



The Nexus between Intercultural Communication Skills, Digital Informal Learning, L2 Motivation, Enjoyment, and WTC in English L2 on Social Media

Hung Phu Bui ^{1*} , Thanh Huynh Vo ² , Ngoc-Tai Huynh ³ 

¹ Faculty of Foreign Languages, Ton Duc Thang University, Vietnam

² PhD candidate, Ho Chi Minh City Open University, Vietnam

³ School of Foreign Languages, Tra Vinh University, Vietnam

Received: 2025/05/31

Accepted: 2025/12/27

Abstract: The current study examines the relationships between intercultural communication skills (ICCS), informal digital learning of English (IDLE), Ideal L2 Self, enjoyment, and netizens' willingness to communicate (WTC) in English as a second or foreign language (L2) on social media. A knowledge of the roles of ICCS, IDLE, Ideal L2 Self, and enjoyment in shaping learners' L2 WTC in virtual settings may provide implications for L2 motivation. From an extensive literature review, we developed a hypothesized model in which ICCS and IDLE function as independent variables, Ideal L2 Self and enjoyment as mediators, and L2 WTC as a dependent variable. Questionnaires were administered to 504 Vietnamese university L2 English students. After the data cleaning phase, the remaining data from 416 participants were analyzed by SPSS 28. We employed the structural equation modelling approach to examine the hypothesized model. The results show that IDLE and ICCS had significantly positive direct effects on WTC in L2 on social media and Ideal L2 Self, respectively. L2 enjoyment was not significantly affected by ICCS but IDLE, in turn significantly impacting Ideal L2 Self. L2 Ideal Self and L2 enjoyment positively influenced learners' WTC in English on social media. The findings suggest implications for L2 education in the digital era.

Keywords: Digital Informal Learning (IDLE), Intercultural Communication Skills (ICCS), L2 Enjoyment, L2 Motivation, Willingness to Communicate (WTC), Social Media.

* Corresponding Author.

Authors' Email Address:

¹ Hung Phu Bui (buiphu Hung@tdtu.edu.vn), ² Thanh Huynh Vo (thanhvh.22at@ou.edu.vn), ³ Ngoc-Tai Huynh (hntai@tvu.edu.vn)



Introduction

Advances in technology have significantly transformed education. It offers education opportunities to those in rural areas through distance education (Mustafa et al., 2024), provides a flexitime schedule for in-service learning (Müller & Mildenerger, 2021), and gives access to global learning resources (Rahiman & Kodikal, 2023). To date, with a computer or mobile device connected to the Internet, people of all ages can personalize their self-study, access tasks assigned by their instructor in the learning management system, and improve their skills (Sinaga et al., 2022). That is, technology has brought about a paradigm shift in education in that education is no longer confined to face-to-face instruction but expands the horizon for students to reach out to the world without travelling.

In language education, social media, advanced by technology, has catered to social interaction with people all over the world. Considering that social media are Lingua Franca platforms in which netizens mainly use English to communicate (Baker & Sangiamchit, 2019), L2 students can practice communicating in English and receive input of authentic language in social discourse (Pikhart & Botezat, 2021). This suggests that ICCS and IDLE may affect WTC in L2 on social media. However, their WTC in L2 may depend on both personal drive (e.g., confidence, language competence, and personality traits) and external factors (e.g., relationship with interlocutors and social situations) (MacIntyre et al., 1998). An extensive review of the literature shows that it is L2 speakers' WTC that can contribute to developments in their knowledge, target language, and skills (Yashima, 2019; Zadorozhnyy & Lee, 2023). From a self-determination perspective, it is the personal characteristics that determine the effects of external interventions (Manninen et al., 2022; Ryan & Deci, 2020). In other words, the internal traits can drive L2 speakers to communicate with other netizens on social media.

Although WTC has been a growing interest in language education, little is known about the internal factors that drive L2 speakers to communicate on social media. Therefore, it is timely to investigate the personal qualities that motivate people to communicate in English L2 in the social media context. An extensive literature review shows that social media are platforms for informal communication in which internal traits affect L2 WTC. A hypothesized model is developed in which intercultural communication skills (ICCS) and IDLE are independent predictors. Ideal L2 Self, a component of motivation, and enjoyment are mediating variables, and WTC in L2 on social media is a dependent variable. Given that this study is especially interested in communication on social media, questionnaires will be

administered to Vietnamese university EFL students on online platforms to collect data. Data will be used to test the hypotheses and model.

Literature Review

L2 WTC on Social Media

Situated at the interplay between L2 communication and technology, L2 communication in digital settings is a proliferating interest as it provides a platform for meaningful communication (Aldukhayel, 2023; Muftah, 2024), facilitates learner-centered personalized language learning (Strawbridge, 2023; Yeh & Swinehart, 2020), and develops their knowledge of other cultures and intercultural communication (MacDonald, 2023). Accordingly, on social media, learners can enhance their language proficiency as well as communication skills by exchanging knowledge with peers and experts (Muftah, 2024; Reinhardt, 2018; Strawbridge, 2023), understand other cultures, and sympathize with cultural differences as they communicate with people from other cultures (MacDonald, 2023; Yeh & Swinehart, 2020). As a consequence, communication apprehension may diminish (Hoang & Bui, 2023), communication enjoyment increases (Lee & Lee, 2021), and vocabulary repertoire develops (Lee & Drajadi, 2019), enhancing learners' WTC (Liu, 2023).

WTC, broadly construed as readiness to engage in or initiate discourse (MacIntyre et al., 1998), is acknowledged as an individual learner difference in L2 education. It is WTC rather than unnoticed communication that contributes to effective communication as learners pay attention and notice new knowledge, suggesting the importance of interaction in mediating language acquisition (McCroskey & Baer, 1985). A vast amount of research has documented the significant role of motivation in L2 WTC. As Pavelescu (2023) put it, L2 motivation is a driving force for L2 WTC. Also, motivation can affect WTC in the target language directly or indirectly (Lei et al., 2023). Regarding social media as Lingua Franca platforms for communication, netizens can communicate with others in English, suggesting the importance of WTC in English in social digital platforms in L2 education. That is, WTC in English L2 is possibly related to IDLE, ICCS, enjoyment, and motivation.

IDLE

Emerging to bridge the divides of technology and education, IDLE is mainly defined as informal English learning in digital platforms (Zhang & Liu, 2023). As such, learners engage in language learning beyond the formal context; that is, learning activities are self-regulated and informal using technological gadgets and available resources (Soyoof et al., 2023; Zhang

& Liu, 2023). The current literature indicates that IDLE is especially crucial in contexts where learners engage extensively in digital platforms, providing personalized autonomous learning activities for knowledge development (Dressman, 2019). Among several existing scales of IDLE, the questionnaire introduced by Lee and Drajati (2019) has been used widely as it “aims to measure the diversity and frequency of IDLE activities that L2 learners participate in” and particularly describes Asian learning contexts (Liu et al., 2025, p. 4).

Engaged in IDLE, learners can be benefited greatly from available resources and communication opportunities with peers in digital environments, resulting in improved proficiency of the target language (e.g. language elements and skills) (Lee & Dressman, 2018), greater communication confidence (Zadorozhnyy & Lee, 2023) and desire (Liu, 2023), intercultural communication development (Hoang & Bui, 2023), and enjoyment (Lee & Lee, 2021). The research has suggested the affordances of IDLE in providing learning opportunities outside the classroom (Liu et al., 2025; Yan, 2023). For instance, Li et al. (2018) investigated how artificial intelligence (AI) could assist Chinese low-income students in L2 writing through assessment and written feedback. The findings indicated that the students perceived AI to be a tutor empowering them with constructive advice on how to improve their essays, which they could use to determine what they may do on their path to academic achievements.

Also, as concluded in Zadorozhnyy and Lee's (2023) study, IDLE could directly impact learners' confidence. From their informal communication activities with peers in digital settings, learners developed self-efficacy in communication, mediating their WTC. This result was confirmed by Rezai's (2023) research by employing a structural equation modelling approach. Thus, the following hypothesis is proposed:

H1: IDLE positively and directly impacts L2 WTC on social media.

Intercultural Communication

Intercultural communication skills (ICCS), generally conceptualized as skills deployed to converse between individuals from different cultures (Rezai, 2023), are grounded in the interplay between linguistic backgrounds and competence of intercultural communication (Hymes, 1972). The ongoing interest in intercultural communication competence has led to scholarly pursuits exploring its components. According to Bennett (1986), it is a developmental continuum shifting from ethnocentrism to cultural relativism. That is, people understand and sympathize with differences in cultural values via intercultural communication, developing their knowledge and awareness of cultural differences to engage

in intercultural communication (ICC). Wu et al. (2013) believe that ICCS is a main component of ICC competence, constituting the majority of items, as people use their skills to manage discourse with those from other cultures. The researchers developed a 6-component scale measuring ICC competence, of which ICCS is an integral component. This scale was then revised by Peng et al. (2015).

Technological advances have created opportunities for international communication. Social media has been developed to connect people all over the world. As noted by Schenker (2012), ICC in digital environments may cultivate knowledge and awareness of other cultures and ICC skills. This concept was confirmed by Godwin-Jones's (2019) study, which found that ICC competence can be enhanced through telecommunication. Gutiérrez-Santiuste and Ritacco-Real's (2023) research further added that behavioural, affective, and cognitive communications may evolve from peers' intercultural online communication, suggesting that social media can be optimal platforms for intercultural communication in which English is used as a Lingua Franca.

Several studies have examined the relationship between ICC and WTC. For example, employing a cross-sectional design, Yousaf et al. (2022) compared the levels of ethnocentrism and willingness to engage in ICC in Pakistan and China. This survey research showed that Pakistani students communicated less than their Chinese counterparts. Although Pakistan and China are both recognized as collectivist cultures, the divergence in such levels of ethnocentrism and WTC suggests the negative effect of ethnocentrism on WTC. This finding suggests ICC as a positive determinant of WTC in multilingual contexts. Also, Lu and Hsu's study (2008) concluded that WTC is positively related to self-perceived intercultural communication competence. They further noted that those who perceive themselves to have a greater capacity to communicate with those from other cultures can overcome their ICC anxiety, resulting in more WTC. This finding aligns with Campbell's (2016) study.

L2 Motivation

L2 motivation, a driving force for language learning, is well documented in the current literature. Among the existing L2 motivation theories, Dörnyei's (2009) model has been widely used in L2 research since its birth. Its two components (Ideal L2 Self and Ought-to L2 Self) together pertain to learners' current pursuits and desire for future language achievements. In particular, the Ideal L2 Self is pertinent to the intrinsic motives driving learners from their current status to personal objectives. In contrast, Ought-to L2 Self is

concerned with extrinsic factors as impetus influencing learners' attempts to satisfy social agents' expectations. Overall, these two selves together serve as internal and external motivators driving learners' efforts and the prevention of disappointing others on the path to succeed in language learning.

Self-determination theory has been widely employed to interpret research on motivation in educational settings, further illuminating the interaction of the two selves. Accordingly, individuals have their own characteristics (e.g., personal goals and preferences) that can determine the effects of external factors (Manninen et al., 2022). In other words, any external intervention aligning with individuals' internal characteristics can be accepted and become effective. In contrast, any extrinsic motivational factor that does not meet individuals' expectations and preferences may be rejected; therefore, it does not influence individuals at all (Ryan & Deci, 2020), suggesting the relevance of Ideal L2 Self to L2 WTC.

Theoretically, motivation is acknowledged to affect learners' L2 WTC. According to MacIntyre et al. (1998), external factors may motivate learners to engage in communication. In their pyramid model, motivation is included as a determinant of WTC, aligning with Dörnyei's (2005) proposal that motivation to communicate drives WTC; thus, L2 WTC is "the resultant of the interplay of linguistic self-confidence and the ideal L2 self" (p. 210). In the research by Lan et al. (2023), in which quantitative data were collected from questionnaires administered to 251 overseas Chinese students, results indicated the direct interplay between motivation and L2 WTC, confirming Nikitina et al.'s (2022) quantitative study in the Chinese context. Unlike these two studies, Pavelescu's (2023) research with two L2 English adult learners from the United Kingdom indicated a link between motivation and WTC. Peculiar to a context of learning a third language in the online setting, Lei et al.'s (2023) study, which collected data from 492 students, showed the association between motivation and WTC. Although the studies reviewed above employed various methods and were conducted in different contexts, they agreed upon the relationship between motivation and WTC, focused on Asian L2 English learners, and suggested pedagogical implications (Yashima, 2019). As this study is mainly interested in learners' internal characteristics affecting WTC, only the Ideal L2 Self is used to represent the motivation variable.

Pertinent to communication capacity, ICC is known as a factor steering motivation to communicate. As Ameli and Molaei (2012) noted, intercultural communication competence can make individuals confident enough to engage in communication. Demotivated individuals generally communicate less. That is, ICC can impact L2 motivation (Huang et al., 2003). In an international multilingual environment, communication requires ICC

encompassing individuals' desire to converse with those from other cultures (Badrkoohi, 2018), positively influencing their WTC in English in a multilingual environment (Asmali, 2016). As concluded by Badrkoohi, a lower level of ICC means lower motivation, consequently leading to a shortage of WTC. Based on the literature review, this study proposes the following hypothesis:

H2: ICCS significantly positively influences L2 motivation.

H3: Motivation positively predicts WTC in English on social media.

L2 Enjoyment

Enjoyment, an individual learner variable, may lead to individuals' greater level of WTC. As Mercer and MacIntyre (2014) argued, when people have a sense of development from social interaction and progress in language learning, positive emotions can occur, resulting in self-efficacy. As such, individuals can be willing to accept and encounter social challenges, driving them toward goal attainment (Dewaele & MacIntyre, 2016). In language education, goals should not be confined to academic issues like language development but include teachers' and students' satisfaction (MacIntyre et al., 2019). In the online learning modality, positive emotions, such as enjoyment, may have a significant positive effect on L2 WTC (Fattahi et al., 2023). As Lee et al. (2021) noted, from a survey with 1,265 Korean L2 English students, emotion mediated the association between IDLE and L2 WTC. Accordingly, L2 enjoyment affected more greatly than L2 anxiety, a negative emotion. Considering that social media are learning platforms, IDLE may influence L2 enjoyment.

Some studies have concluded that emotion is a predictor of L2 motivation. For instance, Pekrun's (1992) study showed that one's positive mood may affect their motivation, resulting in better academic records. This result aligns with Yin et al.'s (2024) investigation. From the literature review, the following hypotheses are formulated:

H4: L2 enjoyment is positively influenced by IDLE.

H5: L2 enjoyment has a positive effect on WTC in English on social media.

H6: L2 enjoyment is positively predicted by ICCS.

H7: L2 enjoyment positively affects L2 motivation.

The Hypothesized Model

The seven hypotheses formulated above indicate that ICCS and IDLE are two independent variables. WTC in L2 English on social media is a dependent variable. L2 enjoyment and L2

motivation are mediating variables. As such, this study proposed the following structural model (see Figure 1).

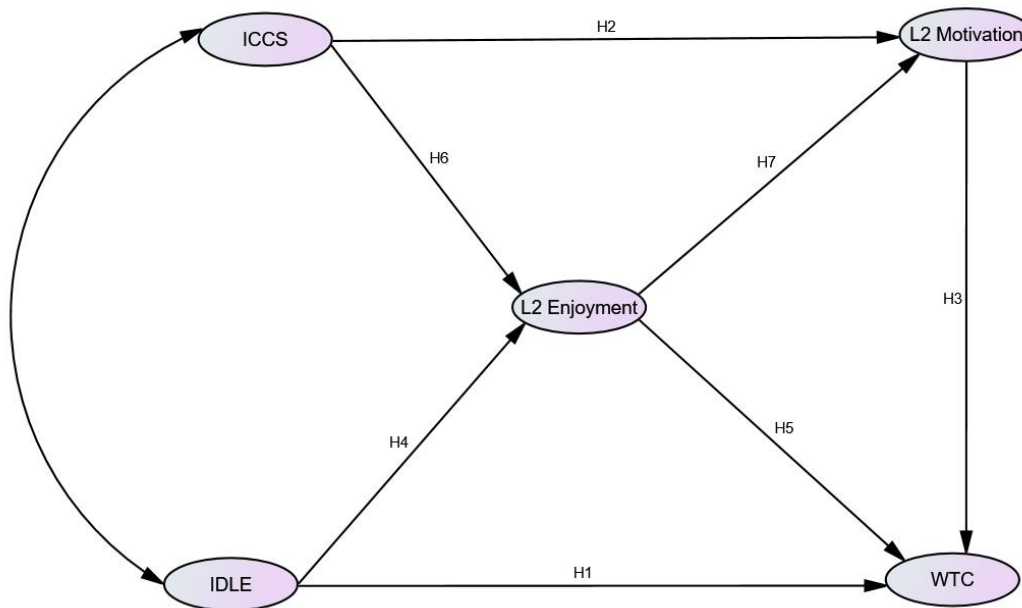


Figure 1. The Hypothesized Structural Model of the Study

Research Methods

Research Approach and Design

Considering the research purpose to examine netizens' WTC in English L2 on social media, we decided to administer questionnaires, employing a structural equation modelling (SEM) approach to investigate the associations of ICCS, IDLE, L2 enjoyment, motivation, and WTC in English L2 on social media. The SEM approach was believed to be powerful in presenting the relationships of multiple variables.

Participants and Setting

The questionnaires of the intended measures were administered to 504 Vietnamese university EFL students. They confessed that they often used English L2 to communicate with other people, including friends and strangers, on social media. Their online communication stemmed from their needs (socializing, employment, and learning). The participants revealed that they came from three different public universities located in Vietnam. They had learned English since junior secondary school and were pursuing three main disciplines: business administration, tourism, and finance and accounting (see Table 1).

Table 1. Participants' Demographic Information

Specialization	N	Gender		Age (M)	University		
		Male	Female		1	2	3
Business Administration	137	73	64	21.14	42	38	57
Tourism	213	112	101	19.42	65	77	71
Finance & Accounting	154	71	83	19.82	48	62	44
Total	504	256	48.7		155	177	172

Measures

Data were collected from questionnaires adopted or adapted from previous research. These questionnaires were chosen as they had been validated and suited the purpose of the study. All questionnaires were formatted on a 1-5 Likert scale.

Intercultural Communication Skills

We used the measure of intercultural communication skills introduced by [Wu et al. \(2013\)](#), further revised by [Peng et al. \(2015\)](#). This 5-point Likert scale, validated by the researchers, comprises 9 items. This scale is comprehensive and suitable for Asian L2 English education contexts ([Chau et al., 2024](#)).

IDLE

Considering the availability of the measures, we adapted the scale of IDLE developed by [Liu and Ma \(2023\)](#) and revised by [Liu et al. \(2025\)](#). This original scale by Liu and Ma generally describes L2 learning activities in digital modality. After validation, Liu and associates reduced the questionnaire to eight items, perpetuating receptive and productive informal learning activities in digital learning environments, including social media. For instance, the items “watching English movies” and “chatting with others in English” particularly refer to social media as platforms for learning and communication. We removed three items denoting online learning, leaving five items describing IDLE on social media in the scale.

L2 Motivation

We deployed the Ideal L2 Self scale introduced by [Dörnyei \(2009\)](#) and adapted by [Liu et al. \(2025\)](#). This original measure consists of 2 sub-scales: Ought-to L2 Self and Ideal L2 Self. Liu and his colleagues validated the questionnaire and reduced it to six items in each of the

components. We used [Liu et al.'s \(2025\)](#) revised scale of Ideal L2 Self to collect data, as this 6-item questionnaire mainly refers to the Asian context.

L2 Enjoyment

With regard to L2 enjoyment, we decided to modify the scale by [Li et al. \(2018\)](#), as this scale measures the degree of L2 enjoyment. However, this scale refers to L2 enjoyment in the formal learning environment. We had to remove the items describing formal teacher instruction, leaving five items about L2 English students' enjoyment in IDLE platforms.

Willingness to Communicate in English L2 on Social Media

The scale of WTC in English L2 on social media was adapted from the scale of WTC in digital settings by [Lee and Hsieh \(2019\)](#). We adapted the scale of WTC in digital environments (5 items), depicting how willing people are to engage in online communication. Subsequently, we changed the wording of the items to fit the purpose of the current study. For example, the item "When you have a chance to explain your own culture in English to other English speakers online" was revised to "When I have a chance to explain my culture in English to other people on social media."

Data Collection

Data were gathered in the first three months of 2024. As the study aimed to investigate L2 English speakers' WTC on social media, we administered the questionnaires to Vietnamese university EFL students who used social media, mainly Facebook, to obtain nuanced data via email. We applied the purposive sampling strategy to recruit the participants. A consent form was also attached, introducing the purpose of the study and ethical considerations. The participants were also required to check such screening statements as "I use English as a second/ foreign language" and "I frequently use English to communicate with other people on social media" before they answered the questionnaires. Those who did not tick these statements were not considered eligible for this study.

Data Analysis

Data were projected to SPSS (IBM, NY) version 28 for analysis. After the screening stage, data provided by 88 respondents were removed as they neglected the consent and/or screening statements, or their answers were incomplete, leaving the remaining valid data ($n = 416$) for statistical analysis. Then, the data distribution was assessed by using Skewness

and Kurtosis before we examined the reliability (Cronbach's alpha) of each scale. Afterwards, we analysed confirmatory factors with AMOS component to investigate the hypothesized associations.

After an examination into the scale reliability and confirmatory factor analysis results, some scales and sub-scales remained: L2 WTC on social media (4 items; $\alpha = .872$), L2 Enjoyment (5 items; $\alpha = .771$), IDLE (8 items; $\alpha = .817$), and L2 Motivation (6 items; $\alpha = .856$). However, some items in the other scales were removed to increase their reliability values. In particular, two items (items 2 and 7) in the scale of ICCS were removed, leaving seven items on the scale ($\alpha = .850$). One item in the scale of WTC was removed, leaving the whole scale of WTC with 4 items ($\alpha = .872$). Finally, we examined the statistics to determine if the hypotheses were supported or unsupported and investigated the interface between the variables.

Results

Initial Data Analysis

As the data set consisted of over 400 cases, we used Skewness and Kurtosis to investigate the data distribution (see Table 2). The results show that the values were within ± 1.96 , which means that the distribution was perfectly symmetrical for the sample of over 400 participants (Field, 2013). Also, the variances were also within the range of slightly above .3 to marginally over 1.0. This means that the ratings in each of the measures oscillated marginally. Besides, the standard deviations ranged between around .6 and marginally over 1.0, meaning that the ratings between individual participants in each of the measures were relatively close. In other words, the variability in their responses was acceptable. Also, the asymmetry to the left or to the right was very limited. In summary, the data were normally distributed.

Table 2. Descriptive Statistics, Normality, and Reliability Test Results

Scale/ sub-scale	Item (n=416)	M	SD	Variance	Skewness	Kurtosis	Reliability
WTC	WTC1	4.10	.86	.746	-.534	-.685	.872
	WTC2	4.02	.90	.812	-.460	-.795	
	WTC3	4.09	.84	.712	-.397	-.954	
	WTC4	4.07	.90	.802	-.531	-.744	
ICCS	ICCS1	3.72	1.01	1.013	-.576	.171	.850
	ICCS3	3.79	1.03	1.057	-.708	.160	

Scale/ sub-scale	Item (n=416)	M	SD	Variance	Skewness	Kurtosis	Reliability
	ICCS4	3.84	1.05	1.111	-.662	-.032	
	ICCS5	3.81	1.07	1.137	-.753	.179	
	ICCS6	3.88	1.10	1.203	-.800	.090	
	ICCS8	3.83	1.01	1.021	-.494	-.268	
	ICCS9	3.82	1.01	1.025	-.654	-.014	
L2 Motivation	IdealSelf1	3.97	1.02	1.040	-.641	-.307	.856
	IdealSelf2	3.98	1.06	1.127	-.778	-.071	
	IdealSelf3	4.05	1.00	1.005	-.861	.264	
	IdealSelf4	3.83	1.03	1.062	-.622	-.051	
	IdealSelf5	3.94	1.05	1.107	-.790	.112	
	IdealSelf6	3.99	1.06	1.125	-.852	.158	
L2 Enjoyment	Enjoy1	4.07	.86	.744	-.461	-.790	.860
	Enjoy2	4.20	.83	.694	-.635	-.605	
	Enjoy3	4.05	.93	.860	-.605	-.381	
	Enjoy4	4.13	.86	.748	-.623	-.446	
IDLE	IDLE1	3.64	.94	.876	-.052	-.915	.782
	IDLE2	3.68	.92	.851	-.071	-.890	
	IDLE3	3.88	1.03	1.054	-.649	-.313	
	IDLE6	3.46	1.04	1.078	.019	-.961	
	IDLE7	3.65	.98	.952	-.323	-.547	
	IDLE8	3.47	1.00	.997	-.146	-.601	

After the descriptive statistics, a Confirmatory Factor Analysis (CFA) with Maximum Likelihood estimation verified the suggested five-factor measurement model (see Table 2). The measurement of Goodness-of-Fit was based on accepted indexes (Kline, 2015). A minor Chi-square was obtained ($\chi^2 = 705.865$, $df = 424$, $p = .001$). Secondary fit indices were prioritized because the index was sensitive to large samples. The model produced a normed Chi-square (χ^2/df) of 1.665, which is way beneath the traditional cut-off point of 3.0. Other indices supported the significance of the model. The Comparative Fit Index (CFI) of .946 and the Tucker Lewis Index (TLI) of .941 exceeded the recommended minimum of .90. The Goodness-of-Fit Index was .900, which passed its cut-off test. Root Mean Square Error of Approximation was at 0.040 (90% $CI = 0.035-0.045$), and closeness of fit p -value was 0.999, which is a close fit.

Hypothesis Testing

To examine the hypothesized model, we conducted two rounds of structural equation modelling. In the first round, we found that the data fit the model well. In particular, Chi-square/degree of freedom ($589.927/370$) = 1.594 ($\chi^2/df < 2$; $p < .001$). CFI = .957 ($> .9$), IFI = .957 ($> .9$), TLI = .953 ($> .9$), NFI = .894, GFI = .909 ($> .8$), RMSEA = .038, and PCLOSE = 1.000.

Table 3. Hypothesis Testing Results of Round 1

Hypothesis	R	CR	S.E.	p	Hypothesis
WTC < IDLE	.275	4.294	.064	***	supported
L2 Motivation < ICCS	.563	10.215	.055	***	supported
WTC < L2 Motivation	.468	8.747	.054	***	supported
L2 Enjoyment < IDLE	.432	5.965	.072	***	supported
WTC < L2 Enjoyment	.284	5.138	.055	***	supported
ICCS <--> IDLE	.075	2.922	.026	.003	supported
L2 Motivation < L2 Enjoyment	.289	5.321	.054	***	supported
*** $p < .001$					

Scalar estimates show that the relationships between the variables were generally established (see Table 3). The significance level was all below .005 ($p < .005$). In other words, the hypotheses were supported ($p < .05$). Accordingly, the relationship between ICCS and L2 motivation was greatest ($r = .563$), followed by the association between L2 motivation and WTC ($r = .468$) and the association between IDLE and L2 enjoyment ($r = .432$). Less strong were the associations between L2 enjoyment and WTC ($r = .284$), and IDLE and WTC ($r = .226$). Meanwhile, the covariance between ICCS and IDLE ($r = .075$, $p < .005$) was weakest. According to Kline (2015), these statistics of this model show a good model fit. In short, the seven hypotheses were supported.

In the second round, therefore, we tried removing the covariance between ICCS and IDLE. As a result, most of the regression weights in general improved (see Table 4). The model fitness statistics were still satisfactory. Specifically, Chi-square/degree of freedom ($599.266/371$) = 1.615 ($\chi^2/df < 2$; $p < .001$). The Comparative Fit Index = .956 (CFI $> .9$), Incremental Fit Index = .956 (IFI $> .9$), Tucker Lewis Index = .951 (TLI $> .9$), NFI = .892, Goodness of Fit Index = .908 (GFI $> .8$), Root Mean Square Error of Approximation (RMSEA) = .039, and PCLOSE = 1.000. After considering the statistics provided by the two rounds of analysis, we decided to use the first model to interpret and discuss the findings.

Table 4. Hypothesis Testing Results of Round 2

Hypothesis	R	CR	S.E.	p	Hypothesis
WTC < IDLE	.273	4.311	.063	***	supported
L2 Motivation < ICCS	.562	10.195	.055	***	supported
WTC < L2 Motivation	.474	8.823	.054	***	supported
L2 Enjoyment < IDLE	.426	5.925	.072	***	supported
WTC < L2 Enjoyment	.283	5.107	.055	***	supported
L2 Motivation < L2 Enjoyment	.295	5.430	.054	***	supported

*** p < .001

Model Testing

After testing the hypotheses above (see Table 3), we examined whether the model was supported (see Figure 2). Accordingly, ICCS and IDLE were two independent variables. WTC in L2 English on social media was a dependent variable. L2 enjoyment and L2 motivation were mediating variables. In fact, L2 enjoyment mediated the connection between IDLE and L2 motivation. Also, L2 motivation mediated the association between ICCS and WTC in L2 English on social media. In other words, IDLE could directly and indirectly affect WTC in L2 English on social media.

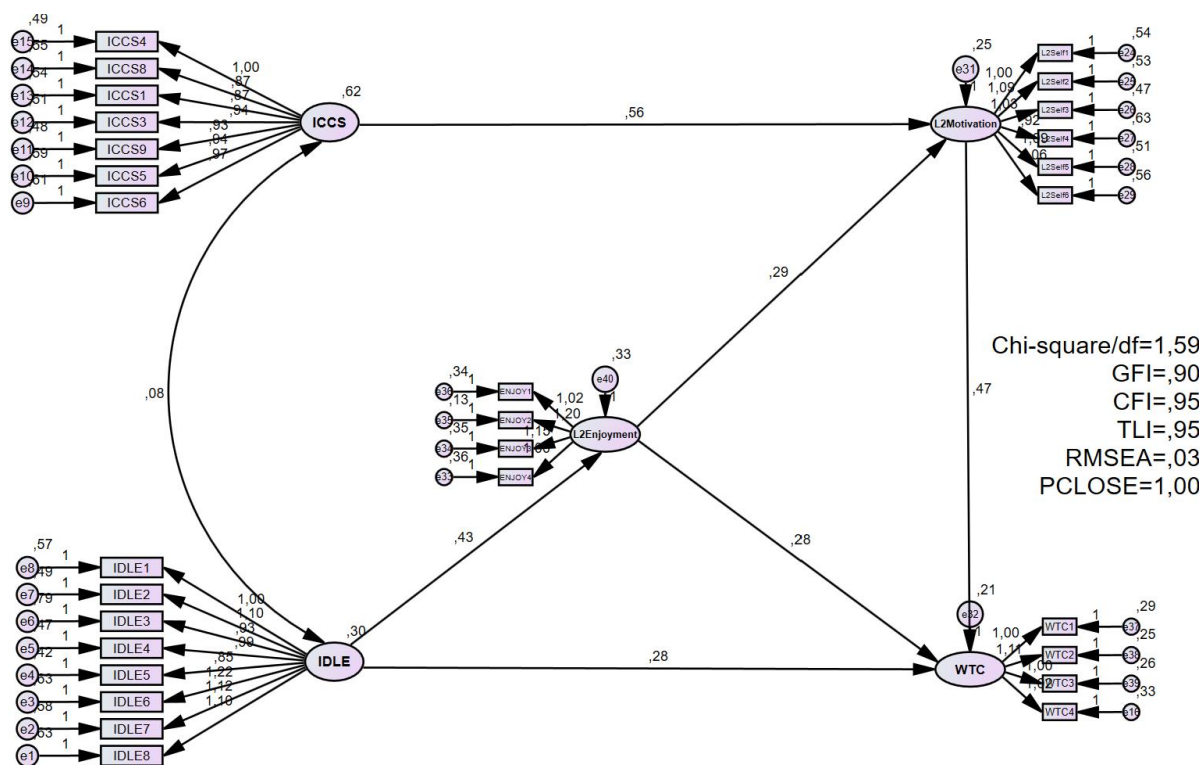


Figure 2. The Structural Model of the Study

Discussion

The current study explored the interplay between five variables, including ICCS, IDLE, L2 motivation, L2 Enjoyment, and L2 English WTC on social media. In this section, based on SEM, we interpret the proposed hypotheses and compare the current findings with previous research.

First, the data analysis reveals that participating in IDLE activities enhanced the WTC in L2 English on social media. This finding is consistent with previous research on the role of IDLE in providing language learners with out-of-classroom learning opportunities. For instance, [Lee and Dressman \(2018\)](#) and [Zadorozhnyy and Lee \(2023\)](#) reported that participating in IDLE activities may improve learners' language proficiency and confidence. These findings indicate the usefulness of integrating IDLE activities into language teaching instructions to support language development and WTC in English of language learners.

Second, results show the positive correlation between ICCS and L2 motivation. Specifically, individuals with higher levels of ICCS may have a greater ideal L2 self. This suggests that the greater ICCS the learners have and the less anxious they are, the greater their motivation and WTC are. This finding is in line with previous research highlighting the crucial role of ICCS in fostering language learners' confidence and reducing anxiety when using the target language in communication. For instance, [Yousaf et al. \(2022\)](#) discovered that a higher level of ICCS may increase the level of WTC in various intercultural communications. [Lu and Hsu \(2008\)](#) also concluded that individuals possessing greater ICCS are more likely to engage in intercultural communication. These findings suggest the necessity to improve learners' ICCS for greater motivation and WTC levels.

Third, this study found that L2 motivation emerges as a crucial predictor of WTC in L2 English within social media. This finding confirms prior research emphasizing the influence of motivation on L2 communication behavior by [Liu et al. \(2024\)](#), [Pavelescu \(2023\)](#), and [Lei et al. \(2023\)](#). Notably, the current research further reveals that L2 motivation functions as a mediating factor between ICCS and WTC. This novel finding suggests that ICCS indirectly affects WTC, mediated by Ideal L2 Self. This suggests that learners with stronger ICCS are more likely to be motivated to communicate, which in turn increases their WTC. Moreover, ICCS may indirectly influence WTC by diminishing communication apprehension and building confidence.

Furthermore, the present study found that participating in IDLE may foster L2 learning enjoyment. This finding is supported by prior research on the interplay between WTC and positive emotions. According to [Lee et al. \(2021\)](#) and [Mercer and MacIntyre \(2014\)](#), positive

emotions positively influence WTC as a greater WTC level may occur when learners notice that they are in a low-anxiety environment. Specifically, the present study reveals that IDLE activities, by their informal and often engaging nature, can create a more enjoyable learning experience, which then positively influences learners' WTC in L2.

The current study also proves that ICCS is a positive determinant of L2 enjoyment. In particular, the result shows that learners with higher levels of ICCS may have greater levels of enjoyment in learning a second language. This finding aligns with the research by [Yousaf et al. \(2022\)](#) and [Lu and Hsu \(2008\)](#), showing ICCS may boost language learners' confidence and reduce their communication anxiety. In other words, learners who feel more competent in intercultural communication are likely to experience greater enjoyment in the process of language learning itself. It may be essential to foster language learners' ICCS to develop their language learning enjoyment and WTC in English on social media.

Additionally, this study supports the hypothesis that enjoyment in learning an L2 positively affects WTC in English L2 on social media. This finding aligns with research on the role of positive emotions in enhancing WTC. For instance, [Mercer and MacIntyre \(2014\)](#) argue that positive emotions, such as enjoyment, can lead to greater confidence and willingness to engage in larger social challenges. Similarly, [Lee et al. \(2021\)](#) discovered that enjoyment in L2 learning mediates the relationship between IDLE and WTC among Korean students learning English as an L2. It might be essential for language educators to develop positive emotions, such as enjoyment, to enhance learners' WTC in L2 English on social media.

Through the above findings, all the hypotheses were supported. This means the proposed structural model in this study provides a comprehensive framework to understand the interplay between ICCS, IDLE, Ideal L2 Self (a component of L2 motivation), L2 enjoyment, and WTC in L2 English on social media. This model highlights the direct and indirect impacts of ICCS and IDLE on WTC, with L2 motivation and L2 enjoyment emerging as mediating factors. The findings suggest that developing ICCS and engaging in IDLE activities can significantly foster learners' motivation and WTC in English on social media. Furthermore, fostering positive emotions, such as enjoyment, can further boost learners' motivation and WTC in the target language (i.e., English). These insights emphasize the necessity to incorporate these elements into L2 education to improve learners' communication on social media.

Conclusion

Pursuing the burgeoning interest in WTC in language education and little research on internal factors that drive L2 speakers to communicate on social media, this study investigated the personal qualities that motivate people to communicate in English on social media. The complex relationships between ICCS, digital informal learning IDLE, L2 motivation, enjoyment, and WTC in English L2 on social media in the Vietnamese context were examined.

As reported above, the findings from data analysis reveal the significant role of personal qualities and external factors in enhancing L2 learners' communication abilities in digital environments. More precisely, the current research found that ICCS and IDLE positively influence L2 motivation and enjoyment, which in turn, enhance WTC in L2 (English) on social media. Specifically, this study highlights that learners with higher ICCS are more motivated and enjoy communicating in English, leading to increased WTC. Similarly, engaging in IDLE activities fosters enjoyment and motivation, further promoting WTC on social media.

These findings offer significant contributions to current knowledge in L2 education. In particular, to enhance language learners' WTC in the target language, it may be essential for teachers to introduce IDLE activities to enhance students' communication. Based on such insights into the roles of IDLE and ICCS, language teachers can create more effective and engaging language learning environments. Additionally, the study suggests that integrating technology and social media into language learning curricula can provide learners with more opportunities to practice and improve their communication skills in real-world contexts.

This study has a few possible limitations. First, it mainly focused on Vietnamese contexts. Further studies can replicate this structural model in other contexts to provide a comprehensive theoretical background. Second, as the current research aims to investigate the associations between the included factors, future research may include other factors that have potential effects on WTC in English L2 on social media. Third, although the sample size was statistically identified as adequate, the current study was confined to the valid data collected from 416 participants. Large-scale research may improve the generalizability of the results.

Declarations

Author contributions: In this study, the first author formulated the hypotheses, analyzed the data, and wrote the manuscript. The second and third authors curated data and edited the

manuscript. All participants consented. The work described has neither been published before nor been under consideration for publication anywhere else.

Funding

There is no funding for this publication.

Data availability

We confirm that we have included a data availability statement in our main manuscript file. All data generated or analyzed during this study are included in this published article.

Ethics approval

This study conformed to the institutional and national ethical guidelines.

Conflict of interests

The authors declare that there is no conflict of interest regarding this publication.

References

- Aldukhayel, D. (2023). The benefits of social media comments to L2 listening comprehension. *Sage Open*, 13(2). <https://doi.org/10.1177/21582440231171320>
- Ameli, S. R., & Molaei, H. (2012). Religious affiliation and intercultural sensitivity: Interculturality between Shia and Sunni Muslims in Iran. *International Journal of Intercultural Relations*, 36(1), 31–40. <https://doi.org/10.1016/j.ijintrel.2010.11.007>
- Asmali, M. (2016). Willingness to communicate of foreign language learners in Turkish context. *Procedia - Social and Behavioral Sciences*, 232(2), 188–195. <https://doi.org/10.1016/j.sbspro.2016.10.044>
- Badrkoochi, A. (2018). The relationship between demotivation and intercultural communicative competence. *Cogent Education*, 5(1), 1531741. <https://doi.org/10.1080/2331186X.2018.1531741>
- Baker, W., & Sangiamchit, C. (2019). Transcultural communication: language, communication and culture through English as a lingua franca in a social network community. *Language and Intercultural Communication*, 19(6), 471–487. <https://doi.org/10.1080/14708477.2019.1606230>

- Bennett, M. J. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations*, 10(2), 179–196. [https://doi.org/10.1016/0147-1767\(86\)90005-2](https://doi.org/10.1016/0147-1767(86)90005-2)
- Campbell, N. (2016). Ethnocentrism and intercultural willingness to communicate: A study of New Zealand management students. *Journal of Intercultural Communication*, 16(1), 1-15. <https://doi.org/10.36923/jicc.v16i1.707>
- Chau, H. T. H., Bui, H. P., & Dinh, Q. T. H. (2024). Impacts of online collaborative learning on students' intercultural communication apprehension and intercultural communicative competence. *Education and Information Technology*, 29, 7447-7464. <https://doi.org/10.1007/s10639-023-12100-0>
- Dewaele, J., & MacIntyre, P. D. (2016). Foreign language enjoyment and foreign language classroom anxiety: The right and left feet of the language learner. In P. D. MacIntyre, T. Gregersen & S. Mercer (Eds.), *Positive psychology in SLA* (pp. 215-236). <https://doi.org/10.21832/9781783095360-010>
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition* (1st ed.). Routledge. <https://doi.org/10.4324/9781410613349>
- Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 9-42). Multilingual Matters.
- Dressman, M. (2019). Introduction. In M. Dressman & R. W. Sadler (Eds.), *The handbook of informal language learning*. John Wiley & Sons.
- Fattahi, N., Ebn-Abbasi, F., Botes, E., & Nushi, M. (2023). Nothing ventured, nothing gained: The impact of enjoyment and boredom on willingness to communicate in online foreign language classrooms. *Language Teaching Research*, 1-28. <https://doi.org/10.1177/13621688231194286>
- Field, A. (2013). *Discovering statistics using SPSS*. SAGE Publications.
- Godwin-Jones, R. (2019). Telecollaboration as an approach to developing intercultural communication competence. *Language Learning & Technology*, 23(3), 8–28. <http://hdl.handle.net/10125/44691>
- Gutiérrez-Santiuste, E., & Ritacco-Real, M. (2023). Intercultural communicative competence in higher education through telecollaboration: typology and development. *Education and Information Technologies*, 28, 13885–13912. <https://doi.org/10.1007/s10639-023-11751-3>
- Hoang, V. Q., & Bui, H. P. (2023). Encouraging EFL students' willingness to communicate inside Vietnamese high school classrooms: Teachers' strategies and students' beliefs.

- Applied Research on English Language*, 12(2), 19-44. <https://doi.org/10.22108/ARE.2022.134674.1968>
- Huang, Y., Rayner, C., & Zhuang, L. (2003). Does intercultural competence matter in intercultural business relationship development? *International Journal of Logistics: Research and Applications*, 6(4), 277–288. <https://doi.org/10.1080/13675560310001626963>
- Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (Eds.), *Sociolinguistics: Selected readings* (pp. 269-293). Penguin.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford Publications.
- Lan, G., Zhao, X., & Gong, M. (2023). Motivational intensity and willingness to communicate in L2 learning: A moderated mediation model of enjoyment, boredom, and shyness. *System*, 117, 103116. <https://doi.org/10.1016/j.system.2023.103116>
- Lee, J. S., & Drajati, N. A. (2019). Affective variables and informal digital learning of English: Keys to willingness to communicate in a second language. *Australasian Journal of Educational Technology*, 35(5), 168–182. <https://doi.org/10.14742/ajet.5177>
- Lee, J. S., & Dressman, M. (2018). When IDLE hands make an English workshop: Informal digital learning of English and language proficiency. *TESOL Quarterly*, 52(2), 435–445. <https://doi.org/10.1002/tesq.422>
- Lee, J. S., & Hsieh, J. C. (2019). Affective variables and willingness to communicate of EFL learners in in-class, out-of-class, and digital contexts. *System*, 82, 63–73. <https://doi.org/10.1016/j.system.2019.03.002>
- Lee, J. S., & Lee, K. (2021). The role of informal digital learning of English and L2 motivational self system in foreign language enjoyment. *British Journal of Educational Technology*, 52(1), 358–373. <https://doi.org/10.1111/bjet.12955>
- Lee, J. S., Xie, Q., & Lee, K. (2021). Informal digital learning of English and L2 willingness to communicate: roles of emotions, gender, and educational stage. *Journal of Multilingual and Multicultural Development*, 45(2), 596–612. <https://doi.org/10.1080/01434632.2021.1918699>
- Lei, F., Chen, X., & Fan, X. (2023). Linking motivation and willingness to communicate in online L3 learning context: The influence of emotions and perceived positive language interaction. *International Journal of Applied Linguistics*, 34(2), 762-780. <https://doi.org/10.1111/ijal.12524>

- Li, C., Jiang, G., & Dewaele, J.-M. (2018). Understanding Chinese high school students' foreign language enjoyment: Validation of the Chinese version of the foreign language enjoyment scale. *System*, 76, 183–196. <https://doi.org/10.1016/j.system.2018.06.004>
- Liu, G. (2023). Interrogating critical digital literacies in the Chinese context: Insights from an ethnographic case study. *Journal of Multilingual and Multicultural Development* (Advance online publication). <https://doi.org/10.1080/01434632.2023.2241859>
- Liu, G., Darvin, R., & Ma, C. (2025). Exploring AI-mediated informal digital learning of English (AI-IDLE): A mixed-method investigation of Chinese efl learners' AI adoption and experiences. *Computer Assisted Language Learning* (Advance online publication). <https://doi.org/10.1080/09588221.2025.2310288>
- Liu, G., & Ma, C. (2023). Measuring EFL learners' acceptance of ChatGPT in informal digital learning of English based on the technology acceptance model. *Innovations in Language Learning and Teaching*, 18(2), 125-138. <https://doi.org/10.1080/17501229.2023.2240316>
- Liu, G. L., Zhang, Y., & Zhang, R. (2024). Examining the relationships among motivation, informal digital learning of English, and foreign language enjoyment: An explanatory mixed-method study. *ReCALL*, 36(1), 72-88. <https://doi.org/10.1017/S0958344023000204>
- Liu, G. L., Zou, M. M., Soyoo, A., & Chiu, M. M. (2025). Untangling the relationship between AI-mediated informal digital learning of English (AI-IDLE), foreign language enjoyment and the ideal L2 self: Evidence from Chinese university EFL students. *European Journal of Education*, 60(1), e12846. <https://doi.org/10.1111/ejed.12846>
- Lu, Y., & Hsu, C. (2008). Willingness to communicate in intercultural interactions between Chinese and Americans. *Journal of Intercultural Communication Research*, 37(2), 75-88. <https://doi.org/10.1080/17475750802533356>
- MacDonald, N. I. (2023). Intercultural communication in second-language (L2) learning via social media within the Inuit context: a scoping literature review. *AlterNative: An International Journal of Indigenous Peoples*, 19(4), 784-793. <https://doi.org/10.1177/11771801231196147>
- MacIntyre, P. D., Dörnyei, Z., Clément, R., & 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., Ross, J., Talbot, K., Mercer, S., Gregersen, T., & Banga, C. A. (2019). Stressors, personality and wellbeing among language teachers. *System*, 82, 26-38. <https://doi.org/10.1016/j.system.2019.02.013>
- Manninen, M., Dishman, R., Hwang, Y., Magrum, E., Deng, Y., & Yli-Piipari, S. (2022). Self-determination theory based instructional interventions and motivational regulations in organized physical activity: A systematic review and multivariate meta-analysis. *Psychology of Sport and Exercise*, 62, 102248. <https://doi.org/10.1016/j.psychsport.2022.102248>
- McCroskey, J. C., & Baer, J. E. (1985). Willingness to communicate: The construct and its measurement [Presentation]. *The Annual Meeting of the Speech Communication Association*, Denver. <https://eric.ed.gov/?id=ED265604>
- Mercer, S., & MacIntyre, P. D. (2014). Introducing positive psychology to SLA. *Studies in Second Language Learning and Teaching*, 4(2), 153–172. <https://doi.org/10.14746/ssl.2014.4.2.2>
- Muftah, M. (2024). Impact of social media on learning English language during the COVID-19 pandemic. *PSU Research Review*, 8(1), 211-226. <https://doi.org/10.1108/PRR-10-2021-0060>
- Müller, C., & Mildemberger, T. (2021). Facilitating flexible learning by replacing classroom time with an online learning environment: A systematic review of blended learning in higher education. *Educational Research Review*, 34, 100394. <https://doi.org/10.1016/j.edurev.2021.100394>
- Mustafa, F., Nguyen, H. T. M., & Gao, X. (2024). The challenges and solutions of technology integration in rural schools: A systematic literature review. *International Journal of Educational Research*, 126, 102380. <https://doi.org/10.1016/j.ijer.2024.102380>
- Nikitina, L., Lan, G., & Woo, W. S. (2022). L2 motivation and willingness to communicate: a moderated mediation model of psychological shyness. *Linguistics Vanguard*, 8(1), 225-235. <https://doi.org/10.1515/lingvan-2021-0125>
- Pavelescu, L. M. (2023). Emotion, motivation and willingness to communicate in the language learning experience: A comparative case study of two adult ESOL learners. *Language Teaching Research*, 1-27. <https://doi.org/10.1177/13621688221146884>
- Pekrun, R. (1992). The impact of emotions on learning and achievement: Towards a theory of cognitive/motivational mediators. *Applied Psychology*, 41(4), 359-376. <https://doi.org/10.1111/j.1464-0597.1992.tb00712.x>

- Peng, R. Z., Wu, W. P., & Fan, W. W. (2015). A comprehensive evaluation of Chinese college students' intercultural competence. *International Journal of Intercultural Relations*, 47, 143–157. <https://doi.org/10.1016/j.ijintrel.2015.04.003>
- Pikhart, M., & Botezat, O. (2021). The impact of the use of social media on second language acquisition. *Procedia Computer Science*, 192, 1621-1628. <https://doi.org/10.1016/j.procs.2021.08.166>
- Rahiman, H. U., & Kodikal, R. (2023). Revolutionizing education: Artificial intelligence empowered learning in higher education. *Cogent Education*, 11(1), Article 2293431. <https://doi.org/10.1080/2331186X.2023.2293431>
- Reinhardt, J. (2018). Social media in second and foreign language teaching and learning: Blogs, wikis, and social networking. *Language Teaching*, 52(1), 1-39. <https://doi.org/10.1017/S0261444818000356>
- Rezai, F. (2023). Investigating the association of informal digital learning of English with EFL learners' intercultural competence and willingness to communicate: a SEM study. *BMC Psychology*, 11(1), 314. <https://doi.org/10.1186/s40359-023-01365-2>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Schenker, T. (2012). Intercultural competence and cultural learning through telecollaboration. *CALICO Journal*, 29(3), 449–470. <https://www.jstor.org/stable/calicojournal.29.3.449>
- Sinaga, R. A., Febrianti, K. V., & Candra, D. (2022). The benefits and drawbacks of adopting mobile learning as perceived by junior high school teachers in Taiwan. *Interactive Learning Environments*, 31(10), 6356–6365. <https://doi.org/10.1080/10494820.2022.2036200>
- Soyoof, A., Reynolds, B. L., Vazquez-Calvo, B., & McLay, K. (2023). Informal digital learning of English (IDLE): A scoping review of what has been done and a look towards what is to come. *Computer Assisted Language Learning*, 36(4), 608–640. <https://doi.org/10.1080/09588221.2021.1936562>
- Strawbridge, T. (2023). The relationship between social network typology, L2 proficiency growth, and curriculum design in university study abroad. *Studies in Second Language Acquisition*, 45(5), 1131-1161. <https://doi.org/10.1017/S0272263123000049>

- Wu, W. P., Fan, W. W., & Peng, R. Z. (2013). An analysis of the assessment tools for Chinese college students' intercultural competence. *Foreign Language Teaching and Research*, 4, 581–592.
- Yan, D. (2023). Impact of ChatGPT on learners in a L2 writing practicum: An exploratory investigation. *Education and Information Technologies* (Advance online publication). <https://doi.org/10.1007/s10639-023-11742-4>
- Yashima, T. (2019). L2 motivation and willingness to communicate. In M. Lamb, K. Csizér, A. Henry, & S. Ryan (Eds.), *The Palgrave handbook of motivation for language learning*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-28380-3_10
- Yeh, E., & Swinehart, N. (2020). Social media literacy in L2 environments: navigating anonymous user-generated content. *Computer Assisted Language Learning*, 35(8), 1731–1753. <https://doi.org/10.1080/09588221.2020.1830805>
- Yin, J., Goh, T. T., & Hu, Y. (2024). Interactions with educational chatbots: the impact of induced emotions and students' learning motivation. *International Journal of Educational Technology in Higher Education*, 21, 47. <https://doi.org/10.1186/s41239-024-00480-3>
- Yousaf, M., Ahmad, M., Ji, D., Huang D., & Raza, S. H. (2022). A cross-cultural comparison of ethnocentrism and the intercultural willingness to communicate between two collectivistic cultures. *Scientific Reports*, 12, 17087. <https://doi.org/10.1038/s41598-022-21179-3>
- Zadorozhnyy, A., & Lee, J. S. (2023). Informal digital learning of English and willingness to communicate in a second language: self-efficacy beliefs as a mediator. *Computer Assisted Language Learning*, 38(4), 669-689. <https://doi.org/10.1080/09588221.2023.2215279>
- Zhang, Y., & Liu, G. (2023). Examining the impacts of learner backgrounds, proficiency level, and the use of digital devices on informal digital learning of English: An explanatory mixed-method study. *Computer Assisted Language Learning*, 37(8), 1-32. <https://doi.org/10.1080/09588221.2023.2267627>