L2.

Fallah's (2014) hypothesized model of L2WTC revealed significant positive paths from motivation and communication self-confidence to L2WTC, from teacher immediacy to motivation and from motivation to self-confidence. In this model, negative paths from shyness to self-confidence and motivation and from immediacy to shyness were detected. It was shown in the model that shyness and teacher immediacy indirectly affect L2WTC through the mediation of self-confidence and motivation. In a similar recent study, Sheybani (2019) found that EFL learners' WTC was positively and significantly predicted by teachers' verbal and nonverbal immediacy. In the same context, in the L2WTC model of Khajavy *et al.* (2016), communication confidence directly affected WTC, and the classroom environment directly affected attitudes, motivation and communication confidence; in addition, motivation and English language proficiency indirectly affected WTC through communication confidence. This study built on a study by Peng and Woodrow (2010), who identified classroom environment as a pervasive predictor, directly predicting WTC, communication confidence, learner beliefs, and motivation; in addition, learner beliefs directly influenced motivation and confidence, while motivation influenced WTC indirectly through confidence. In the WTC model of Öz and his associates (2015), communication competence and communication apprehension were strong predictors of WTC, while motivational factors only indirectly influenced WTC.

## 2.2 Teacher immediacy

Teacher immediacy has been conceptualized by Christophel and Gorham (1995) as "nonverbal and verbal behaviors, which reduce psychological and/or physical distance between teachers and students" (p. 292). According to Menzel and Carrell (1999), verbal immediacy refers to linguistic acts that show empathy, openness, kindness, praise, inclusiveness and willingness to engage students in communicative situations by using personal examples, asking for different viewpoints, addressing students by name and so on. By contrast, nonverbal teacher immediacy refers to behaviors of physical and emotional closeness that, according to Richmond and McCroskey (2000), increase students' positive affect toward the language teacher and the language course alike. It includes maintaining eye contact, gesturing while lecturing, using varied intonation while speaking, standing close to students, maintaining a relaxed and open body position, moving around the classroom and smiling at students.

Past research (Gorham, 1988; Pogue and Ahyun, 2006) has shown that teacher verbal and nonverbal immediacy behaviors improve teacher–student relationships; lead to positive, effective interpersonal interaction, which has direct effects on the students' willingness to learn (Fallah, 2014; Hsu, 2005); generate more positive attitudes on the part of learners toward the teacher and the course (Gregersen, 2005; Henning, 2012); and enhance student motivation (Christophel, 1990; Hsu, 2010; Tormey, 2021; Zheng, 2021).

A strong association between teacher immediacy and learner L2WTC has been emphasized by earlier studies. For example, in Yu's (2009) model, teacher immediacy exerted a significant direct effect on communication apprehension and self-perceived communication competence and indirectly affected learner L2WTC through the mediation of these two constructs. In addition, Gol *et al.* (2014) found a positive relationship between both verbal and nonverbal teacher immediacy behaviors and EFL learners' WTC in EFL classes. Furthermore, Sheybani (2019) found that learners' WTC was positively and significantly predicted by teacher verbal and nonverbal immediacy.

### 2.3 Teacher credibility

According to Myers and Martin (2018), teacher credibility is “a perception that students make about the believability of any instruction” and “an impression that all instructors must manage in order to achieve beneficial and relevant outcomes not only for themselves but also for their learners” (p. 39). Earlier studies have pointed to the close relationship between teacher credibility and students’ perception of different aspects of their learning. For example, when students perceive their teachers as credible, they demonstrate greater motivation to learn (Tibbles *et al.*, 2008; Zheng, 2021), enhanced communication confidence (Myers, 2004), better attitudes toward their teacher and course (Martinez-Egger and Powers, 2007), improved learning outcomes (Teven, 2001; Tibbles *et al.*, 2008) and more willingness to communicate in the L2 (Lee, 2020; Myers, 2004).

The three-dimensional model developed by McCroskey and Teven (1999) is the most widely accepted model of teacher credibility. This construct comprises three sub-components: *competence* (students’ perception of their instructors as experts in the L2), *caring* or “goodwill” (the extent to which instructors show concern for students’ welfare) and *trustworthiness* (the value for goodness or integrity associated with the language instructor).

### 2.4 Learner motivation

Ellis (1994, 509) claims that L2 motivation refers to “the effort that learners put into learning the L2 as a result of their need or desire to learn it.” A significant body of L2 research (Bektas-Cetinkaya, 2009; Dörnyei and Ryan, 2015; Ghonsooly *et al.*, 2012; Hashimoto, 2002; Kruk, 2019; Peng and Woodrow, 2010; Yashima, 2002, 2020; Yashima *et al.*, 2018) has emphasized that motivation is a significant predictor of various EFL learning variables, such as perceived communication competence and L2 proficiency, which in turn affects L2WTC. State motivation, which has been described by Dörnyei (2002) as a more specific or temporary learner motivation, is the type of motivation that has been found to be strongly correlated with teacher immediacy and credibility behaviors (Christophel, 1990; Pogue and Ahyun, 2006).

In light of Gardner’s (1985) theory, motivation for learning a second language is conceived in terms of the desire to learn the target language, positive attitudes toward the target language and its community, and the amount of effort individuals put into learning a language. In a direct development of Gardner’s theory of integrative motivation, Dörnyei’s (2005) L2 motivational self system theory is another highly influential L2 motivation model that has been examined in relation to learner L2WTC. This model comprises three components: the “ideal L2 self” (the within-individual aspirations that characterize the learner’s perfect future self-image), the “ought-to L2 self” (the attributes that others, such as family or friends, believe the learner ought to have)” (Moskovsky *et al.*, 2016) and “the L2 learning experience” (situation-specific motives pertaining to the learning environment and experience [e.g. the teacher, textbook, teaching methodology, classroom environment, learner group dynamics]) (Dörnyei and Chan, 2013). Of the three components, previous L2 motivation studies (Öz, 2016; Rajabpour *et al.*, 2015; Shen *et al.*, 2020; Teimouri, 2017) have shown that ideal L2 self is strongly associated with WTC.

### 2.5 Learner attitudes

Gardner’s (1985) influential socio-educational model elaborated earlier involves two separate attitudinal components that are regarded as the key antecedents of motivation: integrativeness (including attitudes toward the target language, interest in foreign languages and integrative orientation) and attitudes toward the learning situation (including teacher and course evaluations). According to Dörnyei (2005) and Hashimoto (2002), attitudes toward the learning situation refer to the language learners’ evaluation of the language teacher, the course and the curriculum. Hashimoto (2002) observes that attitude

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toward learning a language strongly influences learner perceived L2 competence and WTC in formal situations.

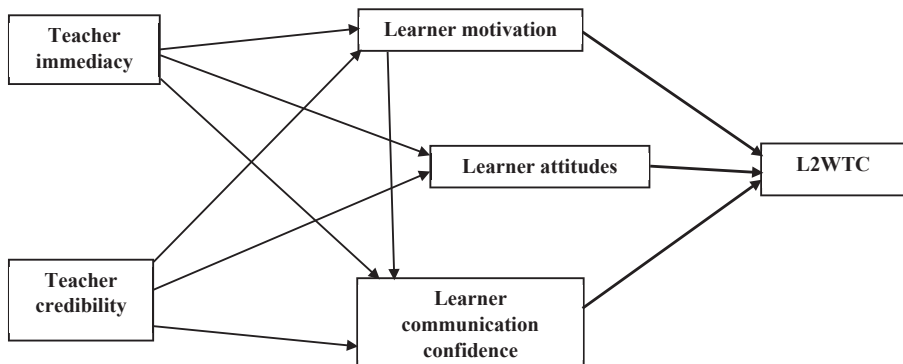
### 2.6 Communication confidence

According to [Barracough et al. \(1988\)](#), communication anxiety (CA) is “an individual’s level of fear or anxiety associated with real or anticipated communication with another person or persons” (p. 188). Research on CA in second language acquisition ([Dörnyei, 2005](#); [MacIntyre and Charos, 1996](#); [Kruk, 2019](#)) has shown that people with high levels of CA often avoid or withdraw from communication in an L2, and that CA has also been found to be negatively correlated with language achievement ([MacIntyre and Charos, 1996](#); [McCroskey and McCroskey, 2002](#)). CA and its contrary concept, “perceived communication competence,” which, according to [McCroskey and Richmond \(1990\)](#), refers to the belief that one can communicate effectively in a given situation, are two composite variables of communication confidence, which has been found to be one of the strongest direct predictors of L2WTC ([Baker and MacIntyre, 2000](#); [Peng and Woodrow, 2010](#)).

Earlier research has acknowledged the strong link between communication confidence and L2WTC ([Lee and Dražati, 2019](#); [Lee and Hsieh, 2019](#); [Lee and Lee, 2020](#)). In the study by [Peng and Woodrow \(2010\)](#), communication confidence was a direct predictor of WTC. In addition, the findings of the study of [Shirvan et al. \(2019\)](#) revealed a moderate association between learners’ L2WTC and their perceived communicative competence, language anxiety and motivation, with the highest correlation with learner perceived communicative competence. Additionally, [Aoyama and Takahashi \(2020\)](#) found that students’ L2 communication confidence strongly correlated with L2WTC, and that this variable mediated the relationship between learners’ L2WTC and their integrative motivation.

*2.6.1 Conceptual model.* The initial hypothesized model in this study was developed by integrating five observed constructs (teacher immediacy, credibility, learner motivation, attitudes and communication confidence) and their latent variables to define learner L2WTC. Model specifications were constructed based on the theoretical assumptions grounded in the field of language learning/teaching about the relations between the study variables as well as about the findings of L2WTC empirical past research. For example, teacher immediacy was speculated to be closely related to learner motivation ([Christophel, 1990](#); [Fallah, 2014](#); [Hsu, 2010](#); [Tormey, 2021](#); [Zheng, 2021](#)); motivation was anticipated to influence L2WTC directly based on empirical evidence ([Fallah, 2014](#); [Yashima, 2020](#)) and indirectly through the influence of learner communication confidence based on [MacIntyre et al.’s \(1998\)](#) pyramid model as well as on empirical investigations ([Bektas-Cetinkaya, 2009](#); [Fallah, 2014](#); [Ghonsooly et al., 2012](#); [Hashimoto, 2002](#); [Peng and Woodrow, 2010](#); [Yashima, 2002](#)), which, in turn, in light of the L2WTC theory ([MacIntyre et al., 1998](#)) and previous empirical studies ([Ghonsooly et al., 2012](#); [Lee and Dražati, 2019](#); [Lee and Lee, 2020](#); [Peng and Woodrow, 2010](#); [Shirvan, et., al, 2019](#); [Yashima, 2002](#)) was proposed to exert direct influence on learner L2WTC. Accordingly, in conceptualizing the model, direct positive paths from teacher immediacy to learner motivation, from motivation to L2WTC and from motivation to communication confidence leading to L2WTC were anticipated. Meanwhile, a direct positive path from teacher credibility to learner motivation leading to L2WTC was hypothesized based on theoretical and correlational assumptions ([Lee, 2020](#); [Tibbles et al., 2008](#)); significant direct positive paths from teacher immediacy to learner attitude toward learning situation and learner communication confidence were also drawn based on theoretical conclusions and empirical evidence ([Fallah, 2014](#); [Gregersen, 2005](#); [Henning, 2012](#); [Yu, 2009](#)). In light of past research findings ([Martinez-Egger and Powers, 2007](#)), a similar path was also constructed from teacher credibility to L2WTC through learner attitudes, and another path through learner communication confidence was uniquely tested in the present study. The complete hypothesized paths among these variables are depicted in [Figure 1](#).

**Figure 1.**  
The hypothesized L2  
communication model  
in the EFL



### 3. Research methodology

#### 3.1 Participants and procedures

Participants in this study were undergraduate Saudi students enrolled in four Saudi universities and were learning English courses that are similar across the different institutions. In total, 214 females and 198 males took part in the study, with age range between 19 and 38 years (mean = 23.02, SD = 5.11). Besides, the sample of participants recruited in this study represented a wide range of educational and regional backgrounds and proficiency levels and could be thus considered as appropriately representative of EFL learners in the study context.

Consent was granted from each participant before commencing to the data collection, which took place in October 2020. Participants filled in a verified, translated Arabic version of the questionnaires using an online questionnaire. The translation was done by the researcher and verified by two Arabic-speaking professors who are fluent in English. The first page of the questionnaire contained detailed information about the goals of the research, its methodology, expected outcomes and the mechanism participants could follow to respond to the questionnaire items. In this page, potential participants were thoroughly assured that their participation is completely voluntary, and that they can quit participation at any time without any penalty. They were also informed that their responses are very confidential and will be used solely for the purposes of this research and will not be disclosed to any person other than the researcher(s) under any circumstance. Those students who were not willing to participate were provided with a link to exit the survey, while the willing ones were asked to move on to the next page to start responding to the items of the questionnaire.

#### 3.2 Instrumentation

This study utilized a questionnaire survey for data gathering (see online supplementary material). This measurement comprised six sections, as follows:

**3.2.1 Measurement of teacher immediacy.** The first section attempted to measure learners' perceptions of their instructors' immediacy as a composite variable of two subscales (verbal and nonverbal immediacy). Teacher verbal immediacy was assessed using 15 items selected from [Gorham's \(1988\)](#) 20-item verbal immediacy scale. These items were selected since they were mostly relevant to the target learning context and population. Teacher nonverbal immediacy was assessed using a ten-item scale that was adapted and slightly modified from the nonverbal immediacy scale developed by [McCroskey et al. \(1996\)](#). To respond to the items in this section, the participants were asked to mark the extent to which their instructors showed each immediacy behavior on a five-point scale from 1 (never) to 5 (almost always).



**3.2.2 Measurement of teacher credibility.** To operationalize the participants' perception of their instructors' credibility, a 15-item scale of credibility (originally adopted from McCroskey and Teven, 1999) was used. Teacher credibility was measured by composing three sub-components (competence, caring and trustworthiness). Items in this measure were rated on a five-point semantic differential scale. To make the items fully applicable to the study participants, the wording of some items was modified and contextualized.

**3.2.3 Measurement of learner willingness to communicate in English.** Learner L2WTC in this study was assessed using the WTC scale for EFL classes that was utilized in different EFL contexts (Khajavy *et al.*, 2016; Peng and Woodrow, 2010; Weaver, 2005). On this scale, the concept of learner L2WTC is assessed using ten items based on a five-point Likert-type scale from 1 (definitely not willing) to 5 (definitely willing).

**3.2.4 Measurement of communication confidence.** To assess learners' communication confidence in an L2, two components were measured. Sixteen items were extracted from the Foreign Language Classroom Anxiety Scale, developed by Horwitz (1986), to measure learner CA in various classroom situations on a five-point Likert scale, ranked from 1 (completely disagree) to 5 (completely agree). Four out of the six items used by Peng and Woodrow (2010) to assess learner perceived communication competence were deemed reliable in this study and were used accordingly. These items were originally extracted from the WTC scale and rephrased to measure learner perceived communication competence (Appendix). According to Peng and Woodrow (2010), using WTC as templates for measuring perceived competence is common practice in L2 WTC research, as established in earlier studies such as those by MacIntyre and Charos (1996) and Yashima (2002). The CA items were reverse coded and combined with perceived communicative competence items to create a communication confidence composite scale.

**3.2.5 Measurement of learner motivation.** An 18-item scale with two components (state motivation and motivational intensity) was utilized to assess participating students' motivation. Twelve items were selected from Christophel's (1990) Student State Motivation five-point semantic differential scale and six items from Yashima's (2002) five-point scale of motivational intensity.

**3.2.6 Measurement of learner attitude toward learning situation.** Attitudes toward EFL learning situations were measured by two separate scales, respectively, related to attitudes toward the language teacher and toward the language course. Items in these scales were adopted from Tremblay and Gardner (1995), Gardner *et al.* (1997) and Alrabai (2016) and were rated on a five-point Likert scale from 1 (completely disagree) to 5 (completely agree).

#### 4. Data analysis and results

Data were screened for missing data, outliers, reliability and normality. The results of the preliminary descriptive analyses showed that no missing cases or outliers were detected. In addition, all constructs demonstrated acceptable reliability scores, and all the skewness and kurtosis values were within the range of  $-1$  to  $+1$  (Table 1).

As a prerequisite for subsequent analyses, we ran a correlation analysis to unveil the interrelationships among the study variables. As can be seen in Table 2, all variables correlated to each other ( $p < 0.01$ ).

The validity of the structural model was assessed by conducting confirmatory factor analysis (CFA), a prerequisite for structural equation modeling (SEM) analysis. According to Alamer and Lee (2019), CFA is an advanced statistical technique that uses correlations as input to build a structural model to establish structural relationships between latent constructs and their underlying observed variables. The quality of the measurement and structural models were assessed using the chi-squared ( $\chi^2$ ), normed  $\chi^2$  ( $\chi^2/\text{df}$ ) statistics and several model fit indices that are used in CFA and SEM alike (Hair *et al.*, 2010) such as

goodness of fit index (GFI), comparative fit index (CFI), normed fit index (NFI), root-mean-square error approximation (RMSEA) and standardized root-mean-square residual (SRMR). It is suggested that a normed  $\chi^2$  smaller than 2 is considered a good fit (Tabachnick and Fidell (2007), and that a value greater than 0.90 for GFI, NFI and CFI is considered acceptable, and greater than 0.95 is considered good fit (Hair *et al.*, 2019), while, in contrast, RMSEA and SRMR values lower than 0.08 are recommended to be around 0.07 or preferably less to show a good model fit (Hair *et al.*, 2010). After the CFA, a path analysis was run to examine the interrelationship among teacher behaviors, learner affective variables and L2WTC in EFL. According to Fan *et al.* (2016), path analysis is a method of SEM analysis that aims to find a causal relationship among variables by mediation, i.e. by whether a variable directly and indirectly influences an outcome through another variable.

4.1 Models testing

As for the measurement models, the CFA results in this study showed substantial factor loadings from the subscales of each construct and indicated good model fit results. Due to space limits, the detailed CFA results are reported in the online supplementary material.

As for the structural model, the fit indices shown in Table 3 emphasize that the model shows a good fit to the data. Thus, the final model in this study supports the proposed interrelationships among teacher immediacy and credibility and learner communication confidence, motivation, attitude and WTC in the EFL classroom context. Effect size (ES) in the model was measured using path coefficient following Cohen *et al.*'s (2011) guidelines and interpreted as follows:  $\beta$  values in the range of 0–0.1 = small effect; 0.1–0.3 = modest effect; 0.3–0.5 = medium effect; and those that are >0.5 are indicative of large ES.

**Table 1.**  
Reliability and descriptive statistics for the study constructs

Construct	$\alpha$	<i>M</i>	SD
Teacher immediacy	0.84	3.11	0.72
Teacher credibility	0.96	3.72	0.93
Learner motivation	0.91	3.81	0.86
Learner attitude	0.87	3.77	0.41
Learner communication confidence	0.93	2.92	0.93
WTC	0.93	3.35	0.71

**Note(s):**  $\alpha$  = Cronbach alpha reliability score, *M* = mean, SD = standard deviation

**Table 2.**  
Correlation matrix of indicator variables (*n* = 412)

Variable	1	2	3	4	5	6
1. Teacher immediacy	1					
2. Teacher credibility	0.736**	1				
3. Learner motivation	0.337**	0.486**	1			
4. Learner attitude	0.957**	0.715**	0.341**	1		
5. Learner communication confidence	0.258**	0.219**	0.391**	0.276**	1	
6. WTC	0.359**	0.354**	0.416**	0.376**	0.385**	1

**Note(s):** \*\*Correlation is significant at the 0.01 level

**Table 3.**  
Goodness of fit indices for the final structural model

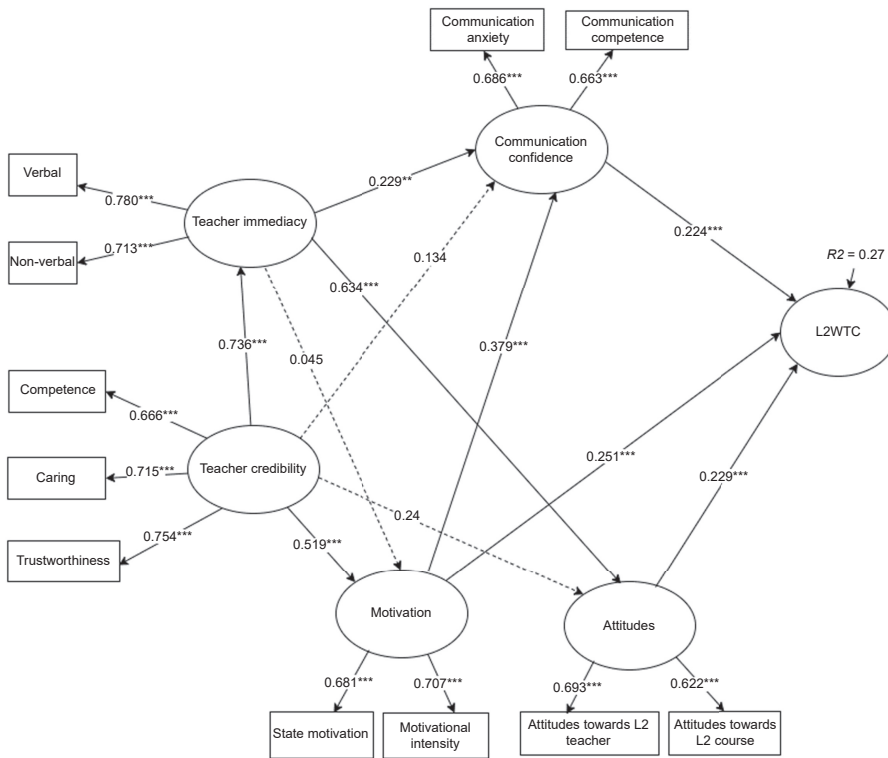
Model	$\chi^2$	<i>p</i>	df	$\chi^2/df$	GFI	AGFI	CFI	RMSEA
	4.65	0.200	3	1.55	0.99	0.96	0.99	0.04



The results of path analysis (Figure 2) show that the final model accounted for 27% of the variance of L2 WTC, 54% of the variance of teacher immediacy, 24% of the variance of learner motivation, 18% of the variance of communication confidence of English and 92% of the variance of learner attitudes. This shows that this model significantly and practically explains the variance of L2WTC, teacher immediacy, learner motivation, attitudes toward learning English and communication confidence, and it consequently conforms with the initial model hypothesized in this study (Figure 1).

The structural model shows no significant direct paths from teacher behaviors (immediacy and credibility) to learner L2WTC. However, teacher immediacy directly impacted learner attitudes toward learning situation ( $\beta = 0.634$ , large ES) and learner communication confidence ( $\beta = 0.229$ , modest ES). Teacher credibility, on the other hand, exerted a significant direct large effect on learner motivation ( $\beta = 0.519$ ) as well as on teacher immediacy ( $\beta = 0.736$ ).

In the L2 communication model, learner variables exerted significant direct (unmediated) modest effects on L2WTC: learner attitudes toward learning situation ( $\beta = 0.229$ ), motivation ( $\beta = 0.251$ ) and communication confidence ( $\beta = 0.224$ ). This means that learners' attitudes toward their L2 teachers and courses as well as their motivation to learn and confidence to communicate in their L2 directly affected their L2WTC. In addition, learner motivation had a significant direct effect on learner communication confidence ( $\beta = 0.379$ , medium ES), indicating that learners' motivation to learn the L2 directly moderately influences their communication confidence in L2.



Note(s): \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; paths with dotted lines are not significant

Figure 2. The final L2 structural communication model in EFL

According to Cheung and Lau (2008), who examined a variety of mediation testing approaches within an actual SEM framework, the best analysis for testing indirect effects in a SEM model seems to be bias-corrected bootstrapping. Consequently, indirect (mediated) effects in the L2 communication model in this study were calculated with bootstrapping analyses using the PROCESS macro for SPSS (V3.5) to examine a sequential mediation model for the relations among teacher and learner variables in learner L2WTC. We adopted the approach proposed by Preacher and Hayes (2008) and used in earlier research (Zhuang et al., 2018) to justify the sequential mediation hypotheses in three steps: (1) The independent variables (teacher credibility and immediacy) should significantly correlate with mediator variables (learner communication confidence, motivation and attitudes). (2) After controlling the effect of the independent variables, the correlation between mediator variables and the dependent variable (learner L2WTC) should be significant. (3) The indirect effect of the independent variable on the dependent variable should be significant. We estimated the indirect effects of teacher credibility (as an independent variable) on learner L2WTC (as a dependent variable) through four mediators (teacher immediacy, learner motivation, communication confidence and attitudes). As shown in Figure 1, the direct effect of teacher credibility on only two mediator variables: learner motivation ( $\beta = 0.519$ ,  $SE = 0.06$ ,  $t = 7.18$ ,  $p < 0.001$ ) and teacher immediacy ( $\beta = 0.736$ ,  $SE = 0.02$ ,  $t = 19.39$ ,  $p < 0.001$ ), was significant (Step 1). After controlling for the effect of the independent variable, at Step 2, the direct effect of motivation ( $\beta = 0.251$ ,  $SE = 0.05$ ,  $t = 4.03$ ,  $p < 0.001$ ) on the dependent variable (learner L2WTC) was significant. The direct effect of immediacy on L2WTC was, however, not significant ( $\beta = -0.0522$ ,  $SE = 0.17$ ,  $t = -0.31$ ,  $p > 0.05$ ) and therefore not validating the estimation of indirect effects via this path. Following, we examined the significance of the indirect effect of teacher credibility on L2WTC (Step 3). As seen in Table 4, a 95% bias-corrected confidence interval based on 10,000 bootstrap samples indicated that the relationship between teacher credibility and learner WTC was fully mediated by learner motivation independently and by the collective influence of motivation and communication confidence, with a total indirect effect of ( $\beta = 0.3004$ ,  $SE = 0.07$ ). Two significant indirect paths from teacher credibility to learner WTC were identified: through learner motivation ( $\beta = 0.122$ , modest ES) and through the combined effect of learner motivation and communication confidence ( $\beta = 0.044$ , small ES). These significant indirect paths from teacher credibility to learner WTC meet the third condition in Preacher and Hayes's (2008) approach and thus justify the sequential mediation in this study.

Indirect path #	Effects	Coefficients		Bootstrapping 95% BC confidence interval	
		$\beta$	SE	Lower	Upper
	Total indirect effects of teacher credibility on L2WTC	0.3004	0.07	0.1720	0.4300
1	Teacher credibility → learner motivation → L2WTC	0.1221***	0.04	0.0522	0.2059
2	Teacher credibility → learner motivation → learner communication confidence → L2WTC	0.0447***	0.02	0.0182	0.0799
	Total indirect effects of teacher immediacy on L2WTC	0.2670	0.1557	0.0427	0.5735
3	Teacher immediacy → learner communication confidence → L2WTC	0.0520***	0.0197	0.0164	0.0930

**Note(s):**  $N = 412$ ,  $k = 10,000$ , \*\*\* $p < 0.001$ ,  $\beta$  = regression coefficient, SE = standard error, BC = bias-corrected

**Table 4.** The indirect effects of teacher credibility and immediacy on learner L2WTC through learner variables

The same procedure was followed in identifying the indirect effects of teacher immediacy on learner L2WTC. The data in Figure 1 show that the direct effect of teacher immediacy as a dependent variable on two mediating variables (learner communication confidence [ $\beta = 0.229$ ,  $SE = 0.10$ ,  $t = 3.04$ ,  $p < 0.01$ ] and learner attitudes [ $\beta = 0.934$ ,  $SE = 0.01$ ,  $t = 38.53$ ,  $p < 0.001$ ]) were at significant levels (Step 1). After controlling for the effect of the independent variable (Step 2), the direct effects of communication confidence ( $\beta = 0.224$ ,  $SE = 0.04$ ,  $t = 4.28$ ,  $p < 0.001$ ) and attitudes ( $\beta = 0.229$ ,  $SE = 0.08$ ,  $t = 1.4661$ ,  $p < 0.05$ ) as mediating variables on the dependent variable (learner L2WTC) were significant. However, the data in Table 4 show only one indirect significant path from teacher immediacy to learner L2WTC via learner communication confidence ( $\beta = 0.052$ , small ES) that fully mediated the relationship between these two variables.

## 5. Discussion

Direct significant paths from teacher behaviors (immediacy and credibility) to learner variables were captured in this study. While theorized to directly influence all learner variables in the hypothesized model, teacher credibility in the data-driven model had a direct positive effect on only learner motivation, emphasizing the widely acknowledged fact that proper teacher credibility behaviors – competence, caring and trustworthiness – usually result in better learner motivation. This is well recognized by Pogue and Ahyun (2006), who emphasized that highly credible teachers influence student motivation, as well as by many other scholars (Chan *et al.*, 2021; Zheng, 2021). Interestingly, there was a significant direct path leading from teacher credibility to teacher immediacy, suggesting that teachers demonstrating strong credibility behaviors could elicit better perceptions of their teacher immediacy behaviors by learners. While not anticipated in the hypothesized model, this data-driven path generally aligns with the positive associations between teacher immediacy and credibility behaviors established by earlier research (Lee, 2020; Mottet *et al.*, 2007; Pogue and Ahyun, 2006; Teven and Hanson, 2004) that teacher immediacy and credibility are related to one another, in that highly immediate teachers are usually rated more highly on credibility, and vice-versa. It could also emphasize that learners' perceptions of teacher credibility have outweighed their perceptions of their teacher immediacy, which led to this finding.

Teacher immediacy, on the other hand, exerted a significant and positive direct effect on learner communication confidence, meaning that teachers demonstrating proper immediacy behavior positively affect learners' perceptions of their ability to communicate in the foreign language. This effect has also been acknowledged by earlier research such as that of Ellis (1995) and Yu (2009), who found that teacher immediacy could directly and significantly affect learners' self-perceived communication competence and, moreover, indirectly affect L2WTC through the mediation of this construct. In addition, teacher immediacy had a substantial direct positive effect on learner attitudes toward learning situation, confirming that exhibiting appropriate teacher verbal and nonverbal immediacy behaviors leads to more positive attitudes on the part of the learner, which in turn has the potential to foster L2WTC. This path is confirmed by earlier correlational studies (Gregersen, 2005; Henning, 2012).

Learner variables in this study directly, positively and significantly predicted learner L2WTC. The significant path detected in this study showing that motivation directly predicts L2WTC aligns with the work of Jung (2011) in South Korea, which was based on SEM analysis findings and is congruent with Fallah (2014), Hashimoto (2002), MacIntyre and Clément (1996), Peng (2007) and Yashima (2020). This finding might be explained in light of Peng's (2007) and Fallah's (2014) argument that motivation in an EFL context is an important stimulus for learners to persist in L2 learning and L2 communication alike. Interestingly, the role that motivation plays in the model is two-dimensional, as it also contributes to L2WTC indirectly through learners' communication confidence. Here, learner communication confidence mediates the relationship between EFL learners' L2 motivation and their L2WTC; this finding runs consistent

with the findings of many previous studies in other contexts (Ghonsooly *et al.*, 2012; Kim, 2004; Khajavy *et al.*, 2016; Öz *et al.*, 2015; Peng and Woodrow, 2010; Yashima, 2002). This verifies a broader link between motivation and L2 confidence (MacIntyre and Clément, 1996), in that motivation is a prerequisite for communication confidence and motivated individuals tend to have confidence in their L2 communication by definition.

The significant direct path from L2 communication confidence to L2WTC is in line with the L2WTC model by MacIntyre *et al.* (1998) and previous empirical studies across different contexts, such as Japan (Yashima, 2002), South Korea (Kim, 2004), Turkey (Öz *et al.*, 2015), China (Peng and Woodrow, 2010), Iran (Fallah, 2014; Khajavy *et al.*, 2016) and Europe (Denies *et al.*, 2015). It emphasizes the positive effect of communication confidence on L2WTC by showing that, when EFL learners perceive themselves as competent to communicate in English, they become more willing to communicate in English inside the language classroom.

The significant positive path showing the direct effect of attitude on L2WTC implies that EFL students who hold positive attitudes toward their English language teacher and English course are more willing to communicate in English. By contrast, the study by Khajavy *et al.* (2016) in Iran found that attitudes toward learning English have an indirect effect on L2WTC through motivation and communication confidence. This difference may be due to social, cultural and educational differences between learners in this study and EFL learners in the Iranian context.

The absence of observed direct paths between teacher immediacy and credibility and learner L2WTC implies that teacher behaviors indirectly exert influence on L2WTC through the mediation of learner variables (mainly learner motivation and communication confidence). Teacher credibility has indirect influences on learner L2WTC through learner motivation individually and through the combined impact of motivation and communication confidence. This indicates that EFL teacher credibility behaviors can positively impact EFL learners' L2WTC if the students are sufficiently motivated and competent in relation to engaging in EFL communication. It is noteworthy that, while the effect of teacher credibility on learner L2WTC is well established by correlational studies in the field (Lee, 2020), the present study is the first attempt to unveil the latent effect of teacher credibility on learner L2WTC via a structural modeling approach.

Teacher immediacy had indirect effects on learner L2WTC only through learner communication confidence, illustrating that teacher immediacy behaviors might account for learners' L2WTC in English if those students perceive themselves as competent in communicating in English. The indirect path from teacher immediacy to learner L2WTC via learner communication confidence detected in this study is comparable to the findings of Fallah's (2014) and Sheybani's (2019) investigations in the Iranian EFL context. However, the significant indirect path from teacher immediacy to learner L2WTC via learner motivation identified in Fallah's and Sheybani's research did not appear in this study. The absence of support by this study's findings to the well-acknowledged association between teacher immediacy and learner motivation might be largely specific to the population of learners in this study, and it merits further investigations. In addition, the absence of indirect effect from teacher immediacy to L2WTC via learner attitudes could be attributed to the very large direct effect that immediacy had on attitudes, which did not allow for indirect influence through this variable to occur on L2WTC (Figure 1).

## 6. Conclusions and implications

This study tested a model of L2 communication by exploring the relation paths between L2WTC, teacher immediacy and credibility situational variables, and other L2 learner affective variables (communication confidence, motivation and L2 learning-specific attitudes) among 412 EFL learners. The final model showed good fit to the data of the study sample and

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aligned with the initial conceptual model as well as with models of L2WTC hypothesized across various EFL contexts as well as theoretical assumptions and empirical investigations conducted in the field. While this study extends the literature on L2 communication in that regard, it is also, to the author's best knowledge, the first to examine the collective impact of teacher immediacy and credibility and learner communication confidence, attitudes and motivation and L2WTC in a single SEM model. As a result, structural paths from teacher credibility to learner variables, namely, teacher credibility  $\rightarrow$  learner communication confidence, teacher credibility  $\rightarrow$  learner attitude and teacher credibility  $\rightarrow$  learner motivation, were tested for the first time in EFL domain. The findings of this study have important pedagogical implications globally for professions related to communication instruction, especially with regard to teacher credibility behaviors and particularly for practitioners and beneficiaries in EFL contexts where learners are widely acknowledged for their unwillingness to communicate in foreign language classes.

As stated earlier, communication is considered to be the primary goal of language instruction (MacIntyre and Charos, 1996). Therefore, teacher education programs should place heavy emphasis on developing teacher communication skills and strategies. The L2WTC model in this study shows that teacher communication behaviors predicted learners' affective variables, which in turn predicted L2WTC, emphasizing the vital role of the teacher in regulating learner affect in the classroom. In this regard, the findings of this study highly emphasize the crucial roles of learner motivation and confidence in defining learner WTC in the foreign language, in that it has been the strongest direct predictor of L2WTC and a mediator of the relationship between teacher credibility and learner WTC, and communication confidence been a direct predictor of L2WTC, a mediator between teacher credibility and L2WTC, and the variable fully mediating the association between teacher immediacy and learner WTC. Because the teacher has the most influential role in promoting learner motivation and communication confidence, EFL teachers should, therefore, give due special attention to these two variables. In this regard, teachers should shift from viewing themselves as the sole authority in class, try to abandon the teacher-centered approach common in EFL contexts and close the distance they usually keep between themselves and their students. EFL teachers should also create a friendly, motivating, relaxed and anxiety-free EFL learning environment to facilitate proper contact with students and to make the classroom context more inspiring, providing empathy, care, respect, acceptance, support and encouragement and integrating jokes and humor. This will help promote learners' motivation, attitudes, communication confidence and, in turn, L2WTC.

Because communicative language teaching is not a widely practiced approach to teaching English language in most EFL contexts, curriculum designers should make efforts to design programs that allow for communicative language teaching to take place in language classes. This can occur by deploying abundant communicative learning tasks in the EFL curriculum that require learners to engage in conversation (both listening and speaking) with other students, as suggested by Khajavy *et al.* (2016). According to Moss and Ross-Feldman (2003), such tasks provide learners with meaningful communication and authentic use of the language. In this regard, teachers also need to eschew old-fashioned EFL teaching methods and adopt more communicative teaching approaches that allow for the involvement of students in real communicative learning situations.

## 7. Limitations

One limitation for this study is that it deployed self-report tools for data collection and examined the role of only two teacher behaviors and three learner variables in L2WTC. Due to the very complex nature of the concept of learner WTC, future research is to examine other teacher and learner factors that have the potential to affect learners' WTC (e.g. teacher

teaching styles, learner self-perceived proficiency) using different instruments (e.g. observations, interviews, diaries). Future research can also deploy experimental investigations that aim to improve teacher communication behaviors using specific strategies and techniques (e.g. emotion-regulation strategies) and to assess how these improvements affect learner affective variables, L2WTC and, accordingly, EFL learning outcomes. In addition, participants in this study were all Saudi EFL learners who hold a same socio-educational background. Although the results can be generalized to learners with similar characteristics especially in EFL contexts, it would be plausible to replicate the present study with other L2 learners across different socio-cultural contexts to identify the role of teacher communication behavior and learner affective factors in L2WTC globally. Finally, future researchers are encouraged to deploy advanced analytical approach such as exploratory structural equation modeling (ESEM), which was beyond the scope of the present research, to assess the internal structure of the constructs examined in this study and to validate intercorrelations among these constructs.

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**Appendices**

**A1. Measures items and factor loadings in CFA**

*A1.1 Teacher immediacy*

No	Item	Loadings	
		VI	NVI
IM1	Asks questions or encourages students to talk	0.610	
IM2	Gets into discussions based on something a student brings up even when this does not seem to be part of his/her lecture	0.762	
IM4	Addresses students by name	0.596	
IM5	Gets into conversations with individual students before or after class	0.766	
IM6	Refers to class as “my class” or “what I am doing”	0.666	
IM9	Calls on students to answer questions even if they have not indicated that they want to talk	0.723	
IM11	Asks questions that have specific, correct answers	0.523	
IM12	Asks questions that solicit viewpoints or opinions	0.782	
IM13	Criticizes or points out faults in students’ work, actions or comments	0.546	
IM14	Has discussions about things unrelated to class with individual students or with the class as a whole	0.610	
IM15	Is addressed by his/her first name by the students	0.542	
IM17	Uses monotone/dull voice when talking to class		0.605
IM18	Looks at class while talking		0.562
IM19	Smiles at the class as a whole, not just individual students		0.573
IM21	Moves around the classroom while teaching		0.623
IM22	Looks at the board or notes while talking to the class		0.576
IM23	Has a very relaxed body position while talking to the class		0.611
IM24	Smiles at individual students in the class		0.593
IM25	Uses a variety of vocal expressions while talking to the class		0.541

**Note(s):** Factor loadings lower than 0.50 are not included in the CFA measurement model; IM = immediacy; VI = verbal immediacy; NVI = nonverbal immediacy

**Table A1.**  
Items and factor  
loadings of teacher  
immediacy (*N* = 412)

*A1.2 Teacher credibility*

No	Item	COM	Loadings	
			TRU	CAR
CRD1	Not fluent in English vs fluent in English	0.651		
CRD3	Unintelligent vs intelligent	0.751		
CRD11	Anxious vs relaxed	0.560		
CRD13	Uncreative vs creative	0.576		
CRD14	Disorganized vs organized	0.623		
CRD2	Incompetent vs competent		0.594	
CRD5	Dishonest vs honest		0.812	
CRD8	Untrustworthy vs trustworthy		0.637	
CRD12	Unconfident vs confident		0.729	
CRD4	Does not care about me vs cares about me			0.709
CRD6	Not understanding vs understanding			0.602
CRD10	Inconsiderate vs considerate			0.790
CRD15	Autocratic vs democratic			0.558

**Note(s):** Factor loadings lower than 0.50 are not included in the CFA measurement model; CRD = credibility; COM = competence; TRU = trustworthiness, CAR = caring

**Table A2.**  
Items and factor  
loadings of teacher  
credibility (*N* = 412)

A1.3 Communication confidence

No	Item	Loadings	
		CA	PCC
CC1	1. I never feel quite sure of myself when I am speaking in English	0.784	
CC3	3. I tremble when I know that I am going to be called on in language class	0.774	
CC4	4. It frightens me when I do not understand what the teacher is saying in English	0.675	
CC5	5. During language class, I find myself thinking about things that have nothing to do with the course	0.644	
CC6	6. I start to panic when I have to speak without preparation in language class	0.804	
CC7	7. I worry about the consequences of failing my language class	0.635	
CC8	8. In language class, I can get so nervous that I forget things I know	0.742	
CC9	9. It embarrasses me to volunteer answers in my language class	0.673	
CC11	11. I feel confident when I speak in English in my language class	0.598	
CC12	12. I am afraid that my language teacher is ready to correct every mistake I make	0.822	
CC13	13. I can feel my heart pounding when I am going to be called on in language class	0.753	
CC14	14. I get nervous and confused when I am speaking in my language class	0.830	
CC15	15. I am afraid that the other students in the class will laugh at me when I speak in English	0.798	
CC17	1. I am able to role-play standing in front of the class in English (e.g. ordering food in a restaurant)		0.822
CC18	2. I am able to give a short self-introduction without notes in English to the class		0.861
CC19	3. I am able to translate a spoken utterance from Arabic into English in my group		0.706
CC20	4. I am able to do a role-play in English at my desk with my peer (e.g. ordering food in a restaurant)		0.654

**Note(s):** Factor loadings lower than 0.50 are not included in the CFA measurement model; CC = communication confidence; CA = communication anxiety; PCC = perceived communication confidence

**Table A3.**  
Items and factor loadings of learner communication confidence (N = 412)

A1.4 Motivation

No	Item	Loadings	
		SM	MI
M1	Motivated	unmotivated	0.558
M2	Interested	uninterested	0.813
M3	Involved	uninvolved	0.818
M5	Do not want to study	want to study	0.577
M7	Unchallenged	challenged	0.657
M8	Uninvigorated	invigorated	0.851
M9	Unenthused	enthused	0.610
M10	Excited	not excited	0.543
M11	Stimulated	not stimulated	0.537
M12	Not fascinated	fascinated	0.503
M13	Compared to my classmates, I think I study English relatively hard		0.869
M14	I often think about the words and ideas that I learn about in my English classes		0.726
M15	If English were not taught at school, I would study on my own		0.772
M16	I think I spend fairly long hours studying English		0.833
M17	I really try to learn English		0.621
M18	After I graduate from college, I will continue to study English and try to improve		0.606

**Note(s):** Factor loadings lower than 0.50 are not included in the CFA measurement model; M = motivation; SM = state motivation; MI = motivational intensity

**Table A4.**  
Items and factor loadings of learner motivation (N = 412)



A1.5 Attitudes toward the learning situation

No	Item	Loadings	
		AC	At
ATT1	English is one of my favorite subjects	0.605	
ATT2	I would rather spend time on subjects other than English this semester	0.612	
ATT3	In English lessons, we are learning things that will be useful to me in the future	0.709	
ATT4	In English lessons, we are learning things that will be useful to me in my daily life activities	0.703	
ATT5	The content of this English course is a burden for me	0.576	
ATT6	I wish we had more English lessons	0.624	
ATT7	The teaching style of my English teacher is unclear and confusing		0.566
ATT8	My English teacher tolerates his students' mistakes		0.586
ATT9	I rely a lot on my English teacher to do learning tasks		0.573
ATT10	My English teacher encourages and inspires me to give my best efforts in learning		0.602
ATT11	My English teacher believes in my abilities to succeed in this course		0.591
ATT12	My English teacher compliments me when I give a correct answer in the classroom		0.534
ATT13	If I do well in English this semester, it is because of the efforts and the fascinating teaching style of my English teacher		0.583

**Note(s):** ATT = attitudes; AC = attitudes toward the course; AT = attitudes toward the teacher

**Table A5.**  
Items and factor loadings of learner attitudes ( $N = 412$ )

A1.6 Willingness to communicate

No	Item	Loadings
WTC1	I am willing to do a role-play standing in front of the class in English (e.g. ordering food in a restaurant)	0.755
WTC2	I am willing to give a short self-introduction without notes in English to the class	0.712
WTC3	I am willing to give a short speech in English to the class about my hometown with notes	0.655
WTC4	I am willing to translate a spoken utterance from Arabic into English in my group	0.683
WTC5	I am willing to ask the teacher in English to repeat what he/she just said in English because I did not understand	0.598
WTC6	I am willing to do a role-play in English at my desk, with my peer (e.g. ordering food in a restaurant)	0.617
WTC7	I am willing to ask my peer sitting next to me in English the meaning of an English word	0.645
WTC8	I am willing to ask my group mates in English the meaning of a word I do not know	0.727
WTC9	I am willing to ask my group mates in English how to pronounce a word in English	0.718
WTC10	I am willing to ask my peer sitting next to me in English how to say an English phrase to express the thoughts in my mind	0.802

**Note(s):** WTC = willingness to communicate

**Table A6.**  
Items and factor loadings of learner L2WTC ( $N = 412$ )

**A2. Confirmatory factory analysis results**

*A2.1 Confirmatory factory analysis of teacher immediacy subscales*

A two-factor CFA measurement model was tested for the two subscales of immediacy constructs. Overall, the tested model showed the presence of the two latent variables of verbal and nonverbal immediacy. However, the overall fit to the data was indicating a low model fit because four items (IMM3, IMM7, IMM8 and IMM10) poorly loaded on their verbal immediacy scale (factor loadings < 0.30). Also,

items (IMM16 and IMM20) had low factor loadings on their nonverbal immediacy factor (with loadings < 0.50). These six items were therefore excluded from their subscales. After removing these items, the remaining items (11 items in verbal immediacy subscale, and eight items in the nonverbal immediacy subscale) showed high loadings (>0.50) on their subscales, and the CFA model of teacher immediacy scale showed a good model fit results, as can be noticed in [Table A7](#).

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**Table A7.**  
Goodness of fit indices for the teacher immediacy scale

Model	$\chi^2$	<i>p</i>	$\chi^2/df$	GFI	AGFI	NFI	CFI	RMSEA	SRMR
	283.2	0.000	2.45	0.92	0.89	0.94	0.98	0.01	0.010

### A2.2 Confirmatory factory analysis of teacher credibility subscales

In the measurement models for the subscales under the teacher credibility scale, 15 items were expected to be loaded on to the three latent variables: competence, caring and trustworthiness. Except for two items: “CRD7” and “CRD9,” which measure learners’ perceptions of their teacher as being helpful vs unhelpful and exhibiting moral vs immoral behaviors to them, respectively (factor loading < 0.50), all the other items were loaded on to their expected subscales with reasonably strong factor loadings. After removing this item from the CFA model, the model fit improved to a satisfactory level ([Table A8](#)).

**Table A8.**  
Goodness of fit indices for the teacher credibility scale

Model	$\chi^2$	<i>p</i>	$\chi^2/df$	GFI	AGFI	NFI	CFI	RMSEA	SRMR
	368.11	0.000	2.86	0.90	0.86	0.91	0.95	0.02	0.017

### A2.3 Confirmatory factory analysis of learner motivation subscales

A two-factor CFA measurement model was tested for the two subscales of motivation. The model showed the presence of two latent variables/subscales of motivational intensity and state motivation. All the six items in motivational intensity loaded significantly on this construct (with factor loadings > 0.60). Two items: M4 (stimulated vs not stimulated) and M6 (inspired vs uninspired) did not highly load on the state motivation factor (<0.50) and were thus removed, leaving this construct with seven remaining items (all with high factor loading > 0.50). After removing these two items (“SEM4” and “SEM6”) from the CFA model, the model fit showed good model fit results, as can be seen in [Table A9](#).

**Table A9.**  
Goodness of fit indices for the learner motivation scale

Model	$\chi^2$	<i>p</i>	$\chi^2/df$	GFI	AGFI	NFI	CFI	RMSEA	SRMR
	187.18	0.000	2.06	0.94	0.91	0.96	0.99	0.001	0.007

### A2.4 Confirmatory factory analysis of learner communication confidence subscales

The items measuring communication confidence were also tested in CFA to confirm existence of the two latent variables, i.e. CA and perceived communication confidence. While 13 items loaded highly on the construct of CA (factor loadings > 0.55), other three items (CC2, CC10 and CC16) did not and were therefore removed from this construct. All the four items intended to measure perceived communication confidence (PCC) loaded highly on this factor (>0.65). The final CFA model showed good model fit results as displayed in [Table A10](#).

**Table A10.**  
Goodness of fit indices for the learner communication confidence scale

Model	$\chi^2$	<i>p</i>	$\chi^2/df$	GFI	AGFI	NFI	CFI	RMSEA	SRMR
	337.09	0.000	2.76	0.91	0.88	0.92	0.96	0.02	0.015

*A2.5 Confirmatory factory analysis of learner attitudes subscales*

The initial CFA model where 13 items were presumed to measure the expected constructs of learner attitudes did return an acceptable goodness of model fit to the data (Table A11), with reasonably substantial factor loadings (>0.60) of all items on to each of the two latent variables (i.e. attitudes toward the English course and attitudes toward the English teacher).

Model	$\chi^2$	<i>p</i>	$\chi^2/df$	GFI	AGFI	NFI	CFI	RMSEA	SRMR
	402	0.000	2.94	0.85	0.81	0.88	0.92	0.03	0.022

**Table A11.**  
Goodness of fit indices  
for the learner  
attitudes scale

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