Individual Differences and Willingness to Communicate in Second Language: The Role of Student Age, Gender and Socioeconomic Status

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Abstract

It has been widely argued that willingness to communicate (WTC) in a second language (L2) is a dual construct of the learner's trait and state. This study aimed to explore the relationships between trait-level antecedents (students' demographic features) and their L2 WTC. A sample of 1502 university students was recruited to participate in this study. Data of their age, gender, family socioeconomic status (SES) were collected. A questionnaire of L2 WTC was adopted to measure the participants' WTC in meaning-focused activities and WTC in form-focused activities. A path model was tested via structural equation modeling and significant relationships between student demographic features (age, gender and SES) and L2 WTC were observed. The major findings were: 1) male students had higher WTC in meaning-focused activities, but female students showed higher WTC in form-focused activities, 2) student age was negatively related to WTC in meaning-focused activities, and 3) students SES positively predicted WTC in meaning-focused activities. Implications for L2 instruction in tertiary education were also discussed.

Keywords: *Willingness to Communicate, Second Language Acquisition, Demographic Feature, Higher Education*

Introduction

The learning and practice of communicative skills is the core of second language (L2) acquisition and the learner's sustainable development (Chen et al., 2022). Whether or not the learner would participate in communicative activities, to some extent, results from his or her inclination towards the participation in communication. This inclination is referred to as willingness to communicate (WTC) in the L2 research field. The most commonly acknowledged definition of WTC is the "readiness to enter into discourse at a particular time with a specific person or persons, using a L2 (MacIntyre et al., 1998, p. 547)". This definition has depicted a dual construct of L2 WTC at both trait and state levels (Zhang et al., 2018). Hence, the existing literature could be roughly divided into two categories which have investigated the antecedents of L2 WTC as a trait or state respectively. Research that has viewed L2 WTC as a fluctuating state has primarily explored the relationships between L2 WTC and situational factors such as activity types, topics, interlocutors, classroom climate, class sizes, and teaching styles (e.g., Cao, 2014; Kruk, 2022; Macintyre & Wang, 2021; Pawlak & Mystkowska-Wiertelak, 2015). In a different vein, some research has tended to consider L2 WTC a constant individual trait and studied its antecedents such as gender, age, cultural background, anxiety, motivation and personality (e.g., Asmali et al., 2015; Barabadi et al., 2021; Ito, 2022; Kruk, 2022; Lan et al., 2021; MacIntyre et al., 2002). However, the understandings of L2 WTC at the trait level have been comparatively limited. Some important trait factors, especially the ones at the social level, have not been examined in relation to L2 WTC, for example, the learner's ethnical group and SES background. In addition, the study on student demographic features predicting L2 WTC has been conducted in secondary schools. Whether and how student demographic features may influence their L2 WTC in tertiary institutions, where student diversity is more commonly observed, still remains unexplored.

Moreover, L2 WTC has been traditionally investigated as a collective variable. However, there has been a distinction between different dimensions within the WTC construct. The overall WTC consists of WTC in meaning-focused activities and WTC in form-focused activities (Peng & Woodrow, 2010; Weaver, 2005). These two dimensions conceptualize WTC in different communicative activities. WTC in meaning-focused activities refers to the willingness to communicate with the teacher and a large audience (whole class peers or whole group). In contrast, WTC in form-focused activities refers to the willingness to communicate with a limited audience (peers nearby or familiar classmates). Given the different types of communicative behavior, it can be anticipated that L2 learners may differ in their WTC. Further exploration is needed to investigate L2 learners' WTC in meaning-focused activities and WTC in form-focused activities respectively. Therefore, to address the research gaps, the current study was designed to examine the relationships between students' demographic features (age, gender, and SES) and their WTC (in meaning-focused activities and in form-focused activities) within tertiary L2 learning.

L2 Willingness to Communicate

The concept of WTC originated from theories of first language communication (Burgoon, 1976) and later became a research focus within the L2 acquisition field. L2 willingness to communicate was initially defined as a predisposition rooted in a person's personality (McCroskey & Richmond, 1991). This definition considers WTC an innate trait which is constant across time and situations (Mccroskey & Baer, 1985). Later, the definition of WTC was revised and conceptualized WTC as a function of the context in which a person communicates with a L2 (MacIntyre et al., 1998). The revised definition has been well acknowledged by the field and it highlighted the more dynamic changes of WTC. It recently has been widely argued that WTC is a dual construct which combines the learner's trait and state characteristics (Peng & Woodrow, 2010; Zhang et al., 2018). The dual perspective has indicated that WTC stems from the learner's trait characteristics, for example, age, gender, and personality (Barabadi et al., 2021; Fernández-García & Fonseca-Mora, 2019; MacIntyre et al., 2002), meanwhile it fluctuates in line with various situation cue, for example, interlocutors, teaching styles, and topics (Chen et al., 2022; Macintyre & Wang, 2021; Wang et al., 2021).

Since willingness to communicate is closely related to the learner's tendency to seek communication opportunities and engagement in interactions (Cao & Philp, 2006), it plays a critical part in language acquisition. A widespread assumption in the L2 field has been that WTC is a decisive factor in L2 communicative behavior, which would consequently lead to L2 competence (Kang, 2005; Mystkowska-Wiertelak & Pawlak, 2017). A couple of studies have investigated WTC as the predictor of L2 communication behavior. For example, researchers have contended that stronger WTC is related to the higher frequency of communication in the L2 context (Cao, 2014; Mystkowska-Wiertelak & Pawlak, 2014). Furthermore, some research has examined the relationship between WTC and L2 competence. It has been found that WTC is positively related to L2 performance (Mahmoodi & Moazam, 2014). More recently, research has documented that L2 performance is a function of learners' WTC, rather than communication behavior.

Researchers have developed a L2 measurement and identified two dimensions within L2 WTC construct: WTC in meaning-focused activities and WTC in form-focused activities (Weaver, 2005). Later, this measurement has been adopted to assess Chinese English-as-a-foreign-language (EFL) learners' WTC (Peng & Woodrow, 2010). The common feature of WTC in meaning-focused activities is that communicative activities take place with the teacher and a large audience (the whole class peers and the whole group). For example, the respondents are willing to give a short self-introduction without notes in English to the class, to translate a spoken utterance from Chinese into English in the group, and to ask the teacher in English to repeat what he/she just said in English. WTC in form-focused activities tends to describe communicative activities which highlight cognitive tasks and take place with a limited audience (peers nearby). For example, the respondents

are willing to ask the peer sitting next to them in English the meaning of an English word and ask the familiar peer in English how to say an English phrase to express their thoughts. However, prior research has only investigated the overall WTC (Peng & Woodrow, 2010), without scrutiny of the respective correlates of WTC in meaning-focused activities and WTC in form-focused activities.

Trait-Level Antecedents of WTC

Although the state-level antecedents of WTC have become a focus in the current L2 WTC research field, explorations of trait-level antecedents have continuously made outstanding contributions (Fernández-García & Fonseca-Mora, 2022; Kruk, 2022; Mystkowska-Wiertelak & Pawlak, 2017; Shirvan et al., 2019). Maclntyre and colleagues' study (2002) has examined the relationships between student gender, age and L2 WTC. It has been found that L2 WTC tends to increase with student age and female students are likely to have higher WTC than male students. L2 WTC has also been found to be affected by the learner's cultural background. For example, studies have shown that Chinese, Korean and Turkish students tend to have comparatively weak WTC in L2 communication (Asmali et al., 2015; Lee, 2009; Liu & Jackson, 2008). A meta-analysis has concluded three trait-level correlates of L2 WTC (Shirvan et al., 2019), namely, perceived language competence, language anxiety, and motivation. The researchers have reviewed 22 studies published from 2000 to 2015 and found that the three trait-level variables are moderately correlated with L2 WTC and the perceived language competence has the most potent effects.

The more recent study also has shown similar findings of the relationships between L2 learners' traits and their WTC. Researchers have explored L2 WTC in relation to learners' personality traits (Zhang et al., 2020). It has been documented that L2 WTC is likely to be linked to the learner's openness to experience, conscientiousness, and agreeableness. Lan and colleagues' research (2021) has collected multi-university data and evidenced that the ideal L2 self is positively associated with L2 WTC. Another study used student self-ratings and teacher ratings and found that student anxiety and gelotophobia are negatively related to L2 WTC (Barabadi et al., 2021). MacIntyre and Wang's latest study (2021) has integrated the learner's trait characteristics and influential situational factors in search of mechanisms of L2 WTC. They have pointed out that WTC changes in line with speakers' motivations and emotions shaped by the deep, personal association with the communication topics (Macintyre & Wang, 2021).

Researchers have argued that the combination of both trait level and state level antecedents of WTC is complimentary and necessary (Shirvan et al., 2019). Of particular interest to the current study was the trait level predictors of L2 WTC. Because the trait level construct is shaped by enduring, constant variables which are less likely to be modified, special attention should be paid to those variables, such as age, gender and SES, to provide implications for L2 instructions. Hence, the research questions the current study aimed to answer were:

RQ₁: What are the relationships between student demographic features (age, gender and SES) and WTC in meaning-focused activities?

RQ₂: What are the relationships between student demographic features (age, gender and SES) and WTC in form-focused activities?

Methods

Participants

The current study recruited a sample of 1502 students who learned English as a second language from a university in southwest China. The students volunteered to participate in the investigation. They varied in gender, age and SES. The demographic features of the sample are presented in Table 1.

Table 1

Demographic Features and L2 WTC of the Students (n = 1502)

Demographic variable	Sub-sample	Number of students
Gender	Female	803
	Male	699
Age	17	308
	18	298
	19	313
	20	321
	21	262
SES	< 5000	154
	5001-10000	355
	10001-15000	501
	15001-20000	299
	> 20000	193

Measurements

Student demographic features. The student participants self-reported the information about their age, gender and SES. Their ages were between 17 to 23, which were quantified as 1 to 5. The "female" gender was labeled as 1 and the "male" gender as 2. Participants' SES was assessed by the indicator of family monthly income. Five options were provided, namely, "lower than 5000 RMB, 5001-10000 RMB, 10001-15000 RMB, 15001-20000 RMB and more than 20001 RMB". Participants' choices of family income were scored as 1 to 5.

L2 WTC. The L2 WTC questionnaire was primarily developed to assess the extent to which the

participants are willing to communicate in L2 (Weaver, 2005). The current study employed a shortened version revised later which had 10 items, and been proved reliable and valid (Peng & Woodrow, 2010). The 10-item questionnaire contained two dimensions: six items regarding WTC in meaning-focused activities and four items focusing on WTC in form-focused activities. According to the exploratory factor analysis (EFA) of the WTC questionnaire (Peng & Woodrow, 2010), WTC in meaning-focused activities (assessed by items 1-6) referred to the willingness to communicate with the teacher and a large audience (the whole class peers and the whole group) where interpersonal interactions were highlighted, for example, "I am willing to give a short self-introduction without notes in English to the class;" and "I am willing to ask the teacher in English to repeat what he/she just said in English because I didn't understand." However, WTC in form-focused activities (assessed by items 7-10) referred to the willingness to communicate with a limited audience (peers nearby) where high-end cognitive tasks usually took place, for example, "I am willing to ask my peer sitting next to me in English the meaning of an English word;" and "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." Students answered the questions on a 5-point Likert scale from 1 (definitely not willing) to 5 (definitely willing). The higher score represents a stronger willingness to communicate in L2.

Data Collection and analysis

In January 2021, the participants were contacted and invited to respond to the investigation. The demographic form and L2 WTC questionnaire were delivered via an online survey system (Zheng, 2008); students filled them out on computers and the system gathered all the responses and transferred the data into an SPSS file. The collection of demographic and WTC data was completed within one week.

Given the multivariate estimation, we adopted structural equation modeling (SES) for data analysis via the statistical tool AMOS. The SES would illustrate the complex interactions among variables. The model fit was evaluated and considered good for CFI > 0.90, GFI > 0.90, SRMR < 0.08, and RMSEA < 0.06 (Hu & Bentler, 1999).

Results

The participants' responses to the WTC questionnaire were aggregated into scores regarding WTC in meaning-focused activities and scores regarding WTC in form-focused activities. The means of L2 WTC of each sub-sample by demographic features are presented in Table 2.

Table 2

WTC in Meaning-focused Activities and WTC in Form-focused Activities across Demographic Subgroups

Demographic variable	Sub-sample	WTC in meaning focused activities	WTC in form focused activities
Gender	Female	3.13 (0.51)	4.22 (0.60)
	Male	3.99 (0.55)	3.71 (0.59)
Age	17	4.12 (0.60)	3.98 (0.63)
	18	4.01 (0.62)	3.92 (0.61)
	19	3.77 (0.55)	4.15 (0.56)
	20	3.41 (0.60)	4.13 (0.63)
	21	3.11 (0.52)	4.14 (0.64)
SES	< 5000	2.67 (0.50)	3.96 (0.60)
	5001-10000	3.55 (0.53)	3.98 (0.61)
	10001-15000	3.88 (0.60)	3.93 (0.59)
	15001-20000	4.01 (0.62)	4.05 (0.61)
	> 20000	4.03 (0.55)	4.04 (0.52)

The hypothesized model included all the paths between the independent variables and dependent variables. Figure 1 presents the coefficients of predicting effects.

Figure 1

Hypothesized Model of Student Demographic Features Predicting WTC
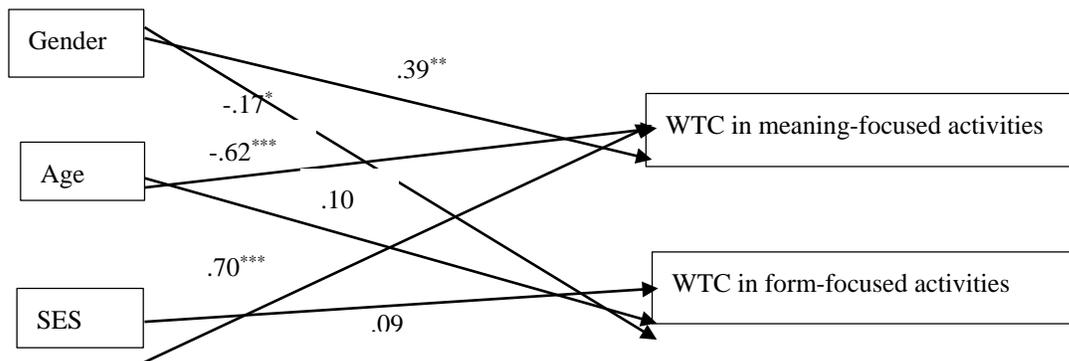
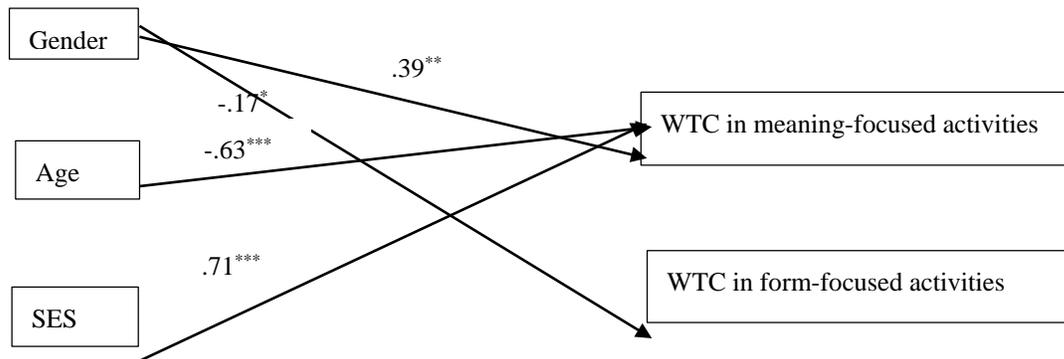*Note.* * $p < .05$; ** $p < .01$; *** $p < .001$

The examination of the hypothesized model showed that two paths were not significant, indicating the independent variable age and SES could not significantly predict WTC in for-

focused activities. In addition, the model fit was not good (CFI = .74, GFI = .70, RMSEA = .26, SRMR = .18), suggesting modification of the model.

Hence, two paths (from Age to WTC in form-focused activities; from SES to WTC in for-focused activities) were removed from the model. Necessary covariance was added. The final model is presented in Figure 2. After modification, the fit of the final mediation model was excellent (CFI = .99, GFI = .99, AFGI = .96, RMSEA = .05, SRMR = .01). The results showed that student gender was positively related to WTC in meaning-focused activities, but negatively related to WTC in form-focused activities; student age negatively predicted WTC in meaning-focused activities; student SES was positively associated with WTC in meaning-focused activities.

Figure 2

Modified Model of Student Demographic Features Predicting WTC

Note. * p < .05; ** p < .01; *** p < .001

Discussion

The findings of the current study suggest that male students are likely to have higher WTC in meaning-focused activities than female students. However, female students are likely to have higher WTC in form-focused activities than male students. Furthermore, with the increase in student age, students are less willing to communicate in meaning-focused activities. However, students from higher SES families tend to participate in meaning-focused activities more willingly.

Student Gender and L2 WTC

The findings of the current study, to some extent, have confirmed the prior research about the gender difference in WTC (MacIntyre et al., 2002). In addition, the present study has provided evidence of different effects of student gender on WTC in form-focused activities and WTC in meaning-focused activities. Male students have stronger willingness to attend meaning-focused activities with the teacher and the whole class/group. This indicates that male students may be more confident with interactions with the authorized role (the teacher) and/or a large audience.

Female students may have lower WTC in meaning-focused activities but higher WTC in form-focused activities. It seems that female students enjoy more the communication with a few familiar and intimate peers. These findings could be explained by the gender differences from a psychosocial perspective. Female students are more susceptible to the fear of failure and the fear of being laughed at than male students (Borgonovi & Han, 2021); in contrast, male students suffer lower fears and take advantage of leadership in communicative interactions (Schlamp et al., 2020).

The gender differences in WTC have some implications for L2 instruction. The instructor should lend more support to female students in meaning-focused activities. By offering more opportunities for meaning-focused activities, the instructor is responsible for encouraging female students to actively participate in communication with more peers. Also, the instructor should be aware of the student gender ratio by which the instructor impersonally communicates with the students. It is plausible that the instructor deliberately spends slightly more time interacting with the female students in person. For male students, the instructor is supposed to notice their lower WTC in form-focused activities. Therefore, special guidance should be offered to male students to focus somewhat more on cognitive tasks in L2 communication and acquisition.

Student Age and L2 WTC

The findings of this study have shown that L2 WTC varies in line with student age, which has been pointed out in the existing literature (MacIntyre et al., 2002). However, contrary to the prior research that L2 WTC may become more assertive with the increase in student grades (from grade 7 to grade 9), the current study has found that L2 WTC is negatively associated with student age. The results have provided evidence that with the increase in student age (from year 17 to year 19), there probably is a drop of WTC in meaning-focused activities. One explanation could be the differences in the sample selection. The current study used a sample of university students who were emerging adults. University students, compared with school students, are more likely to take delight in high-end cognitive tasks and self-regulated learning. In addition, given that the learning tasks in tertiary institutions are academically oriented and highly structured, the students may experience a decrease in WTC in meaning-focused activities. In higher education, students tend to experience unsuccessful collaborative learning through peer communication (Lai, 2021) because they may vary in interests, habits and competence. Without a shared goal, the young adults are likely to withdraw from meaning-focused activities, and consequently turn to form-focused communication with a couple of familiar peer students.

However, WTC in meaning-focused activities should not be ignored in L2 instruction, even though it is delivered to adult students. There is less acquaintance between students and a large number of peers due to the comparatively loose curriculum settings in higher education. Therefore, the L2 instructor is supposed to encourage more cooperative learning in instructional designs. With the peers who are cooperative and actively participating in a discussion, role play, and public

speech (Kang, 2005; Pawlak & Mystkowska-Wiertelak, 2015), the learners may be more likely to develop higher WTC in meaning-focused activities. Furthermore, the instructor should make a special effort to build and maintain positive relationships with the university L2 learners. A teacher-student rapport may support the students with a positive attitude towards interacting with the teacher. Being situated in favorable interpersonal relationships, the learner would be less susceptible to the fear of L2 communication when interacting with familiar, caring and cooperative interlocutors.

Student SES and L2 WTC

There has been, to our knowledge, no prior study investigating the relationship between student SES and L2 WTC. The current study has found that students with higher SES are likely to have higher L2 WTC in meaning-focused activities. Research has shown that high SES students more frequently use social strategies in learning (Callan et al., 2017). It can be anticipated that high SES students are more willing to enjoy the social interactions with the teacher and a comparatively large number of classmates in meaning-focused activities. On the other hand, it seems that students with lower SES tend to experience more struggles throughout their college life, especially in terms of interpersonal relationships (O'Connell & Marks, 2021). Therefore, low SES students are likely to be discouraged from meaning-focused activities which are comparatively high demanding of social interaction skills.

In L2 instructional practice, the teacher should be aware of low SES students' weak WTC and provide them more learning opportunities for participating in meaning-focused activities. Low SES students should be encouraged to actively take part in group/whole class discussion, role-play, and public speaking, and so on. Meanwhile, the teacher and peers are supposed to offer low SES students more emotional support. Research has shown that social support from teachers and peers is an important protective resource and that when both sources of support are high, the students are more likely to perceive a safe environment. Teacher support is exceptionally critical, because it is protective when social support from peers is low (Coyle et al., 2022). With perceptions of a safe and caring learning environment, low SES students could possibly engage in L2 learning with a high WTC.

The current study has provided evidence of antecedents of L2 WTC, which has added weight to the argument that L2 WTC is a dual construct of both learner trait and state (Kruk, 2022; Zhang et al., 2018). The individual differences in learners' demographic features, such as gender, age and SES, play a predicting factor in L2 learners' WTC in tertiary classrooms. This shows that L2 WTC of tertiary students is still a function of learners' personal traits which are likely to be constant. It is worth noting that these personal traits differ in relation with various types of WTC. For example, learners' SES is positively linked to meaning-focused activity WTC but not significantly linked to form-focused activity WTC. This suggests that for different learning activities, the influence of

SES on learners' WTC tend to be different. These findings could be interpreted as moderating effects of activity types on L2 WTC, indicating that L2 WTC is also a state-level tendency which varies in line with what types of activity that the learner is exposed to. In addition, the contradicting findings suggest L2 WTC tends to vary across educational levels. Learners' age is negatively associated with their L2 WTC in higher education while such association is positive in schools. The different patterns imply that educational levels may play a role in shaping L2 learners' WTC. Therefore, it can be expected that L2 WTC is susceptible to contextual factors which belong to the objective dimension of fluctuating states (Macintyre & Wang, 2021).

Limitations and Future Research

One major limitation of the current study was that it only investigated three demographic variables in relation to L2 WTC. More variables should be included in future research, for example, prior achievement, ethnical groups, and school contexts. With more variables added up to the model, the trait-level WTC for second language acquisition would be more clearly depicted. Another limitation of the current study was it adopted a Chinese context. Therefore, whether the findings could be generalized to L2 learners in a different cultural background is still unverified. The existing literature has pointed out that the cultural background plays a role in shaping L2 learners' WTC (see the review of Zhang et al., 2020). In future research, an investigation into the effects of student demographic characteristics on L2 WTC should be conducted. Future research should also combine studies of trait-level and state-level correlates of L2 WTC. As a dynamic characteristic of L2 learners, WTC is influenced by innate traits, contemporary states and fluctuating situations. The L2 instructors, educators and administrators would be better served if a comprehensive model is produced and verified in further research.

Conclusions

Learners' demographic features, age, gender and SES, are likely to significantly influence their L2 WTC. The current study has provided statistical evidence that male students have higher WTC in meaning-focused activities but female students have higher WTC in form-focused activities. Furthermore, with the increase in student age, students show a decrease in meaning-focused activities. However, students from higher SES families are more willing to participate in meaning-focused activities. Furthermore, the current study has addressed two research gaps. First, it has explored the relationship between student demographic characteristics and L2 WTC in higher education. The results have shown different patterns from precious research in schools. This finding justifies further research into L2 acquisition at different educational levels. Secondly, the current study has investigated WTC in meaning-focused activities and WTC in form-focused activities and identified correlates with either WTC dimension. The results have provided new

understandings of L2 WTC. The current study has important implications for L2 instruction. Being aware of individual differences in WTC across students of various ages, gender and SES, L2 instructors and administrators in tertiary education should carefully design communication activities and provide students with various learning opportunities accordingly.

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Ethics Declarations

Competing Interests

No, there are no conflicting interests.

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