

Communication in a second language and individual differences: Effects of student age, gender, and socioeconomic status

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Suggested Citation:

Li, Z. & Li, B. (2022). Communication in a second language and individual differences: Effects of student age, gender, and socioeconomic status. *Global Journal of Sociology: Current Issues*. 12(2), 124–135. <https://doi.org/10.18844/gjs.v12i2.8620>

Received from June 12, 2021; revised from August 22, 2022; accepted from October 18, 2022.

Selection and peer review under the responsibility of Prof. Dr. Carlos Rodrigues, Universidade Fernando Pessoa, Portugal

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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 1,502 university students was recruited to participate in this study. Data on their age, gender, and 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 modelling, and significant relationships between student demographic features (age, gender, and SES) and L2 WTC were observed. The major findings were that male students had higher WTC in meaning-focused activities, but female students showed higher WTC in form-focused activities, and student age was negatively related to WTC in meaning-focused activities.

Keywords: Willingness to communicate, second language acquisition, demographic feature, higher education;

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1. Introduction

The learning and practice of communicative skills are the core of the second language (L2) acquisition and the learner's sustainable development (Chen, Dewaele, & Zhang, 2022). Whether or not the learner would participate in communicative activities, to some extent, results from his or her inclination towards 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 an L2 (MacIntyre, Clément, Dörnyei, & Noels, 1998, p. 547)'. This definition has depicted a dual construct of L2 WTC at both trait and state levels (Zhang, Beckmann, & Beckmann, 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 (Cao, 2014; 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 (Asmali, Bilki, & Duban, 2015; Barabadi, Brauer, Proyer, & Tabar, 2021; Lan, Nikitina, & Woo, 2021; MacIntyre, Baker, Clément, & Donovan, 2002). However, the understanding of L2 WTC at the trait level has been comparatively limited.

Some important trait factors, especially the ones at the social level, have not been examined about L2 WTC, for example, the learner's ethnical group and socioeconomic status (SES) background. In addition, the study about 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, 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 conceptualise WTC in different communicative activities. WTC in meaning-focused activities refers to the WTC with the teacher and a large audience (whole class peers or whole group). In contrast, WTC in form-focused activities refers to the WTC with a limited audience (peers nearby or familiar classmates).

1.2. Literature review

1.1.1. 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 WTC was initially defined as 'a personality-based, trait-like predisposition' (McCroskey & Richmond, 1991, p. 134). This definition considers WTC an innate trait that is constant across time and situations (McCroskey & Baer, 1985). Later, the definition of WTC was revised as 'a readiness to enter into discourse at a particular time with a specific person or persons, using an L2' (MacIntyre et al., 1998, p. 547). The revised definition has been well acknowledged by the field and highlighted the more dynamic changes of WTC.

It recently has been widely argued that WTC is a dual construct that 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, Peng, & Patterson, 2021).

Since WTC 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 behaviour, 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 behaviour. 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 behaviour.

Researchers have developed an 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 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 (whole class peers and 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 respective correlates of WTC in meaning-focused activities and WTC in form-focused activities.

1.1.2. 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 (Mystkowska-Wiertelak & Pawlak, 2017; Shirvan, Khajavy, Macintyre, & Taherian 2019). MacIntyre et al. (2002) study 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 about Learners' personality traits (Zhang, Beckmann, & Beckmann, 2020). It has been documented that L2 WTC is likely to be linked to the learner's openness to experience, conscientiousness, and agreeableness. Lan et al. (2021) research 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 (2021) latest study 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 as speakers' motivations and emotions are influenced by the deep, personal relevance of the topics under discussion (Macintyre & Wang, 2021, p. 1)'.

1.2. Purpose of study

Given the different types of communicative behaviour, 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 form-focused activities) within tertiary L2 learning. 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 are 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?

2. Materials and methods

2.1. Participants

The current study recruited a sample of 1,502 students who learned English as a L2 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 ($n = 1,502$)

Demographic variable	Sub-sample	Number of students
Gender	Female	803
	Male	699

Age	17	308
	18	298
	19	313
	20	321
	21	262
SES	<5,000	154
	5,001–10,000	355
	10,001–15,000	501
	15,001–20,000	299
	>20,000	193

2.2. Data collection instruments

2.2.1. Student demographic features

The student participants self-reported the information about their age, gender, and SES. Their ages were between 17 and 23, which were quantified as 1 to 5. The ‘female’ gender was labelled 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 5,000 RMB, 5,001–10,000 RMB, 10,001–15,000 RMB, 15,001–20,000 RMB, and more than 20,001 RMB’. Participants’ choices of family income were scored as 1 to 5.

2.2. 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 proven 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 of the WTC questionnaire (Peng & Woodrow, 2010), WTC in meaning-focused activities (assessed by items 1–6) referred to the WTC with the teacher and a large audience (whole class peers and 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 WTC 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 Lickert scale from 1 (definitely not willing) to 5 (definitely willing). The higher score represents a stronger WTC in L2.

2.3. Procedure 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 1 week.

Given the multivariate estimation, we adopted structural equation modelling 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, RMSEA < 0.06, and SRMR < 0.08 (Hu & Bentler, 1999).

3. 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	<5,000	2.67 (0.50)
	5,001–10,000	3.55 (0.53)	3.98 (0.61)
	10,001–15,000	3.88 (0.60)	3.93 (0.59)
	15,001–20,000	4.01 (0.62)	4.05 (0.61)
	>20,000	4.03 (0.55)	4.04 (0.52)

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

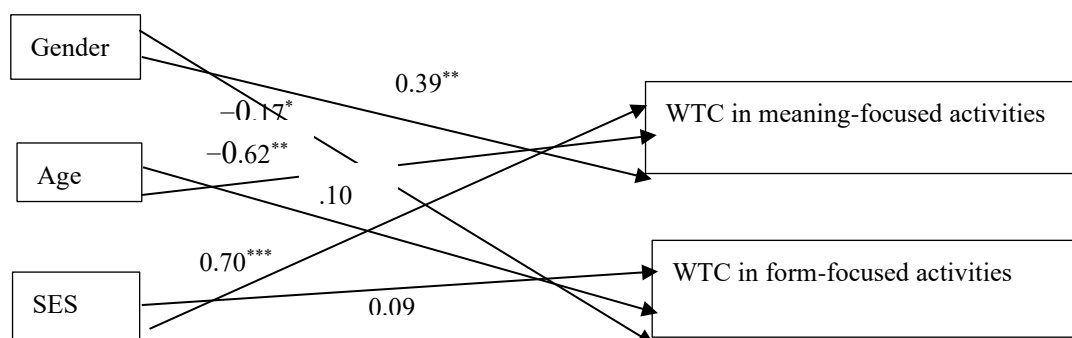


Figure 1. Null model of student demographic features predicting WTC. Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The examination of the null 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 = 0.74, GFI = 0.70, RMSEA = 0.26, SRMR = 0.18), 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 =

0.99, GFI = 0.99, AFGI = 0.96, RMSEA = 0.05, SRMR = 0.01). 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.

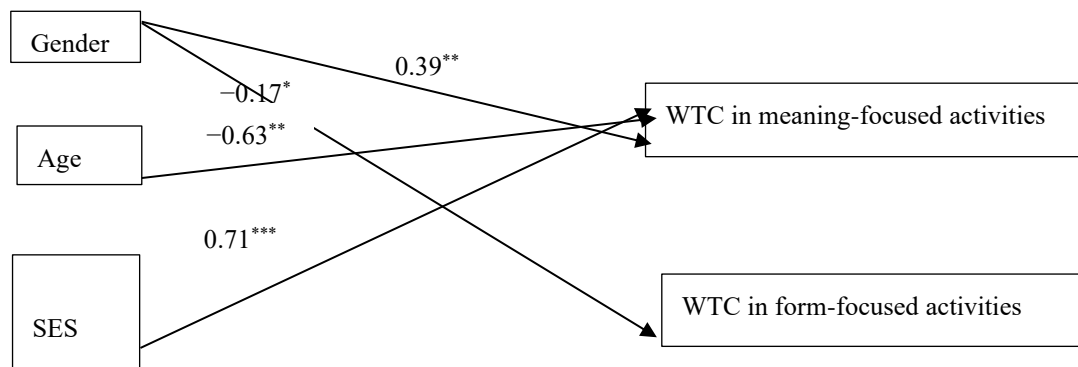


Figure 2. A modified model of student demographic features predicting WTC. Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

4. 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.

4.1. 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 a 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 authorised 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 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, Gerpott, & Voelpel, 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.

4.2. *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 in 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 the 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 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 toward interacting with the teacher. Being situated in favourable interpersonal relationships, the learner would be less susceptible to the fear of L2 communication when interacting with familiar, caring, and cooperative interlocutors.

4.3. *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, Marchant, Finch, & Flegge, 2017). It can be anticipated that high SES students are more willing to enjoy 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 relationship quality (O'Connell & Marks, 2021). Therefore, low SES students are likely to be discouraged from meaning-focused activities which are comparatively highly demanding of social interaction skills.

In L2 instructional practice, the teacher should be aware of low SES students' weak WTC and provide them with more learning opportunities for participating in meaning-focused activities. Low

SES students should be encouraged to actively take part in group/whole class discussions, 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, Weinreb, Davila, & Cuellar, 2022). With perceptions of a safe and caring learning environment, low SES students could engage in L2 learning with a high WTC.

4.4. Limitations and future research

One major limitation of the current study was that it only investigated three demographic variables about L2 WTC. More variables should be included in future research, for example, prior achievement, ethnical group, and school context. With more variables added to the model, the trait-level WTC for L2 acquisition would be more clearly depicted.

Another limitation of the current study was it adopted a Chinese context. Therefore, whether the findings could be generalised to L2 learners in the different cultural background are still unverified. The existing literature has pointed out that 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 the 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.

5. Conclusion

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.

The current study has provided evidence of trait-level antecedents of L2 WTC, which has added weight to the argument that L2 WTC is a dual construct of learner trait and state. 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 previous 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 a new understanding 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, the L2 instructors, and administrators in tertiary education should carefully design communication activities and provide students with various learning opportunities accordingly.

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