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Willingness to Communicate and Action Control Among Iranian EFL Learners

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Abstract

Given the key role communication plays in L2 learning, studies addressing students' (un)willingness to communicate (WTC) and factors contributing to it are of pedagogical and theoretical relevance. Although studies on Iranian students' WTC and its relationship with different variables are available, no research has been conducted on how Kuhl's (1994) Action Control (AC) theory—proposed to carry explanatory potential regarding WTC—relates to it or its pertinent variables. The current study aims at investigating the predictive power of three variables (preoccupation, hesitation, and volatility) underpinning Kuhl's AC theory and two high-evidence key factors (perceived competence and communication apprehension) vis-à-vis Iranian English students' WTC in class. To collect data, Willingness to Communicate in L2 Questionnaire, Perceived Competence Questionnaire, Communication Apprehension Scale, Preoccupation, Hesitation, and Volatility Scales were given to four hundred and fourteen English students. Structural Equation Modeling was utilized to analyze the data and test the hypothesized model. Findings indicated that volatility, an AC variable, coupled with perceived competence and communication apprehension are significant predictors of students' WTC. Results also suggested that hesitation and preoccupation predict WTC indirectly. Findings are used to maintain that Kuhl's AC theory can help with explaining WTC with reference to a new argument, i.e. state and action orientation. The paper ends with pedagogical suggestions.

Keywords: willingness to communicate, perceived competence, communication apprehension, preoccupation, hesitation, volatility

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Introduction

Almost three decades ago, Macintyre et al. (1998, p. 547) defined willingness to communicate (WTC) as "readiness to enter into a discourse at a particular time with a specific person or persons, using a L2". The ending part of their definition, i.e. *using* a *L2*, clearly shows how WTC relates to language education as learners with higher WTC levels use L2 more for communication purposes which, in turn, leads to more successful language learning. That some language learners are willing and others unwilling to communicate has attracted the interest of different researchers. In other words, researchers in language pedagogy and psychology have conducted studies in attempts to explain variables directly or indirectly affecting L2 learners' tendency or willingness, or lack thereof, to initiate communication. Why do some learners seek opportunities to use L2 voluntarily—be it in the classroom or outside it—whilst others prefer to keep silent? One potential explanation is to do with students' *action control*.

Kuhl (1994) proposed Action Control Theory (ACT) to explain the process of beginning an action including L2 communication. His account of action initiation, maintenance, and completion consists of three basic concepts: hesitation, preoccupation, and volatility. We use an example to explain the terms and how they relate to WTC in a L2. A teacher asks a question and all her/his students are permitted to raise hands and answer. Hesitation acts in the form of a student's decision to raise his/her hand to speak followed by an inability to translate the decision into action. In other words, the student vacillates between his/her current behavior (silence) and the decision to initiate a new action (L2 use in the form of answering the question). Preoccupation might affect students' WTC when they are obsessed with the likely unfavorable consequences of initiating an action (raising hand and L2 use) due to unpleasant experiences of similar tasks done in the past. Finally, volatility might exert a negative effect on a student's WTC if s/he initiates the action but fails to keep focused and complete the task. More specifically, s/he does not have enough persistence and perseverance. Jamarillo et al. (2007) succinctly summarize Kuhl's (1994) ACT as the (in)ability to initiate an action or a task (hesitation), keep focused on it (preoccupation) and proceed persistently to finish it (volatility).

Dörnyei (2005) uses ACT to account for motivation and individual differences in L2 learning and notes that since L2 learners' decisions to do a learning task is followed by either success or failure, students with high levels of hesitation, preoccupation, and volatility will be less motivated to initiate it. As far as WTC is concerned, even if equal opportunities for L2 communication are provided and almost all students signing up for a conversation course intend to learn to use L2 for communication, "there is an unfortunate tendency for people in general, and language learners in particular, to fail to act on their intentions" since AC variables are likely to intervene. Kuhl's AC then provides an alternative basis to explain the motivation or tendency to communicate in L2. Additionally, researchers (e.g. Piechurska-Kuciel, 2021) believe that since AC variables play a role in at least one of the non-linguistic outcomes (e.g. perceived competence & communication

anxiety), it makes sense to investigate how such variables relate to each other in a single model.

In addition to Kuhl's (1994) three variables underpinning his ACT, there are other variables two of which are of prime significance in terms of predicting L2 WTC: students' perceived competence and their anxiety level or communication apprehension (de Saint Léger & Storch, 2009). In fact, in earlier approaches to WTC it was held that the higher students' perceived competence and the lower their anxiety level, the higher their WTC in L2. Macintyre and Doucette (2010) studied action control variables (volatility, hesitation, and preoccupation) in relation to perceived competence and communication apprehension and how the variables collectively relate to L2 WTC and proposed a model in which several interesting relationships were found. Briefly, their findings suggested that ACT has the potential to explain WTC in ESL (English as a Second Language) contexts where students' tendency to communicate is prone to be affected by features associated with such settings (e.g. opportunities to use English outside the class). Additionally, the frequently studied variables relating to WTC, i.e. perceived competence and communication anxiety, were found to be related to AC components.

Motivated by their study, the current study aims at investigating if Kuhl's (1994) three AC variables and WTC antecedents (perceived competence and communication apprehension) predict Iranian EFL (English as a Foreign Language) learners' WTC. Our study draws upon Macintyre and Doucette's (2010) research in that our hypothesized model and the relationship between variables are inspired by their findings. It is, however, different in two key respects. First, we exclude *WTC outside the classroom* from the model because of the particular context to which Iranian EFL learners belong. More specifically, unlike ESL contexts where opportunities to communicate via English for daily social activities abound, it is the so-called *dumb English* that prevails in Iran and the extent English is used for communicative purposes outside classrooms is admittedly restricted. Second, they used path analysis whereas we employ Structural Equation Modelling (SEM) with the concomitant advantage of moving beyond reporting relationships between the variables; we discuss the predictive power of the variables on WTC and, more importantly, explain how much of Iranian students' WTC is accounted for by which variables thanks to the inherent potential in SEM in general. The study is significant from another perspective. Iranian EFL students' WTC is accounted for with reference to state and action orientation framework inherent in ACT. This takes us to the latest arguments in studies on self-regulation and what teachers can do with students falling on somewhere in state-action continuum.

In the following section, we review studies on WTC in L2 in general to pave the ground for the current study. Next, information pertaining to research methodology is presented. Finally, findings are given and discussed followed by a section on conclusion.

Literature Review

Earlier studies on WTC focused on L1 communication and followed personality psychology to explain individual differences in initiation of verbal

communication. This era is characterized by studies reporting correlations between WTC and an array of personality traits such as introversion (Macintyre, 1994), shyness (Teven et al., 2010), self-esteem (McCroskey & Richmond, 1991), and so forth. Below a review of research on WTC in L2 is given. The review starts with studies pertaining to L2 WTC in general and moves to those addressing variables similar to ours (perceived competence, communication apprehension, and action control variables).

Macintyre et al. (2003) examined the relationship between WTC in L2, age, and gender. They reported that, compared to males, female L2 learners are more willing to communicate and that, with age, the level of WTC increases for the former but decreases for the latter. In two similar studies, Peng (2007) and Hashimoto (2002) investigated the relationship between L2 WTC and motivation and concluded that integrative motivation and L2 WTC are highly correlated. Similar results have been reported with Iranian students (Ghonsooly et al., 2012). L2 WTC has been reported to be related to or affected by a host other factors such as quality and frequency of L2 contact (Clément et al., 2003), the topic under discussion, interlocutors, and the context of conversation (Kang, 2005), group size, familiarity with interlocutors, and interlocutors' participation (Cao & Philp, 2006), and the topic, the planning time, cooperation and familiarity with the interlocutor, the opportunity to express one's opinions, and the mastery of requisite lexis (Mystkowska-Wiertelak, 2018).

More relevant to this study are research investigations addressing the relationship between WTC in L2, communication apprehension (L2 communication anxiety), and perceived communication competence. Perceived competence and communication apprehension are probably the most frequently studied variables relating to WTC. Generally speaking, "perceived competence of a L2 learner entails his or her self-assessment" (Baran-Lucarz, 2021) and for McCroskey and McCroskey (1988), it is regarded as "self-perception of adequate ability to pass along or give information; the ability to make known by talking or writing" (p. 109). The second concept is "connected with anxiety stemming from real or anticipated communication with other people" (Piechurska-Kuciel, 2021).

Numerous studies suggest that higher levels of perceived competence and lower levels of anxiety are positively connected to L2 WTC (Halupka-Rešetar et al., 2018; Fushino, 2010). Macintyre and Charos (1996), for example, conducted a study to find out if WTC in L2 is related to variables relating to WTC in L1 and concluded that anxiety, perceived competence, and WTC in L2 are correlated; lower levels of the first and higher levels of the second predicted the third. Yashima (2002) investigated the relationship between Japanese students' WTC in English and their self-perceived communication confidence. She, of course, conceived lack of anxiety in L2 communication and perceived communicative competence in L2 as one overarching factor and called it self-perceived communication confidence. Her results indicated that it strongly predicts Japanese students' WTC in English. Hashimoto (2002) did another study on Japanese learners and concluded that their perceived competence in English predicts their L2 WTC strongly. In a similar study, Peng and Woodrow (2010) reported similar results with Chinese EFL learners. That

communication competence and communication apprehension are strong predictors of L2 WTC has been reported in Turkey (Öz et. al., 2015) and Iran (Amirian et al., 2020; Shirvan et al., 2019) too. For Piechurska-Kuciel (2021), anxiety might have *disastrous effects* on L2 WTC in real as well as anticipated cases of L2 communication and should be addressed by teachers and students.

Even more pertinent to our study is that of Macintyre and Doucette (2010) who included in their investigation not only perceived competence and communication apprehension but also the three variables (hesitation, preoccupation, volatility) underpinning action control. Hesitation "involves the inability to translate decisions into action" which, in turn, negatively relates to WTC. Hesitant learners vacillate between keeping on with what they do (e.g. an L2 task) and deciding to begin a new one. Preoccupation is the "tendency for intrusive and enduring thoughts to flood a person's mind after a failure"; prior unpleasant experiences in L2 communication are likely to negatively relate to WTC. Finally, volatility is the "tendency to abandon an ongoing task in favor of another, alternative task" (Macintyre & Doucette, 2010, p.164). Volatile learners lack persistence and, as a result, are expected to be less willing to communicate.

To empirically check such assumptions, Macintyre and Doucette (2010) studied the relationships of these three variables with L2 WTC and suggested that AC variables correlated as expected. In other words, they found a negative path between volatility and WTC; they also reported that hesitation increases communication anxiety and decreases perceived competence which result in lower WTC levels among French-as-a-second-language learners in Canada. They also found a negative correlation between communication anxiety and perceived competence both of which related to WTC in anticipated fashion: the first negatively and the second positively related to WTC.

Despite the fact that ACT is believed to have the potential to account for L2 WTC, no research study has addressed the issue with Iranian EFL learners. This study is an attempt to address such a gap. The gaps this study intends to fill are three. First, how AC variables, hesitation, preoccupation, and volatility relate to Iranian EFL learners' WTC has not been investigated. We believe studies focusing on AC variables are important and deserve exploration since not only the variables have "strong potential to account for motivation underlying the language learning processes" (Macintyre & Blackie, 2012, p.534) but also they can help us understand why some Iranian students seldom speak English and avoid communication. Few studies, if any, turn to explain Iranian EFL students' (un)willingness in English communication with reference to the continuum of state vs. action orientation as postulated in the ACT. What adds more significance to the study is the attribution mechanism of Iranian teachers with regard to reticent students in their classes: they have a negative view of such students and attribute their habitual silence to learner-internal causes about which teachers can do nothing (Allahyar, 2021) while this is not necessarily true as we discuss later. Second, most local studies addressing the other two variables of L2 WTC (perceived competence & communication apprehension) use correlation or regression analyses and provide us with what such studies are intended for, i.e. relationships. As noted above, this study is expected to

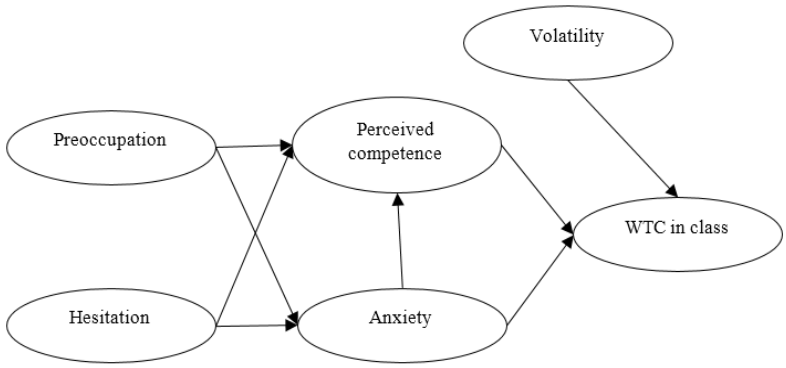
yield a more statistically robust picture of the variables that provides us with predictive value of such variables as intended and explained above. Third, and perhaps more importantly, the two frequently reported WTC antecedents studied by several Iranian researchers are set next to AC variables which is significant as WTC in L2 interacts complexly with such traits. More specifically, the current study helps us understand the nature of classic WTC antecedents, i.e. perceived competence and L2 anxiety, more by investigating how and to what extent such high-evidence predictors of L2 communication are accounted by or related to AC variables. The literature on perceived competence and L2 anxiety as factors relating to and predicting L2 WTC is rich; what we know little is how to account for the factors themselves. We believe one promising avenue of research to account for such relationships is using Kuhl's (1994) ACT as the framework. Our argument is supported by Macintyre and Blackie (2012) who hold that ACT has the potential to deepen our understanding of non-linguistic outcomes (e.g. L2 WTC) as well as language learning in general. Casting light on intricate relationships between and among the five variables and how they, taken together, account for L2 WTC can reveal more with regard to the question raised above: why some Iranian learners seize opportunities to speak English in class whilst others choose to remain habitually reticent.

Method

Research Design

This is a correlational study in which SEM was employed. Based on Macintyre and Doucette's (2010) findings (discussed above), we developed the following hypothesized model (Figure 1) to be tested with Iranian EFL learners.

Figure 1
Hypothesized Base Model



Participants

Four hundred eighty-seven students participated in the study but data coming from four hundred fourteen students (178 male & 236 female) were considered for analysis. Their average age was 21 years old and their majors

included Teaching English as a Foreign Language, Translation Studies, and English Literature. They were BA level students from different universities (state, Azad, and Payame-Noor universities) in Tehran, East Azerbaijan, West Azerbaijan, Zanjan, Isfahan, and Fars.

Materials and Instruments

We used six instruments to collect data. A brief account of each is given. As regards the psychometric properties of the scales, Cronbach's alpha was used as a measure of reliability for all instruments. To establish validity, the criterion of 'thoroughly researched' (Barry et al, 2014) was employed to make sure the scales are content and construct valid. More specifically, we used instruments known to include items representing the full domain of the content we intended to measure and, at the same time, documented to appropriately measure the underlying trait of focus. Thoroughly researched instruments help with addressing such issues. The only threat is concerned with external validity of the study as randomization was not feasible.

WTC in L2 Questionnaire

Macintyre et al.'s (2001) questionnaire has 27 items to assess the percentage of time a respondent shows tendency to communicate inside the classroom. Each scale comprises 27, 5-point Likert-type items ranging from 1 (almost never willing) to 5 (almost always willing). WTC inside the classroom questionnaire assesses WTC through reading, writing, listening, and speaking within the classroom context. The scale provides information on WTC pertaining to four communication situations, three interlocutor types (strangers, acquaintances and friends), and total WTC. Its internal consistency coefficient was .78.

Perceived Competence Questionnaire. McCroskey and McCroskey's (1988) questionnaire comprising twelve items was used. The internal consistency coefficient was .71

Communication Apprehension Scale. The classic, yet widely used scale of Horwitz et al. (1986) was employed to measure communication apprehension. Its internal consistency coefficient was .82.

Action Control Scale. Kuhl's (1994) action control scale was used. It consists of 36 dichotomous, forced-choice items, which describe a particular situation. The internal consistency coefficient was .76. The items were presented in mixed random order. The subscales are preoccupation, hesitation, and volatility.

As for preoccupation subscale, the 12 items in this subscale describe situations in which thoughts pertaining to unpleasant experiences interfere with one's behavior-changing ability. The internal consistency coefficient was .76.

Regarding hesitation subscale, the 12 items in this subscale describe challenges and difficulties associated with initiating an intended activity. The internal consistency coefficient was .84.

Finally, as regards volatility subscale, the 12 items in this subscale describe one's ability to keep on activities without a sudden shift to alternative activities. The internal consistency coefficient was .88.

Procedure

Data were collected in 2020 and it took almost seven weeks. Participants were given the questionnaires with some pre-explanations concerning what to do and a general account of research goal. Several arrangements were made with colleagues in six provinces to include a relatively large number of English majors so that we can employ SEM. Each data collection session took approximately 40 to 50 minutes.

Data Analysis

Before running SEM, the necessary underlying assumptions including screening of data, missing values, multivariate regression, and multi-linearity were checked. SEM went through five stages of model specification, model identification, model estimation, model modification and model evaluation. Then, the overall model was developed.

Results

Descriptive Indices

Table one gives the mean and standard deviation (SD) of the research variables.

Table 1

Mean and SD of the Variables

Variables	Mean	SD
Preoccupation	1.1	.52
Hesitation	1.05	.49
Volatility	1.32	.63
Perceived competence	50.1	16.2
Communication apprehension	3.31	1.1
WTC	3.1	1.13

Note: WTC = Willingness to Communicate

Correlation Matrix of Variables

Table 2 gives the correlation matrix between the variables. Significant positive correlations were found between preoccupation and perceived competence ($r = 0.25$), hesitation and communication apprehension ($r = 0.45$), and perceived competence and WTC ($r = 0.60$). Negatively significant correlations were observed between preoccupation and communication apprehension ($r = 0.19$), hesitation and perceived competence ($r = 0.39$), volatility and WTC ($r = 0.21$), perceived competence and communication apprehension ($r = 0.53$), and communication apprehension and WTC ($r = 0.35$).

Table 2
Correlation Matrix of Research Variables

	Preoccupation	Hesitation	Volatility	PC	CA	WTC
Preoccupation	1					
Hesitation	0.05	1				
Volatility	-0.08	0.05	1			
PC	0.25**	-0.39**	0.04	1		
CA (anxiety)	-0.19*	0.45**	0.05	-0.53**	1	
WTC	0.1	0.08	-0.21*	0.60**	-0.35**	1

Note. PC = Perceived competence; CA = Communication apprehension; WTC = willingness to communicate
* = significant at level 0.05, ** = significant at level 0.01

Model Evaluation

Examination of the relationships between action control variables, perceived competence, communication apprehension, and L2 WTC gave the following model (Figure 2).

Figure 2

Model of Relationships Between WTC, Perceived Competence, Anxiety, Preoccupation, Hesitation, and Volatility

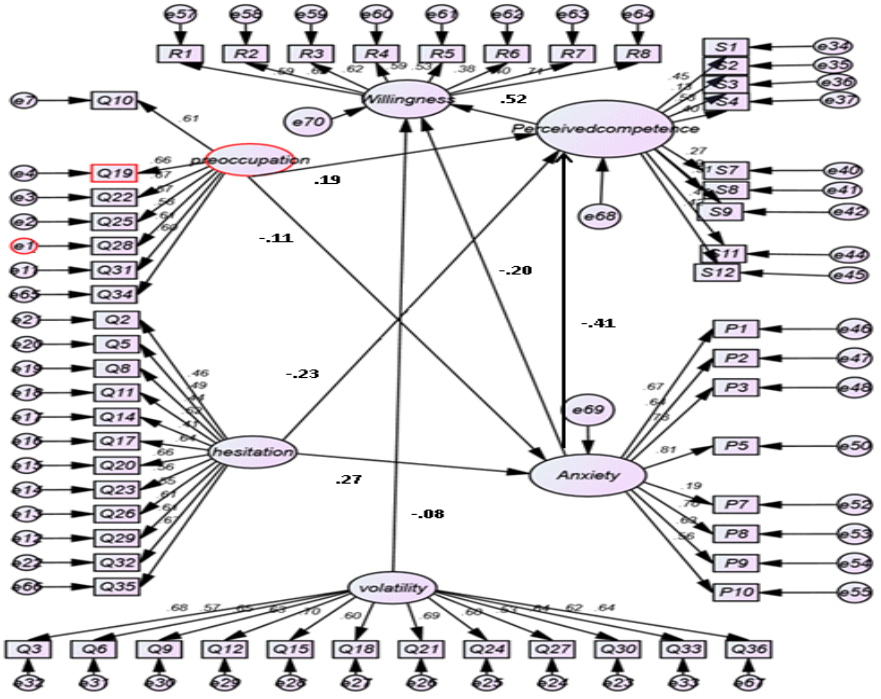


Figure 2 shows that there are *three* directional arrows to the endogenous variable (WTC); volatility and anxiety (communication apprehension) directly, negatively and *significantly predict* the participants' WTC in English whereas the significant relationship of perceived competence on the endogenous variable is positive. As volatility and anxiety increase, WTC in English decreases and WTC in English increases as does students' perceived competence. Statistically speaking, the first two variables have a significantly negative predictive power on L2 WTC (β = 0.08 & β = 0.20, respectively) whilst the third, i.e. perceived competence, has a significant positive impact on it (β = 0.52).

The other two components of action control, i.e. hesitation and preoccupation, predict L2 WTC indirectly. More precisely, hesitation has a positive significant loading on anxiety (β = 0.27) and a negative one on perceived competence (β = 0.23) both of which show significant loading over WTC. More hesitation results in more anxiety and less of perceived competence which, in turn, has an adverse predictive power on L2 WTC. As far as preoccupation—one of the exogenous variables—and its relationships are concerned, it negatively predicts anxiety (β = 0.11) and positively perceived competence (β = 0.19) and these two, in turn, predict the participants' WTC in English. This is surprising as we expected obsessions with unsuccessful past experiences to increase anxiety and negatively relate to our participants' estimations of their English competence. Potential explanations are given when discussing findings.

Regarding our research focus addressing how Iranian EFL students' perceived competence, communication apprehension (L2 anxiety), and the three ACT variables (preoccupation, hesitation, and volatility) predict their WTC in English, it can be briefly stated that three variables (perceived competence, communication apprehension, and volatility) directly and the other two (hesitation and preoccupation) indirectly predict their WTC in English.

Table 3 shows fit indices of the SEM before and after modifying the model. The results of fit indices which include chi-square (X^2), chi-square on degree of freedom (df/x^2), comparative fit index (CFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), and root mean square error of approximation (RMSEA) are 173.71, 2.41, 0.93, 0.85, 0.90, and 0.09 respectively. In this study, the numerical value of the fit indices for the modified model shows that the assumed pattern needs modification.

Table 3

Fit Indices of the Structural Equation Model

	X^2	df	X^2/df	GFI	AGFI	CFI	RMSEA
Before modifying the model	173.71	72	2.41	0.90	0.85	0.93	0.09
After modifying the model	139.07	71	1.95	0.94	0.90	0.97	0.05

Note. df = degree of freedom; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation

According to Hu and Bentler (1999), a cut off value close to 0.95 for CFI, and 0.06 for RMSEA and > 2 for chi-square index on freedom degree and a cutoff value less than 0.90 of AGFI are needed before concluding that there is a relatively good fit between the hypothesized model and the observed data. Therefore, the values of fit indices in our study demonstrate the necessity of modifying a given model to help improve its fit with the observed data. The amount of chi-square (X^2), chi-square on freedom degree (X^2/df), comparative fit index (CFI), goodness fit index (GFI), adjusted goodness fit index (AGFI), and root mean square error of approximation (RMSEA) are 139.07, 1.95, 0.97, 0.94, 0.90, and 0.05, respectively. The numerical values of fit indices for modified model show that the hypothesized model is acceptable.

Table 4 shows the proportion of total variance (R^2) in the criterion variable (WTC in English) accounted for by its predictors. Volatility, perceived competence, and communication apprehension, taken together, explain 39% of the endogenous variable. The results show that 20% of communication apprehension (L2 anxiety) is accounted for by hesitation and preoccupation. And, finally, hesitation, preoccupation, and communication apprehension explain 33% of perceived competence.

Table 4

The Amount of Variance Explained by Latent Variables in the General Model

Predicative Variables	**Predicted variables**	**R^2**
Hesitation, Preoccupation	CA	.20
Hesitation, Preoccupation, CA	PC	.33
Volatility, PC, CA	WTC	.39

Note. PC = perceived competence, CA = communication apprehension

Discussion

Overall, our findings suggest that Iranian students' WTC is most strongly and directly predicted by their perceived competence, first, and communication apprehension, second. Also, one of Kuhl's (1994) AC variables, volatility, predicts their WTC directly and negatively and the other two, hesitation and preoccupation, predict it indirectly. Findings contribute to our understanding of WTC among Iranian students by, first, revealing the intra-variable relationships between what used to be called the two strongest predictors of L2 WTC in general (perceived competence and communication apprehension becoming mediating variables in Figure 2), and, second, disclosing their individual and joint predictive value on Iranian English students' WTC. The third contribution is the fact that their L2 WTC can be explained not only by two commonly reported variables but also three variables underpinning Kuhl's ACT; they turn to exogenous variables predicting their WTC directly and indirectly.

Before discussing our findings, two points seem to be in order. The three variables directly predicting the endogenous variable (WTC) account for about 40 percent of the participants' WTC in English (Table 4). Given the large number of factors relating to L2 WTC, this amount of variation is considerable and carries theoretical and pedagogical implications that are raised in Conclusion Section below. Second, Table 4 is revealing from yet another perspective: it indicates where from variation pertaining to perceived competence and communication apprehension—two key factors relating to L2 WTC in literature—comes and how much of it is accounted for by which variables. We discuss our findings in two general parts: variables predicting Iranian students' WTC directly and those doing so indirectly.

Perceived Competence and Communication Apprehension

Perceived competence seems to have the maximum direct and positive loading on Iranian students' WTC. This, according to Öz et al. (2015), is *not the objectively measured* but *self-reported perceived* competence. The implication is that even perceptions of Iranian students concerning how competent they think they are in English best predicts the final step to initiation of communication: WTC (Macintyre, 2007). Those perceiving their English competence higher are more likely to be willing to communicate the ultimate result of which is more interaction and learning. This is in keeping with prior studies (Liu & Jackson, 2008; Donovan & Macintyre, 2004; Macintyre & Legatto, 2011) in which different learners with the feeling that they have the capacity to communicate are reported to be more willing to communicate.

To help Iranian students feel more capable of communicating, hence gain higher levels of perceived competence, teachers can play a role. Macintyre and Wang (2021), for instance, believe that teachers can create conditions in which learners invest emotionally and overcome uncertainty in their ability to communicate. This suggestion takes us to the large negative contribution of communication apprehension (anxiety) to perceived competence (Figure 2). In simple terms, lowering Iranian students' anxiety—be it by teachers' assistance as Macintyre and Wang (2021) and Zarei et al. (2019) suggest or students' self-regulated strategies—can enhance their perceived competence which, in turn, predicts their WTC positively and directly. It is interesting to note that communication apprehension predicts WTC both indirectly and directly; they, i.e. anxiety and WTC, make up the hub of the model. As Figure two suggests heightened language anxiety negatively and indirectly predicts Iranian students' WTC by contributing to their self-perceived competence—as mentioned above—and, negatively but directly as well. This replicates prior studies (e.g. Macintyre, 2007; Kang, 2005) and suggests that as Iranian English learners' anxiety arouses their self-perceived competence declines, so does their WTC level. Given the large negative role of communication apprehension in, and the marked positive loading of perceived competence on L2 WTC, it is safe to argue that McCroskey and Richmond's (1991) three-decade old contention that perceived communicative competence and communication apprehension are *the strongest predictors of WTC*

holds true with Iranian English learners too. This runs counter to Joe et al.'s (2017) study in which WTC was weakly predicted by perceived competence.

Such arguments, however, need to be viewed through a more interpretative lens. First, since perceived competence and lack of anxiety are subsumed under the general category of self-confidence and as self-confidence *in L2 use* is culture sensitive (Zhang et al., 2018), some cultures are more likely to overestimate their skills in the second language and others are more prone to underestimate them. Similarly, Lockley (2013) and Mercer (2011) maintain that self-evaluation, a more inclusive term encompassing one's assessment of his/her L2 competence, is shaped by students' culture and how they have been brought up. Culture dependency of the variables suggests that it remains to be seen if our participants' perceived competence—admittedly tied to notions such as self-confidence and self-evaluation— is prone to such culturally informed over- or underestimations. Of few studies addressing the issue is Liu and Littlewood's (1997) study with 2156 East Asian students who are reported to lack confidence in their English competence resulting in underrating their perceived L2 competence which, in turn, leads to more silence in English classes. Peng (2014) also reported that Chinese students' lower levels of L2 WTC is partially attributable to the Chinese culture which "may predispose individuals not to be assertive" (p. 31). Whether Iranian English learners are similar to or different from East Asian or Chinese students needs further studies. In addition to culture dependency, prior studies suggest that personality factors might also lead to over- and underestimation of perceived competence. For example, Kemper et al. (2008) report that extrovert students tend to measure their competence more optimistically. Finally, with fluctuations in students' English proficiency, their perceptions of their competence are also prone to change (Alemi et al, 2013). Therefore, learners' perceptions of how much competent they are in English should be considered vis-à-vis such factors.

Second, the context of our study is classically described as foreign; Iranian students have limited opportunities to use English for authentic interactions beyond classroom boundaries. Research suggests when English learners find that native speakers are not as critical of their attempts as learners think they are or, more pertinent to this study, when their contacts with other non-native learners show them that the latter group encounters similar challenges, their anxiety lowers and their eagerness to initiate communication and take risks rises (Baran-Łucarz, 2021). The large negative loading—direct and indirect—of Iranian students' anxiety on their WTC in this study needs to be viewed vis-à-vis their limited contact opportunities even with other English learners. More precisely, they don't have the opportunity to take advantage of *feeling to be in the same boat* and, consequently, gain courage to communicate. This argument is supported by findings in other foreign contexts where such opportunities exist; English learners feel less anxious and show more inclination to communicate in L2 when they learn that similar learners in similar contexts make similar mistakes (Lee, 2018).

Volatility

Volatile learners are unable to stay focused on self-initiated activities and do not "continue with the task until it has been completed" (Macintyre & Doucette,

2010, p.163). The tendency to leave communication tasks uncompleted is argued to lower WTC in the long run. In Figure 2, the negative direct path from volatility to WTC suggests that the tendency to abandon ongoing communication tasks negatively predicts Iranian English learners' WTC in class. This accords to the findings of Macintyre and Duocette (2010) with French learners in Canada. In WTC literature learners tending to oscillate between communication task *one* to *two* without following the first through to completion are typically described as state-oriented individuals. Such learners shift from one self-initiated communication task, even if it is pleasant, to another "simply to satisfy a desire for change" (Macintyre & Duocette, 2010, p.163). It makes sense to expect that such fluctuations have an adverse effect on Iranian students' WTC since leaving communication tasks uncompleted lowers their chances of goal attainment and positive feelings following it. Such learners keep swinging from one task to another and, in the long run, end up with piles of abandoned tasks with feelings of no accomplishment revolving around them. Subsequently, they are more likely to be unwilling to communicate particularly in classroom contexts. The above argument is advocated by features associated with the action-oriented pole of volatility: persistence. Persistent L2 learners keep on with the communication tasks until they are completed. According to Macintyre and Duocette (2010), action-oriented persistent L2 learners "are more willing to speak in classroom-style communication activities" (p. 167).

Although Macintyre and Duocette (2010) maintain that volatile learners shift from one task to another just to satisfy their desires for change, we propose that another potential cause for their oscillation might lie in the *challenge load* of initiating communication in L2 particularly in EFL settings. This is supported by Mystkowska-Wiertelak and Pawlak's (2017) argument that L2 communication is a challenging task in general. As a result, a competing explanation for such learners' wavering behavior pertaining to L2 WTC might be the fact that they, unlike action-oriented learners, swing from a given communication task to another once they encounter the challenge inherent in it.

Volatility is an isolated factor in Figure 2 and is not linked to other antecedents of L2 WTC. But when taken to broader psychological notions such as state- and action-oriented individuals and how state- and action-oriented individuals cope with learning in general, its role becomes more apparent. For instance, rooted in literature, one might argue that the role of volatility is not limited to Iranian students' WTC only as volatile individuals, aligned with state-orientation, are likely to be less self-regulatory in goal striving, have lower levels of autonomous motivation (Shi et al., 2018), and struggle to enact (Koole et al., 2012).

Hesitation

Hesitation predicts our participants' WTC indirectly and negatively; it significantly predicts our participants' anxiety level which, in turn, has an adverse loading on their WTC. Indirect negative predictive power of hesitation on our participants' WTC is further observed in its negative contribution to perceived competence. In other words, hesitations lower the levels of perceived competence and as the latter lowers, so does L2 WTC. Our findings are consistent with those of

Macintyre and Doucette (2010). The combined contributions of hesitation on Iranian EFL learners' WTC, though indirectly, give further credence to Macintyre and Blackie's (2012) contention that hesitation is one of the key elements in explaining English learners' unwillingness to communicate. Given that in Kuhl's (1994) ACT hesitation is deemed as the action initiator preceding the final step of communication initiation, and regarding the intensity of loadings hesitation has on anxiety and perceived competence, our findings bear significant explanatory potential with regard to one of the common concerns and complaints of English teachers in Iran: a good number of students are habitually silent. Their habitual silence is, to a considerable extent, attributable to their *inability to translate their decisions into actions*. As students choosing to major in EFL in Iranian universities, they have presumably decided to learn English and communicate more efficiently in it; however, upon joining communication classes or any speaking-oriented activities, they cannot turn their decisions into actions. The cause for this inability, according to Friederichs et al. (2020), is rooted in hesitant individuals' being state-oriented in trait. State-oriented individuals are "more likely to get stuck in hesitation" (ibid: 2).

The above argument is further supported by Yashima et al.'s (2004) study in which they report that hesitation after making decisions negatively affects Japanese adult students who decide to travel to the US and join American host families to learn to speak English in context for authentic purposes. Despite their initial decisions followed by undertaking the journey, a good number of them could not move into action and had lower levels of WTC. Similar to Friederichs et al. (2020), they turn to action-state continuum to explain findings of Yashima et al.'s (2004). We also believe that our hesitant participants are inclined to the state end of the same continuum and have issues "initiating their intended actions" (Friederichs et al., 2020, p. 2). This, in turn, results in higher anxiety levels and lower perceptions of communication competence, as depicted in Figure 2. This process operates cyclically: some learners hesitate to speak English when it is necessary (e.g. in Iranian EFL settings). As hesitation experiences increase, the same students are more likely to feel anxious leading to keep silent. Keeping silent means their experiences of L2 communication become less and less which bring about feelings of incompetency in English.

Preoccupation

Contrary to our expectation, preoccupation positively predicts the participants' perceptions of communication and negatively predicts their anxiety levels. As the "the tendency for intrusive and enduring thoughts to flood a person's mind after a failure" (Macintyre & Doucette, 2010, p. 164), we expected preoccupation to have a negative loading on perceived competence and a positive one on anxiety since obsession with prior failures in communication tasks or any negative past experiences is expected to increase anxiety and adversely relate to EFL learners' perceptions of competence.

One way to explain this is to refer to the argument Baker and Macintyre (2000) raise concerning the positive and contributory role of negative past experiences in students' language learning process. They found that some students

view such unpleasant and failure-associated experiences as opportunities to learn: such experiences motivate them and make them determined to get involved in more communication activities. It seems, then, prior unsuccessful communication attempts can be productive as learners become motivated to invest more, show tendency to engage in L2 communication activities and, hence feel more competent to communicate. They use *learned lessons* from past failures upon encountering new communication challenges. This interpretation is backed further by Macintyre and Doucette (2010) who propose that students' previous encounters with communication situations decrease their preoccupation levels and result in higher self-evaluation of L2 competence. In other words, it is likely that the items addressing our participants' rumination over negative past communication endeavors are familiar communication contexts they have encountered before and, subsequently, feel more competent the second time around.

Similar arguments can be made with regard to the path from preoccupation to anxiety. While prior communication failures might be theoretically regarded as an anxiety-breeding factor, it is also likely that students' unsuccessful past experiences might bring them a sense of *L2 learning nonchalance* and make them feel *immune to* what initially used to induce communication anxiety. In other words, we speculate that upon facing an L2 communicative task our participants use prior unpleasant communication experiences as an armor helping them feel less anxious since the novelty of such an anxiety-provoking task has worn off in time; they do not feel intimidated any more. We, of course, admit that interview or think-aloud data are needed to learn if such a speculation is tenable.

Conclusion

Dörnyei (2005) once likened L2 learners' decisions to initiate L2 communication to Crossing the Rubicon as such decisions are likely to be followed by failure or success. A large number of trait and state factors are believed to relate to L2 learners' decisions to initiate conversation in a second language. Given the multitude of such factors, it is almost impossible to include all in a single study (Henry et al., 2021). In this study, we chose to focus on enduring and stable features of L2 WTC and how they relate to Kuhl's (1994) ACT, acknowledging, at the same time, its "multilayered nature as well as its variability over time and across situations" (Nematizadeh & Wood, 2021).

Drawing upon the findings, we believe the three components of Kuhl's (1994) ACT, i.e. hesitation, volatility, and preoccupation, carry explanatory potential with regard to Iranian EFL students' (un)willingness to communicate in classroom settings. Of course, their explanatory power should be seen along with two commonly factors, i.e. perceived competence and communication apprehension, relating to L2 WTC. Three direct loadings from perceived competence, communication apprehension (anxiety), and volatility to L2 WTC and indirect loadings of hesitation and preoccupation on it bear theoretical and pedagogical conclusions.

Theoretically, and given the sizeable contributions of perceived competence and anxiety to Iranian EFL learners' L2 WTC, it is concluded that they

seem unrivaled in predicting "the intention to speak or to remain silent given free choice" (Macintyre, 2020). As regards Kuhl's (1994) ACT and its three constituent components, his general observation that individuals differ in their processes of action initiation (speaking English in Iranian classes in this study) and that such processes should be seen in light of decision making, the ability to translate decisions into actions, prior unpleasant experiences, and (in)ability to keep focused explains WTC among Iranian EFL learners more comprehensively. In other words, if prior studies reported correlations between L2 WTC and perceived competence or communication apprehension among Iranian students, Kuhl's ACT casts more light as it reveals that such important variables themselves are predicted by hesitation and preoccupation, though the prediction was different from what ACT suggested for the latter. Following this unexpected finding (preoccupation lowers anxiety and boosts feelings of communicative competence among Iranian EFL students), we tentatively propose that unpleasant communication experiences might motivate students become determined to invest more in L2 communication. This proposal accords with Friederichs et al.'s (2020, p.1) "when tough gets you going" postulation.

Pedagogically, Iranian English teachers can turn to different strategies to help with higher levels of L2 WTC with students who are habitually silent in class. For instance, to lower anxiety, hence increase WTC and perceived competence levels, it has been suggested that group work activities, wait time, and appropriate use of error correction are helpful (Zarei et al., 2019). Similarly, Cao (2011) and Sheybani (2019) hold that positive interpersonal interactions between teachers and students can be equally facilitative. Uncertainty in L2 ability can be addressed if teachers create affordable communication tasks that gradually lead to higher levels of perceived competence and, accordingly, L2 WTC (Altiner, 2017). Finally, Kang (2005) recommends teachers to design plans to deal with their students' volatility and hesitation tendencies. One such plan is to turn to Parks-Stamm et al.'s (2007) implementation intentions or the so-called *if-then* plans. In such plans, students "identify situational cues that provide them with the opportunity to communicate in their second language and might also be able to identify their hesitations" (p. 169).

Studies focusing on state factors of WTC are valuable but make up one side of the coin only. Further studies are needed to help us understand the intricate, moment-to-moment, and dynamic fluctuations of L2 WTC among Iranian EFL students. Such studies constitute the other side of WTC coin.

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References

Alemi, M., Tajeddin, Z., & Mesbah, Z. (2013). Willingness to communicate in L2 English: Impact of learner variables. *Research in Applied Linguistics, 4*(1), 42–61.

Allahyar, N. (2021). What does students' willingness to communicate or reticence signify to teachers? In N. Zarrinabadi & M. Pawlak (Eds.), *New perspectives on willingness to communicate in a second language*, Second Language Learning and Teaching, https://doi.org/10.1007/978-3-030-67634-6_5.

Altiner, C. (2017). *Willingness to communicate in English in the Turkish EFL classroom context.* [Unpublished PhD dissertation]. Hacettepe University, Ankara.

Amirian, Z., Karamifar, Z., & Youhanaee, M. (2020). Structural equation modeling of EFL learners' willingness to communicate and their cognitive and personality traits. *Applied Research on English Language*, *9*(1), 103-136. https://doi.org/10.22108/are.2019.116248.1451

Baker, S. C., & Macintyre, P. D. (2000). The role of gender and immersion in communication and second language orientations. *Language Learning*, *50*, 311–341. https://doi.org/10.1111/0023- 8333.00119

Baran-Łucarz, M. (2021). The mediating effect of culture on the relationship between FL self-assessment and L2 willingness to communicate: The Polish and Italian EFL context. In N. Zarrinabadi & M. Pawlak (Eds.), *New perspectives on willingness to communicate in a second language* (pp. 85-117*). Springer.* https://doi.org/10.1007/978-3-030-67634-6_5.

Barry, E., Chaney, B., Piazza-Gardner, K., & Chavarria, A. (2014). Validity and reliability reporting practices in the field of health education and behavior: A review of seven journals. *Health Education & Behavior*, *41*(1), 12-18. http://dx.doi.org/10.1177/1090198113483139

Cao, Y. (2011). Investigating situational willingness to communicate within second language classroom from an ecological perspective. *System*, *39*, 468–479. http://dx.doi.org/10.1016/j.system.2011.10.016

Cao, Y., & Philp, J. (2006). Interactional context and willingness to communicate: A comparison of behaviour in whole class, group and dyadic interaction. *System*, *34*(4), 480–493. https://doi.org/10.1016/j.system.2006.05.002

Clément, R., Baker, S. C., & Macintyre, P. D. (2003). Willingness to communicate in a second language the effects of context, norms, and vitality. *Journal of Language and Social Psychology*, *22*(2), 190–209. https://doi.org/10.1177/0261927X03022002003

de Saint Léger, D., & Storch, N. (2009). Learners' perceptions and attitudes: Implications for willingness to communicate in an L2 classroom. *System, 37*(2), 269–285. https://doi.org/10.1016/j.system.2009.01.001

Donovan, L. A., & Macintyre, P. D. (2004). Age and sex differences in willingness to communicate, communication apprehension, and self-perceived competence. *Communication Research Reports*, *21*(4), 420–427. https://doi.org/10.1080/08824090409360006

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum.

Friederichs, K. M., Kees, M. C., & Baumann, N. (2020). When tough gets you going: Action orientation unfolds with difficult intentions and can be fostered by mental contrasting. *Personality and Individual Differences, 161,* Article 109970. https://doi.org/10.1016/j.paid.2020.109970

Fushino, K. (2010). Casual relationships between communication confidence, beliefs about group work, and willingness to communicate in foreign language group work. *TESOL Quarterly, 44*(4), 700–724. http://dx.doi.org/10.5054/tq.2010.235993

Ghonsooly, B., Khajavy, G. H., & Asadpour, S. F. (2012). Willingness to communicate in English among Iranian non-English major university students. *Journal of Language and Social Psychology, 31*(2), 197–211. http://dx.doi.org/10.1177/0261927X12438538

Halupka-Rešetar, S., Kneževi´c. L., & Topalov, J. (2018). Revisiting willingness to communicate in English as a foreign language: The Serbian perspective. *Journal of Multilingual and Multicultural Development, 39*(10), 912–924. http://dx.doi.org/10.1080/01434632.2018.1454456

Hashimoto, Y. (2002). Motivation and willingness to communicate as predictors of reported L2 use: The Japanese ESL context. *Second Language Studies, 20*(2), 29–70.

Henry, A., Thorsen, C., & Macintyre, P. D. (2021). Willingness to communicate in a multilingual context: part one, a time-serial study of developmental dynamics. *Journal of Multilingual and Multicultural Development*, 1–20. https://doi.org/10.1080/01434632.2021.1931248

Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal, 70*(2), 125–132. https://doi.org/10.1111/j.1540-4781.1986.tb05256.x.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*, 1-55. http://dx.doi.org/10.1080/10705519909540118

Jamarillo, F., Locander, W. B., Spector, P. E., Harris, E. G. (2007). Getting the job done: the moderating role of initiative on the relationship between intrinsic motivation and adaptive selling. *Journal of Personal Selling and Sales Management 27*, 59-74. http://dx.doi.org/10.2753/PSS0885-3134270104

Joe, H. K., Hiver, P., & Al-Hoorie, A. H. (2017). Classroom social climate, self-determined motivation, willingness to communicate, and achievement: A study of structural relationships in instructed second language settings. *Learning and Individual Differences, 53*, 133–144. http://dx.doi.org/10.1016/j.lindif.2016.11.005

Kang, S. J. (2005). Dynamic emergence of situational willingness to communicate in a second language. *System, 33*, 277–292. http://dx.doi.org/10.1016/j.system.2004.10.004

Kemper, C. J., Leue, A., Wacker, J., Chavanon, M. L., Hennighausen, E., & Stemmler, G. (2008). Agentic extraversion as a predictor of effort-related cardiovascular response. *Biological Psychology, 78*(2), 191–199. https://doi.org/10.1016/j.biopsycho.2008.02.009

Koole, S. L., Jostmann, N. B., & Baumann, N. (2012). Do demanding conditions help or hurt self-regulation? *Social and Personality Psychology Compass, 6*(4), 328–346. https://doi.org/10.1111/j.1751-9004.2012.00425.x.

Kuhl, J., (1994). A theory of action and state orientations. In J. Kuhl, J. Beckmann (Eds.), *Volition and Personality*, (pp. 9-46). Gottingen.

Lee, J. H. (2018). The effects of short-term study abroad on L2 anxiety, international posture, and L2 willingness to communicate. *Journal of Multilingual and Multicultural Development, 39*(8), 703–714.

Liu, M., & Jackson, J. (2008). An exploration of Chinese EFL learners' unwillingness to communicate and foreign language anxiety. *The Modern Language Journal, 92*(1), 71–86. http://dx.doi.org/10.1111/j.1540-4781.2008.00687.x

Liu, N. F., & Littlewood, W. (1997). Why do many students appear reluctant to participate in classroom learning discourse? *System, 25*, 371–384. http://dx.doi.org/10.1016/S0346-251X(97)00029-8

Lockley, T. (2013). Exploring self-perceived communication competence in foreign language learning. *Studies in Second Language Learning and Teaching, 3*(2), 187–212. http://dx.doi.org/10.14746/ssllt.2013.3.2.3

Macintyre, P. D. (1994). Variables underlying willingness to communicate: A causal analysis. *Communication Research Reports, 11*(2), 135–142. https://doi.org/10.1080/08824099409359951

Macintyre, P. D. (2007). Willingness to communicate in the second language: Understanding the decision to speak as a volitional process. *The Modern Language Journal, 91*(4), 564–576. https://doi.org/10.1111/j.15404781.2007.00623.x

Macintyre, P. D. (2020). Expanding the theoretical base for the dynamics of willingness to communicate. *Studies in Second Language Learning and Teaching*, *10* (1), 111–131. https://doi.org/10.14746/ssllt.2020.10.1.6

Macintyre, P. D., & Charos, C. (1996). Personality, attitudes, and affect as predictors of second language communication. *Journal of Language and Social Psychology, 15*, 3–26. https://doi.org/10.1177/0261927X960151001

Macintyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: a situational model of L2 confidence and affiliation. *The Modern Language Journal*, *82*(4), 545–562. https://doi.org/10.1111/j.1540-4781.1998.tb05543.x

Macintyre, P. D., Baker, S., Clément, R., & Conrod, S. (2001). Willingness to communicate, social support, and language-learning orientations of immersion students. *Studies in Second Language Acquisition, 23*(3), 369–388. https://doi.org/10.1017/S0272263101003035

Macintyre, P. D., Baker, S. C., Clément, R., & Donovan, L. A. (2003). Sex and age effects on willingness to communicate, anxiety, perceived competence, and L2 motivation among junior high school French immersion students. *Language Learning, 53*, 137–66. http://dx.doi.org/10.1111/1467-922.00194

Macintyre, P. D., & Doucette, J. (2010). Willingness to communicate and action control. *System, 38*, 161–171. https://doi.org/10.1016/j.system.2009.12.013

Macintyre, P. D., & Legatto, J. J. (2011). A dynamic system approach to willingness to communicate: Developing an idiodynamic method to capture rapidly changing affect. *Applied Linguistics, 32*(2), 149–171. http://dx.doi.org/10.1093/applin/amq037

Macintyre, P. D., & Blackie, R. A. (2012). Action control, motivated strategies, and integrative motivation as predictors of language learning affect and the intention to continue learning French. *System, 36*, 533–43. http://dx.doi.org/10.1016/j.system.2012.10.014

Macintyre, P. D., & Wang, L. (2021). Willingness to communicate in the L2 about meaningful photos: Application of the pyramid model of WTC. *Language Teaching Research*, *25*(6), 878-898. https://doi.org/10.1177/13621688211004645

McCroskey, J. C., & McCroskey, L. L. (1988). Self-report as an approach to measuring communication competence. *Communication Research Reports, 5*, 108–113. https://doi.org/10.1080/08824098809359810

McCroskey, J. C., Richmond, V. P. (1991). Willingness to communicate: differing cultural perspectives. *The Southern Communication Journal*, *56*, 72-77. https://doi.org/10.1080/10417949009372817

Mercer, S. (2011). Language learner self-concept: Complexity, continuity & change. *System, 39*(3), 335–346. http://dx.doi.org/10.1016/j.system.2011.07.006

Mystkowska-Wiertelak, A. (2018). Fluctuations in willingness to communicate during a semester: A case study. *The Language Learning Journal*. https://doi.org/10.1080/09571736.2018.1469660

Mystkowska-Wiertelak, A., & Pawlak, M. (2017). *Willingness to communicate in instructed second language acquisition: A micro and macro perspective*. Clevedon. Multilingual Matters.

Nematizadeh, Sh., & Wood, D. (2021). Second language willingness to communicate as a complex dynamic system. In N. Zarrinabadi & M. Pawlak (Eds.), *New perspectives on willingness to communicate in a second language (pp. 7-23). Springer*. https://doi.org/10.1007/978-3-030-67634-6_5

Öz, H., Demirezen, M., & Pourfeiz, J. (2015). Willingness to communicate of EFL learners in Turkish context. *Learning and Individual Differences, 37*, 269–275. https://doi.org/10.1016/j.lin dif.2014.12.009

Parks-Stamm, E. J., Gollwitzer, P. M., & Oettingen, G. (2007). Action control by implementations: effective cue detection and efficient response initiation. *Social Cognition*, *25*(2), 248-266. https://psycnet.apa.org/doi/10.1521/soco.2007.25.2.248

Peng, J. E. (2007). Willingness to communicate in an L2 and integrative motivation among college students in an intensive English language program in China. *University of Sydney Papers in TESOL, 2*(1), 33–59.

Peng, J. E. (2014). *Willingness to communicate in the Chinese EFL university classroom: An ecological perspective*. Multilingual Matters.

Peng, J. E., & Woodrow, L. (2010). Willingness to communicate in English: A model in the Chinese EFL classroom context. *Language Learning*, *60*(4), 834–876. https://doi.org/10.1111/j.1467- 9922.2010.00576.x

Piechurska-Kuciel, E. (2021). Positive predictive value of extraversion in diagnosing L2 WTC. In N. Zarrinabadi & M. Pawlak (Eds.), *New perspectives on willingness to communicate in a second language*, Second Language Learning and Teaching, https://doi.org/10.1007/978-3-030-67634-6_5.

Sheybani, M. (2019). The relationship between EFL Learners' Willingness to Communicate (WTC) and their teacher immediacy attributes: A structural equation modelling. *Cogent Psychology*, *6*, 1–14. http://dx.doi.org/10.1080/23311908.2019.1607051

Shi, D., Lee, T., & Maydeu-Olivares, A. (2018). Understanding the model size effect on SEM fit indices. *Educational and Psychological Measurement, 79*, 310–334. https://doi.org/10.1177/0013164418783530

Shirvan, M. E., Khajavy, G. H., Macintyre, P. D., & Taherian, T. (2019). A meta-analysis of L2 willingness to communicate and its three high-evidence correlates. *Journal of Psycholinguistic Research*, *48*, 1241–1267 https://link.springer.com/article/10.1007/s10936-019-09656-9

Teven J., Richmond, V. P., McCroskey, J. C., & McCroskey, L. L. (2010). Updating relationships between communication traits and communication competence. *Communication Research Reports, 27*, 263–270. https://doi.org/10.1080/08824096.2010.496331

Yashima, T. (2002). Willingness to communicate in a second language: The Japanese EFL context. *The Modern Language Journal*, *86*, 54–66. http://dx.doi.org/10.1111/1540-4781.00136

Yashima, T., Zenuk-Nishide, L., & Shimizu, K. (2004). The influence of attitudes and affect on willingness to communicate and second language communication. *Language Learning*, *54*(1), 119–152. http://dx.doi.org/10.1111/j.1467-9922.2004.00250.x

Zarei, N., Saeidi, M., & Ahangari, S. (2019). Exploring EFL Teachers' Socioaffective and Pedagogic Strategies and Students' Willingness to Communicate with a Focus on Iranian Culture. *Education Research International*, *2019*, 1–11. https://doi.org/10.1155/2019/3464163

Zhang, J., Beckmann, N., & Beckmann, J. S. (2018). To talk or not to talk: A review of situational antecedents of willingness to communicate in the second language classroom. *System*, *72*(1), 226–239. https://doi.org/10.1016/j.system.2018.01.003.

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