

# Piloting a Questionnaire on Affective Factors Influencing Willingness to Communicate in English Among Chinese Undergraduates at a Malaysian University

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## Abstract

This paper reports on a pilot study evaluating the clarity, reliability, and feasibility of a questionnaire designed to assess affective factors impacting Chinese undergraduates' Willingness to Communicate (WTC) in English at a Malaysian university. The research sought to understand their relationship with WTC by focusing on self-perceived communication competence (SPCC), communication apprehension (CA), motivation, and attitudes toward English. The questionnaire comprised five constructs covering relevant constructs. First, it seeks to assess the internal consistency, clarity, and contextual suitability of a 5-part questionnaire. Second, it provides preliminary insights into the affective profile of Chinese undergraduates in Malaysia as it relates to English communication. A sample of 45 Chinese undergraduates participated in this study. Results showed acceptable reliability (Cronbach's alpha > .70) and highlighted the questionnaire's suitability for the target population. Participant feedback improved item clarity and cultural relevance. This paper underscores the importance of piloting to validate instruments, especially in diverse educational settings, and shares lessons learned in instrument design and cultural adaptation.

**Keywords:** *Willingness to Communicate (WTC), self-perceived communication competence (SPCC), communication apprehension, motivation, attitude toward English, Chinese undergraduates, reliability*

## Introduction

### Background

In the context of international education, English functions not only as a medium of instruction but also as a critical tool for academic engagement, intercultural communication, and social integration (Roshid et al., 2024). As a global lingua franca, English proficiency is increasingly regarded as an essential competency for students pursuing higher education abroad (Roshid et al., 2024). For Chinese undergraduates, mastery of English is viewed as a pathway to global competitiveness, yet their willingness to actively communicate in English remains a persistent challenge, particularly in host countries where English is a second rather than native language (Liu & Huang, 2020; Zhai & Razali, 2022a). Malaysia provides a unique context for investigating these dynamics. As a multilingual nation where English is widely used in higher education, Malaysia attracts a growing number of international students from China, who are drawn by its cultural

proximity, affordability, and academic reputation (Wang & Yang, 2017; Zakaria & Ibrahim, 2022). However, the shift from a teacher-centered, grammar-focused Chinese classroom to Malaysia's interactive, discussion-driven pedagogy poses psychological and cultural adjustments for Chinese students (Ahmad & Yusof, 2017). This transition often manifests in reticence during classroom activities, reluctance to initiate conversation, and limited participation in informal English interactions, issues that are closely tied to underlying affective variables (Peng & Woodrow, 2010; Zhai & Razali, 2022).

Previous studies have emphasised the importance of affective constructs in predicting WTC (Lee & Chen Hsieh, 2019; Wang et al., 2025), but there remains a lack of research that examines these factors collectively within the Chinese undergraduate population in Malaysia. Moreover, existing measurement tools, though well-established, often require cultural adaptation and validation when applied to new contexts (Cruchinho et al., 2024; Idemudia et al., 2025). Therefore, it is imperative to ensure that instruments designed to measure constructs such as SPCC, CA, motivation, and attitude toward English are both reliable and contextually appropriate.

### **Objectives and Research Questions**

This pilot study serves two primary purposes. First, it seeks to assess the internal consistency, clarity, and contextual suitability of a 5-part questionnaire. Second, it provides preliminary insights into the affective profile of Chinese undergraduates in Malaysia as it relates to English communication. The primary research questions guiding this investigation are:

RQ1: To what extent is the questionnaire clear, reliable, and culturally appropriate for Chinese undergraduates studying in Malaysia?

RQ2: What are the levels of self-perceived communication competence (SPCC), communication apprehension (CA), motivation, and attitude toward English among Chinese undergraduates in relation to their willingness to communicate in English?

### **Literature Review**

#### **Context of English Communication Among Chinese Undergraduates in Malaysian Universities**

In recent years, Malaysia has become an increasingly popular destination for Chinese undergraduates pursuing higher education (Zakaria & Ibrahim, 2022). English serves as a vital medium of instruction in Malaysian universities, playing a crucial role in academic engagement, intercultural communication, and social integration (Fang & Sah, 2023). However, Chinese undergraduates often face challenges in adapting to the interactive and discussion-driven teaching methods in Malaysian universities, which differ significantly from the teacher-centered, grammar-focused approach in China (Zhai & Razali, 2022b). This

transition can lead to issues such as reticence during classroom activities, reluctance to initiate conversations, and limited participation in informal English interactions (Zhai & Razali, 2022b). These behaviors are closely tied to affective factors that influence their willingness to communicate in English.

## Theoretical Frameworks and Constructs

### *Willingness to Communicate (WTC)*

The concept of Willingness to Communicate (WTC) has gained considerable attention in the field of second language acquisition (SLA) as a key predictor of learners’ actual use of the target language (Kirkpatrick et al., 2024). MacIntyre et al. (1998) define WTC as “a readiness to enter into discourse at a particular time with a specific person or persons, using a L2.” Unlike linguistic competence or general motivation, WTC focuses on a learner’s situational readiness to communicate, which may vary moment to moment depending on psychological, interpersonal, and contextual factors (Peng, 2025; Zarrinabadi et al., 2019).

The heuristic model proposed by MacIntyre and colleagues outlines a six-layered structure (shown Figure 1), with stable traits such as personality and motivation at the base, and more immediate, situational variables like state anxiety and desire to communicate at the top (MacIntyre et al., 1998; MacIntyre & Wang, 2021). This model positions WTC as the final step before actual speech, highlighting the complexity of language use beyond grammar and vocabulary. The model has since been adapted in various contexts but remains underexplored among Chinese learners studying in English as a Medium of Instruction (EMI) environments, particularly in Southeast Asia. Research by Research by Subekti (2020) and Muftah (2023) has shown that factors like self-perceived communication competence and communication anxiety significantly influence WTC in different educational settings.

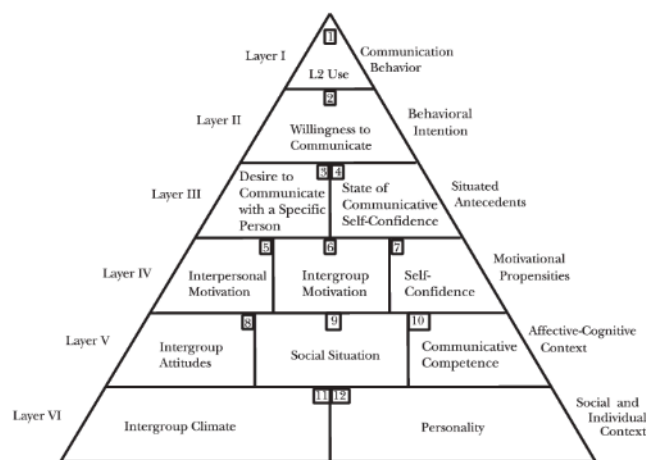


Figure 1: MacIntyre et al.’s (1998) heuristic model of variables influencing WTC

Complementing the heuristic model, the study applied Bandura's (2001) Social Cognitive Theory (SCT) as an explanatory lens for understanding how learners develop communicative confidence. SCT posits that self-efficacy—defined as an individual's belief in their capability to perform specific tasks—is a key determinant of behavior. In the context of language learning, self-efficacy influences learners' willingness to engage in communicative activities. Self-efficacy is shaped through enactive mastery experiences, vicarious experiences (e.g., observing peer modeling), and social feedback. Learners with high self-efficacy are more likely to take risks, persist in communication, and resist anxiety. Graham (2022) demonstrates that students who benefit from mastery experiences and affirming social feedback exhibit enhanced willingness to communicate. Bandura (2001) also emphasises the role of human agency in shaping behavior, highlighting the interplay between personal, behavioral, and environmental factors in the development of self-efficacy.

These theoretical frameworks together provide a comprehensive lens for examining the affective predictors of WTC among Chinese undergraduates in Malaysian EMI settings. The heuristic model offers a structured approach to understanding the multiple layers of influence on WTC (MacIntyre & Wang, 2021), while SCT provides insights into the psychological mechanisms underlying learners' communicative confidence and behavior (Graham, 2022). Combining these frameworks allows for a nuanced exploration of how factors such as self-perceived communication competence, communication apprehension, motivation, and attitudes toward English interact to shape Chinese students' willingness to communicate in English in a Malaysian university context.

### ***Self-Perceived Communication Competence (SPCC)***

SPCC refers to a learner's self-assessed ability to communicate effectively in a second language. MacIntyre and Charos (1996) emphasise that SPCC is often a more accurate predictor of communication behavior than objective proficiency. In Chinese educational contexts, where language instruction tends to focus on reading and writing skills for examination purposes, students may develop strong receptive skills but still report low SPCC, especially in speaking (Xing & Bolden, 2019).

Nadeem et al. (2023) found a significant positive correlation between SPCC and WTC, suggesting that learners with higher self-confidence in their communicative ability are more willing to initiate conversations. This is particularly relevant for Chinese students in Malaysia, who must adjust to an educational system that places a high premium on spoken interaction and collaborative learning tasks. Since the focus of this paper is to examine the reliability of the used questionnaire, hence SPCC was operationalised through 15 items adapted from MacIntyre and Charos (1996), covering public speaking, meetings, and dyadic interactions.

### ***Communication Apprehension (CA)***

Communication Apprehension (CA), as defined by McCroskey (1970), is the fear or anxiety associated with real or anticipated communication. It is one of the most frequently cited affective barriers to WTC. Learners with high levels of CA are often reluctant to participate in oral activities, regardless of their language ability. In Alrabai's 2022 study, students with high communication apprehension (CA) exhibited significantly lower willingness to communicate (WTC) and were less likely to engage in peer-based speaking tasks. Yu and Wong's 2025 research indicated that Chinese students, influenced by Confucian educational values emphasising modesty and error avoidance, are highly susceptible to CA in unfamiliar and interactive classroom settings. Pragash et al.'s 2020 study further confirmed that CA is a strong negative predictor of classroom participation and peer communication in ESL and EMI environments. In the current study, CA was measured through 25 items adapted from the PRCA-24 scale, covering group communication, formal meetings, dyadic interactions, and public speaking.

### ***Motivation and Attitudes toward English***

Motivation plays a central role in SLA, especially in determining the learner's persistence, effort, and communicative behavior. Dörnyei's (2009) L2 Motivational Self System differentiates between integrative motivation (desire to connect with the target culture) and instrumental motivation (goal-oriented drive, such as passing exams and improving employability). Both forms of motivation have been positively associated with WTC (Yashima, 2002; Ebn-Abbasi et al., 2022).

Attitude toward English, though closely related to motivation, is treated as a distinct construct influencing learners' emotional and behavioral orientation toward the language. Learners who perceive English as a valuable and empowering tool are more inclined to use it spontaneously and persistently. Zhao et al., (2024) observed that positive attitudes not only foster WTC but also reduce anxiety and enhance communicative persistence, particularly in intercultural group interactions.

Motivation was operationalised through 26 items adapted from Dörnyei's (2009) L2 Motivational Self System, covering ideal L2 self, ought-to L2 self, and instrumentality. Attitude toward English, though closely related to motivation, is treated as a distinct construct influencing learners' emotional and behavioral orientation toward the language. Attitude toward English was operationalised through 14 items adapted from previous studies, covering attitudes toward learning English and attitudes toward the L2 community.

### ***Research Gap in the Malaysian EMI Context***

While WTC and its affective factors have been widely studied in EFL contexts, there remains a notable gap in research focusing on Chinese students studying in Malaysian EMI institutions. Malaysia presents a unique

multilingual and multicultural context, where Chinese undergraduates are immersed in English-dominant academic practices while navigating diverse peer interactions.

Zhai and Razali (2022a) reported that many Chinese students in Malaysia experience difficulty adapting to communicative teaching methods, leading to reduced WTC despite sufficient language knowledge. Likewise, Zakaria and Ibrahim (2022) observed that classroom participation and peer engagement are significantly lower among Chinese international students than local peers, often due to affective barriers rather than linguistic deficiencies. Therefore, validating a culturally responsive instrument to measure affective predictors of WTC in this population is both timely and necessary.

## Methodology

### Research Design

This study adopted a quantitative, instrument-validation pilot design. The primary objective was to test the reliability and clarity of a questionnaire developed to measure affective factors influencing Chinese undergraduates' Willingness to Communicate (WTC) in English. A pilot study is a standard methodological step in large-scale research involving self-report instruments, as it allows for the identification of linguistic, structural, or cultural inconsistencies in survey items (Sundram & Romli, 2023). This pilot study aims to assess the internal consistency, clarity, and contextual suitability of a 5-part questionnaire. The design was deemed appropriate given the need to adapt previously validated constructs to a new cultural and educational context, namely Chinese students studying in a Malaysian EMI environment.

### Instrument

The study utilised an online survey instrument comprising five validated scales: the Willingness to Communicate in English Scale, Self-Perceived Communication Competence Scale, Personal Report of Communication Apprehension (PRCA-24), Motivation Scale, and Attitude Toward the English Language Scale. Table 1 presents the total number of items for each variable. All items were presented on a 5-point Likert scale ranging from 1 to 5.

Table 1: The total numbers of each variable item

Section	Subconstruct	Number of Items	Total Items
Section 1	Student Background Information	4	4
<b>Willingness to Communicate in English</b>			
<b>Section 2</b>	Public Speaking	4	<b>20</b>
	Meetings	4	
	Group Discussion	4	
	One-on-One Conversations	4	

	Online Communication	4	
<b>Section 3</b>	<b>Affective Factors</b>		<b>80</b>
	Self-Perceived Communication Competence		
Section 3.1	Public Speaking	3	15
	Large Meetings	3	
	Small Groups	3	
	Dyad (One-on-One)	3	
	Online Communication	3	
	Communication Apprehension		
Section 3.2	Group	6	25
	Formal Meeting	6	
	Dyadic	6	
	Public	7	
	Motivation		
Section 3.3	Ideal L2 Self	5	26
	Ought-to L2 Self	8	
	Instrumentality (Promotion)	8	
	Instrumentality (Prevention)	5	
	Attitudes Toward English		
Section 3.4	Attitudes to Learning English	6	14
	Attitudes to L2 Community	8	

**Participants**

The study recruited 51 Chinese undergraduates from Malaysian private universities, selected for their demographic similarity to the target population. This allowed for a preliminary assessment of the survey’s validity and reliability.

Table 2: Sample Size Cleaning Process

Stage	Sample Size	Criteria
Initial Collection	51	Automatically recorded via Google Forms
Exclusion of First-Semester Students	6	Screening criteria: "Current enrolled semester" $\geq$ 2
Valid Sample	45	Retained for pilot test analysis

**Data Collection Procedure**

The data for this study were collected through an online questionnaire administered via Google Forms. The following is a detailed account of the data collection process:

Participants Recruitment: Participants were recruited from two private universities (Sunway University and INTI International University). Invitations to participate in the study were sent out via email, with a total of 51 Chinese undergraduates invited. The invitation email included a brief introduction to the study’s purpose and a link to the online questionnaire

**Consent and Information:** Prior to accessing the survey, participants were provided with an information sheet outlining the study’s objectives, the voluntary nature of their participation, and their right to withdraw at any time. An electronic consent form was also presented, and only those who clicked “Agree” could proceed to the survey. Those who selected “Disagree” were redirected to a termination page with a message of thanks, and their status was recorded as “declined.”

**Survey Administration:** The online survey was designed to take approximately 15 minutes to complete. Participants were assured of the confidentiality of their responses, and the survey was programmed to validate real-time responses through Google Forms’ “required question” feature, minimising missing data.

**Data Validation:** Throughout the data collection period, the researchers monitored the incoming responses to ensure data quality. The stringent recruitment criteria prolonged the data collection timeline due to the limited pool of eligible Chinese undergraduates in private universities. To address potential careless or random answering, the main study will incorporate real-time validation algorithms and attention-check questions.

**Completion and Follow-up:** Upon completion of the survey, participants were thanked for their time and contribution to the study. No incentives were offered for participation, as the focus was on obtaining genuine and unbiased responses from the participants.

This comprehensive procedure ensured that the data collected was both valid and reliable, providing a solid foundation for the subsequent analysis and interpretation of the findings.

**Data Analysis Procedure**

The collected data were coded and analyzed using SPSS version 27. Internal consistency reliability was assessed for each construct using Cronbach’s alpha. Following the guideline of Nunnally and Bernstein (1994), an alpha value of 0.70 or higher was considered acceptable. The results indicated good to excellent internal consistency across the subscales, with Cronbach’s alpha values ranging from 0.76 to 0.97. Specifically, the Willingness to Communicate scale achieved a Cronbach’s alpha of 0.96, the Affective Factors composite scale achieved 0.91, SPCC achieved 0.95, Communication Apprehension achieved 0.76, Motivation achieved 0.96, and Attitudes Toward English achieved 0.97. These results suggest that the questionnaire demonstrated strong reliability across all subscales, with most showing good to excellent internal consistency and only Communication Apprehension having an acceptable level of reliability (see Table 3).

Table 3: Pilot Test Cronbach’s alpha

<b>Scale/Subscale</b>	<b>Number of Items</b>	<b>Cronbach’s <math>\alpha</math></b>	<b>Interpretation</b>
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Willingness to communicate	20	.96	Excellent
<b>Affective Factors</b>	80	.91	Excellent
SPCC	15	.95	Excellent
Communication Apprehension	25	.76	Acceptable
Motivation	26	.96	Excellent
Attitudes Toward English	14	.97	Excellent

## Findings

This section presents the results of the pilot study in direct response to the research questions:

### **RQ1: To what extent is the questionnaire clear, reliable, and culturally appropriate for Chinese undergraduates studying in Malaysia?**

The pilot study confirmed the questionnaire’s internal consistency (all  $\alpha > .90$ ), and participant feedback supported its cultural clarity. This addresses RQ2: To what extent is the questionnaire clear, reliable, and culturally appropriate for Chinese undergraduates studying in Malaysia? The results indicate that the questionnaire is clear, reliable, and culturally appropriate for the target population.

Inferential analysis was not conducted as this was an instrument validation study. Cronbach’s alpha values above 0.90 indicate strong reliability and support the quality of the instrument for future analysis.

### **RQ2: What are the levels of self-perceived communication competence (SPCC), communication apprehension (CA), motivation, and attitude toward English among Chinese undergraduates in relation to their willingness to communicate in English?**

The questionnaire employed different Likert scales for different constructs, defined as shown in Table 4.

Table 4: Measurement Scales Used in This Study

Variable	Scale	Anchors
Willingness to Communicate (WTC)	5-point Likert scale	1 = Never 2 = Rarely 3 = Undecided 4 = Often 5 = Always
Self-Perceived Communication Competence (SPCC)	5-point Likert scale	1 = Completely Incompetent 2 = Below Average 3 = Average 4 = Above Average 5 = Completely Competent
Communication Apprehension (CA)	5-point Likert scale	1 = Strongly agree 2 = Agree

		3 = Undecided
		4 = Disagree
		5 = Strongly Disagree
Motivation	5-point Likert scale	1 = Strongly Disagree
		2 = Disagree
		3 = Undecided
		4 = Agree
		5 = Strongly Agree
Attitudes toward English	5-point Likert scale	1 = Strongly Disagree
		2 = Disagree
		3 = Undecided
		4 = Agree
		5 = Strongly Agree

Descriptive statistics were computed to evaluate the levels of each affective construct and WTC among participants, based on the defined Likert scales (as shown in Table 55).

Table 5: Descriptive Statistics of Affective Constructs and WTC

Variables	Number of Items	Mean	SD
Willingness to communicate	20	3.66	.97
<b>Affective Factors</b>	<b>80</b>	<b>3.50</b>	<b>1.20</b>
SPCC	15	3.73	.89
Communication Apprehension	25	3.07	1.22
Motivation	26	3.51	1.31
Attitudes Toward English	14	3.70	1.37

**Willingness to Communicate:** Participants showed a moderate to high willingness to communicate (M = 3.66, SD = 0.97), indicating that, on average, they are somewhat willing to engage in English communication. The moderate standard deviation suggests variability in willingness among participants.

**Affective Factors:** The overall score for affective factors (M = 3.50, SD = 1.20) suggests a moderate to high level of influence from these factors. This indicates that emotions, attitudes, and motivations related to communication play a significant role in participants' willingness to communicate.

**Self-Perceived Communication Competence (SPCC):** Participants reported a relatively high level of self-perceived communication competence (M = 3.73, SD = 0.89). This indicates that most participants feel moderately to highly competent in their ability to communicate in English, which is a positive sign for their willingness to engage in communication.

**Communication Apprehension:** A moderate level of communication apprehension was reported (M = 3.07, SD = 1.22). This suggests that some participants experience anxiety or fear regarding communication, which may impact their willingness to communicate in certain situations.

**Motivation:** Motivation levels were moderate to high ( $M = 3.51$ ,  $SD = 1.31$ ). This indicates that participants have a relatively strong drive to engage in English communication, though there is still room for enhancing their motivational levels.

**Attitudes Toward English:** Participants held generally positive attitudes toward English ( $M = 3.70$ ,  $SD = 1.37$ ). The relatively large standard deviation shows a wide range of attitudes, with some participants having more positive attitudes and others having more negative ones.

In summary, participants showed a moderate to high willingness to communicate ( $M = 3.66$ ,  $SD = 0.97$ ), indicating that, on average, they are somewhat willing to engage in English communication. The overall score for affective factors ( $M = 3.50$ ,  $SD = 1.20$ ) suggests a moderate to high level of influence from these factors. Participants reported a relatively high level of self-perceived communication competence ( $M = 3.73$ ,  $SD = 0.89$ ). A moderate level of communication apprehension was reported ( $M = 3.07$ ,  $SD = 1.22$ ). Motivation levels were moderate to high ( $M = 3.51$ ,  $SD = 1.31$ ). Participants held generally positive attitudes toward English ( $M = 3.70$ ,  $SD = 1.37$ ). The relatively large standard deviation for some variables indicates a wide range of responses, with some participants scoring higher and others lower on certain constructs.

Inferential analysis was not conducted as this was an instrument validation study. Cronbach's alpha values above 0.90 indicate strong reliability and support the quality of the instrument for future analysis.

The findings reveal that Chinese undergraduates in Malaysian universities generally exhibit a moderate to high willingness to communicate in English. The overall score for affective factors suggests a moderate to high level of influence from these factors. Participants reported a relatively high level of self-perceived communication competence and generally positive attitudes toward English. However, a moderate level of communication apprehension was reported, and motivation levels were moderate to high. These findings are consistent with the theoretical frameworks and constructs discussed in the literature review, highlighting the importance of considering the interplay of these factors in the main study.

### **Implications for the Main Study**

The pilot test confirmed the reliability and practicality of the research instruments. The strong internal consistency of all subscales and the acceptable distributional properties support the use of these instruments in the main study. However, the pilot sample size ( $N = 45$ ) was relatively small, which may limit the generalisability of the findings. The main study will address this limitation by using a larger sample size to meet the statistical power requirements for PLS-SEM. Additionally, the main study will incorporate attention-check items and real-time validation mechanisms to enhance data integrity.

The pilot study also provided preliminary insights into the levels of the affective factors among the participants. The results indicated that participants generally exhibited a moderate to high willingness to

communicate in English. The overall score for affective factors suggests a moderate to high level of influence from these factors. Participants reported a relatively high level of self-perceived communication competence and generally positive attitudes toward English. However, a moderate level of communication apprehension was reported, and motivation levels were moderate to high. These findings highlight the importance of considering the interplay of these factors in the main study.

In summary, the pilot study laid a solid foundation for the main research by validating the instruments and providing initial insights into the affective factors related to WTC among Chinese undergraduates in Malaysia. The main study will build on these findings, using a larger and more representative sample to explore the relationships between these factors and WTC in greater depth.

## **Conclusion**

This pilot study set out to evaluate the reliability, clarity, and contextual relevance of a questionnaire designed to assess affective factors influencing Willingness to Communicate (WTC) in English among Chinese undergraduate students at a Malaysian university. The study focused on four key constructs: Self-Perceived Communication Competence (SPCC), Communication Apprehension (CA), motivation, and attitude toward English, all of which are widely recognised as affective factors of L2 communication behavior.

The findings from 45 participants demonstrated that the adapted instrument has satisfactory internal consistency across all subscales, with Cronbach's alpha values exceeding the recommended threshold of 0.70. This indicates that the questionnaire is a reliable tool for measuring the intended constructs. Descriptive data further revealed that students reported generally high levels of SPCC and motivation, positive attitudes toward English, and moderate levels of CA. These trends were consistent with theoretical expectations and prior empirical findings, indicating the potential relevance of these constructs in shaping WTC among international learners in EMI environments.

In summary, the pilot study has successfully met its objectives and established a foundation for the main research. The validated instrument is now ready for broader administration, where inferential analysis can be conducted to examine the relationships between affective factors and WTC. The main study will use a larger sample size to meet the statistical power requirements for PLS-SEM and will incorporate attention-check items and real-time validation mechanisms to enhance data integrity.

## **Author contributions**

Study conception and design: All authors; Data collection: Lyu Yunhe.; Analysis and interpretation of results: Lyu Yunhe; Writing - draft preparation: Lyu Yunhe; Writing – Reviewing and editing: All authors reviewed the results and approved the final version of the manuscript.

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None.

## Data availability statement

The data supporting this study's findings are available on request from the corresponding author.

## Conflicts of interest

The authors have no conflicts of interest to declare.

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