

## Article

# The Role of Positive and Negative Emotions in Shaping Willingness to Communicate in a Second Language: Self-Perceived Communication Competence as a Moderator

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**Abstract:** Willingness to communicate (WTC) in a second language (L2) is one of the key concepts in L2 communication and learning. Previously, research practice in this area has been more concerned with investigating the relationship between individual negative emotions and WTC. However, insufficient attention has been given to a wide range of positive and negative emotions contributing to WTC. This study aims to address the impact of emotions (positive and negative) and self-perceived communication competence (SPCC) on WTC in an L2 in the context of Pakistan. The broaden-and-build theory of positive emotions has driven theoretical reasoning. Higher education students (N = 401) were considered the participants of this study and were approached conveniently. Data were processed and analyzed in SPSS. The findings revealed that positive emotions and SPCC positively influence WTC in an L2. On the contrary, negative emotions have a negative impact on WTC in an L2. Additionally, SPCC appears to be a significant moderator in the relationship between emotions (positive and negative) and WTC in an L2. The study's findings have important practical implications for Pakistan's Higher Education Commission (HEC) in drafting and implementing policies to enhance students' WTC within higher education classrooms.

**Keywords:** second language (L2); positive emotions; negative emotions; self-perceived communication competence (SPCC); willingness to communicate (WTC)



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## 1. Introduction

An individual's capacity to effectively communicate with people of non-identical languages has become an essential concept in communication and second language (L2) acquisition. It has become a critical skill that needs to be fostered as global citizens of the 21st century [1]. People's ability to initiate communication with others is based on their willingness to communicate (WTC) [2]. WTC in an L2 is one of the key components of L2 communication and learning. However, researchers have found a lack of WTC in higher education students [3].

Students' WTC is influenced by various linguistic, contextual, psychological, and communicative factors [4,5]. Recent studies have identified the essential role of emotions in L2 communication and learning [5]. Most of the previous studies have been more concerned with the impact of negative emotions on WTC in an L2 [6,7] and very few studies in the context of an L2 have concentrated on the influence of positive emotions on WTC in an L2 [6,7]. Prior studies have only examined the association between WTC in an L2 and individual emotions such as enjoyment, joy, motivation, anxiety, etc. [7]. However, there is a broad range of negative and positive emotions that can be examined regarding WTC in an L2 [7]. Moreover, various researchers have highlighted the need to address the relationship

between emotions, especially positive emotions, and WTC in an L2 [6,7]. Therefore, it can be argued that there is a need to address the impact of positive and negative emotions on WTC in an L2.

The limited literature available on WTC and emotions has indicated an inconsistent relationship between emotions and WTC in an L2 [7,8]. For instance, research found a positive relationship between positive emotions and WTC and a negative relationship between negative emotions and WTC [7]. On the contrary, a study witnessed that WTC in an L2 is not influenced by emotions [9]. Similarly, it was examined that positive and negative emotions are useful concepts to explain someone's WTC [8]. This discrepancy in the literature indicates the existence of a potential moderator in the relationship between emotions (positive and negative) and WTC in an L2. Self-perceived communication competence (SPCC) is also considered a strong predictor of WTC in an L2 [5,10]. Several investigations demonstrate the existence of the relationship between SPCC and WTC [10,11]. Furthermore, it is suggested considering SPCC as a moderating factor in the relationship of other variables with WTC [5]. Therefore, this study has considered SPCC as a potential moderator to examine the relationship between emotions (positive and negative) and WTC in an L2.

Moreover, previous research has been more inclined towards the cultural context of the West [12], East [5], and Asia [13] in exploring individuals' WTC. However, insufficient attention has been given to the cultural context of Pakistan [1,14] in the mainstream discourses of WTC in an L2. Pakistan is among the top linguistically complex countries, where learners from different socio-economic backgrounds and native languages have different exposure to the English language [15]. In addition, it is strongly recommended by the earlier attempts to consider diverse cultural contexts regarding WTC in an L2 [16,17]. Based on discussed concerns, this study considered the cultural context of Pakistan to address the influence of emotions (positive and negative) and SPCC on WTC in an L2.

The study aims to address these various gaps in the literature. First, the study will explore the systematic influence of emotions (positive and negative) on WTC in an L2 and the moderating effect of SPCC on the relationship between WTC in an L2 and emotions. For this reason, inconsistencies regarding the relationship between the variables (emotions and WTC) have been witnessed, and it is strongly recommended to consider SPCC as a crucial contributor to WTC. The broaden-and-build theory of positive emotions has been considered as a theoretical support for the proposed framework. Second, this research aims to represent the cultural context of Pakistan because previous efforts have been more focused on other cultural contexts. Therefore, the context of Pakistan will offer more insights into the conceptualization of WTC in an L2 by more effective means.

## 2. Literature Review

### 2.1. *Willingness to Communicate (WTC)*

WTC can be defined as an individual's predisposition to initiate communication with others. MacIntyre and his colleagues referred to WTC in an L2 as "a readiness to enter into discourse at a particular time with a specific person or persons, using an L2" [2] (p. 547). WTC was redefined by [18] as "the probability of initiating communication, given choice and opportunity" (p. 567). Researchers in the past have investigated the influence of linguistic, psychological, and communicative variables on L2 WTC [1,19]. Various models have been developed, and multiple variables have been identified, such as self-concept, communication apprehension, uncertainty, anxiety, and self-esteem, as influencing WTC in an L2 [20,21]. The first comprehensive heuristic model, a combination of temporary and long-lasting effects, was developed by MacIntyre and colleagues [2]. The model was developed and conceptualized as a willingness to join a conversation using an L2 at a specific time with an individual or group.

The heuristic model is comprised of psychological, linguistic, and communicative factors influencing L2 WTC [2]. The model is composed of six categories. Category I represents the actual use of an L2, while Category II is the behavioral intention of the L2

user. The upper three categories constitute the situation-specific influences (state variables), while the lower three categories of the model are more enduring and stable (trait-like variables). The model also specifies numerous variables that have the tendency to contribute to one's WTC in an L2 [2]. Over the years, researchers have explored the role of various immediate variables influencing WTC, such as communication apprehension and SPCC [22]. However, the contribution of many distal variables like emotions in predicting WTC is still inconclusive in various English as a foreign language (EFL) contexts.

## 2.2. Emotions

Emotions are defined as “a cause that has a “force” to affect some response (physiological, behavioral, and expressive) or that produces some kind of action or set of actions” [23] (p. 23). In addition, Reeve [24] referred to emotions as “short-lived, feeling purposive-expressive-bodily responses that help us adapt to the opportunities and challenges we face during important life events” (p. 340). Previous research has documented that these emotions play an important role in L2 communication [25]. Students with the right balance of emotions are more willing to communicate in an L2 [26]. A study has broadly differentiated between positive and negative emotions based on twenty representative emotions [27]. Joy, gratitude, interest, serenity, amusement, hope, pride, awe, inspiration, and love are classified as ten representative positive emotions. At the same time, sadness, disgust, guilt, contempt, anger, embarrassment, feeling scared, hate, and being stressed are classified as ten representative negative emotions [27]. It is strongly suggested [28] to further investigate the role of emotions in L2 communication.

### 2.2.1. Positive Emotions

Historically, researchers have prioritized the theories of negative emotions compared to positive emotions [29]. Traditional models have appropriately explained the functions of negative emotions. The recent developments in positive emotions are linked with researchers' interest in “good life” psychology [29,30]. The broaden-and-build theory [29] was the first positive-emotion-based model that documented the distinctive influence of positive emotions. According to the theory, “positive emotions broaden people's momentary thought-action repertoires and lead to actions that build enduring personal resources” [31] (p. 782). A researcher suggested that positive emotions strive to expand individuals' attention (e.g., individuals are ready to try new things and prepared to take varying perspectives), enabling them to develop potential resources (e.g., gain new skills) [32]. According to research, professional teachers utilize the emotions of L2 learners in the classroom setting to make them dare to speak in an L2 [33]. Nonetheless, students go through negative and positive emotions [34]. A study found that WTC has a significant association with positive emotion at both classroom and individual levels and students who enjoy learning at a classroom level are more willing to communicate in an L2 [7]. Positive emotions can significantly influence the classroom environment and learners' WTC within those classrooms [35]. It is witnessed that very limited studies in the context of L2 have concentrated on the effect of positive emotions on WTC [7]. Based on the above literature, it can be concluded that positive emotions can play an important part regarding WTC in an L2.

**Hypothesis 1.** *There is a positive relationship between positive emotions and WTC in an L2.*

### 2.2.2. Negative Emotions

Negative emotions can also play a critical role in responding to individual and immediate threats [31]. They help people in achieving survival and short-term material ends. However, contrary to positive emotions, negative emotions limit individuals' attention [32]. Researchers in the past have predominantly focused more on negative emotions in their studies than positive emotions. Anxiety is the most studied and researched negative emotion in L2 research [6,36]. There is an element of anxiety in L2 classroom environments

where it is compulsory to communicate in a foreign language [37], and that communication-related anxiety consequently affects the WTC of L2 learners [38]. Research has documented that people with high-intensity negative emotions such as fear and anxiety tend to avoid communication [39]. The cognitive disruption of negative emotions such as anxiety can create a distraction in the language learning process. Negative emotions such as hopelessness, anger, and shame influence students' learning strategies [40]. A study reported that individual emotions can be grouped into broad negative and positive emotions [41]. According to their perspective, positive emotions are linked to approach behavior, whereas negative emotions are linked to avoidance behavior. It is further emphasized that positive or negative emotions need to be examined to better understand communication and language learning [42]. Therefore, it can be assumed that the negative emotions can impact the WTC in an L2 of the individuals.

**Hypothesis 2.** *There is a negative relationship between negative emotions and WTC in an L2.*

### 2.3. Self-Perceived Communication Competence (SPCC)

SPCC is defined as "how an individual believes his/her communication competence is, based on self-awareness rather than the actual communication competence" [20] (p. 12). In the literature on L2 communication [2], SPCC is expressed as "the self-perception of an individual about his/her ability to communicate with other people in L2" (p. 549). Given the complex nature of SPCC, previous studies in this area have found interesting results. It was found that people's perceptions of their communication competence in an L2 influence their actual WTC [43]. It is considered a significant factor that can help determine WTC in an L2 [44]. Several research studies have found a significant positive association between SPCC and L2 WTC [5,45]. Furthermore, individuals who do not consider themselves competent enough to communicate in an L1 are also less willing to communicate in an L2 [46]. Since the choice of whether to communicate is a cognitive one, it is likely to be more influenced by one's perceptions of competence (of which one is usually aware) than one's actual competence (of which one may be unaware) [20]. According to the research in [10], if an individual has a positive self-concept about their communication competence, they will have a positive and strong WTC in that language. Based on the discussed studies, it is established that SPCC and WTC in an L2 are related to each other.

**Hypothesis 3.** *There is a positive relationship between SPCC and WTC in an L2.*

### 2.4. Moderating Effect of Self-Perceived Communication Competence

In this study, SPCC is considered a moderating variable for two main reasons. First, a discrepancy in the findings is witnessed in the relationship between emotions (positive and negative) and WTC in an L2 [7,8]. Few investigations revealed a significant association between the variables mentioned above [7], and others found an insignificant relationship [9]. Second, a line of studies strongly recommended addressing the relationship between SPCC and WTC in an L2 [10,11] and suggested considering SPCC as a moderating variable [5,10]. Therefore, the current study will determine the direction of the relationship between emotions (positive and negative) and WTC in an L2 by considering SPCC as a moderating variable.

**Hypothesis 4.** *SPCC moderates the relationship between positive emotions and WTC in an L2.*

**Hypothesis 5.** *SPCC moderates the relationship between negative emotions and WTC in an L2.*

### 2.5. Broaden-and-Build Theory

Fredrickson proposed that positive emotions can "broaden people's momentary thought-action repertoires and build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources" [32] (p. 219).

According to the theory, people with positive emotions are willing to experience new things and take different perspectives, ultimately increasing their resources. For instance, they try to attain new skills. More importantly, the process mentioned above produces upward spirals in their lives. The theory further argues that positive emotions lift people to optimal well-being and move them forward [32]. People with positive emotions are more generative, creative, and resilient. The theory highlighted the distinctive role of emotions in teaching and learning. On the contrary, negative emotions of the individuals can confine the attention. For instance, a study proved that negative emotions have confined the attitudes and behaviors of people [47]. It is also proposed that unlike positive emotions, negative emotions shrink the array of thoughts and actions that come to people's minds [32]. The impact of emotions (positive and negative) on WTC in an L2 is already predicted and explained by the broaden-and-build theory. Therefore, in the present study, this theory has the potential to predict the role of positive and negative emotions in influencing students' WTC in an L2 inside the classroom. Figure 1 represents the research model for this current study.

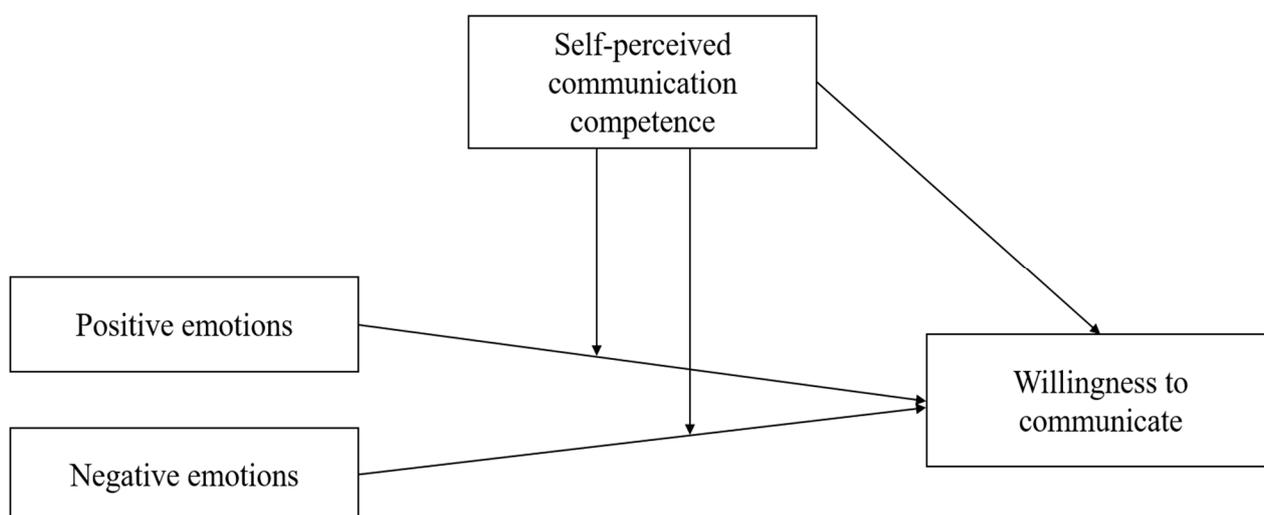


Figure 1. Research framework.

### 3. Methods

A quantitative research design was used for this study. Previous studies have also utilized a survey technique to address the students' WTC in an L2 [7,19,48]. The unit of analysis was the individuals, and the study population comprised higher education students in Pakistan [49]. The population was determined based on popular perception of Pakistani students' UWTC in an L2 [50,51] and because English is a compulsory part of major higher education institutions across the country [52]. The study's target population was the undergraduate (UG) and postgraduate (PG) students of various public and private sector universities in Islamabad, Pakistan. The specific city was selected because it is the country's most diverse metropolis regarding students and people [53]. A Morgan table was used for sample size determination, which indicates that the minimum sample should be 384 based on the population of this study [54]. Convenience sampling was utilized to select the respondents [55]. The sampling technique was selected by considering the cost, time, and access constraints. The reliability of convenient sampling can be increased by ensuring diversity and incorporating more data. A Google form was developed to collect data from the study participants.

#### 3.1. Participants

Higher education students from various public and private sector universities in Islamabad, Pakistan, participated in this study. The medium of instruction in all universities of Pakistan is English and the university students are usually proficient in English as they

have passed their school and college exams majorly in English before their enrollment in the universities. Of 401 participants, 272 (67.8%) were undergraduates and 129 (32.2%) were postgraduate students. The ages of participants were between 16 and 30 years. Table 1 indicates the demographic details of the participants. The male participants represented 57.6% ( $n = 231$ ), whereas female respondents represented 42.4% ( $n = 170$ ) of the study sample. About 38.2% of participants were from the National University of Sciences and Technology (NUST), 22.4% from International Islamic University Islamabad (IIU), 13.7% from the National University of Modern Languages (NUML), and 25.7% from other public and private sector universities. The L1 of the participants was indicated as Punjabi (46.9%), Pashto (26.2%), Sindhi (5.5%), Balochi (5%), and others (6%).

**Table 1.** Descriptive statistics.

Demography	Category	Frequency	Percentage
Age	16–20	176	43.9
	21–25	157	39.2
	26–30	68	17
Gender	Male	231	57.6
	Female	170	42.4
Education	Undergraduate	272	67.8
	Postgraduate	129	32.2
University	National University of Sciences and Technology (NUST)	153	38.2
	International Islamic University Islamabad (IIU)	90	22.4
	National University of Modern Languages (NUML)	55	13.7
	Other	103	25.7
First Language	Balochi	20	5.0
	Balti	11	2.7
	Pashto	105	26.2
	Punjabi	188	46.9
	Saraiki	16	4.0
	Sindhi	22	5.5
	Urdu	14	3.5
Other	25	6	

### 3.2. Measurement

A five-point Likert-type scale was used to measure the variables of the study.

#### 3.2.1. Emotions (Positive and Negative)

The positive and negative emotions of the students were measured by adopting the 20-item of Modified Differential Emotions Scale (mDES) in the classroom context [27]. The scale is comprised of two subscales that allow the use of aggregate measures of positive and negative emotions.

#### 3.2.2. Self-Perceived Communication Competence (SPCC)

SPCC was measured by adopting the 12-item of self-perceived communication competence scale [56].

#### 3.2.3. Willingness to Communicate (WTC)

WTC was measured by adopting the 27-item scale for the classroom context [57].

## 4. Results

Data were analyzed using the statistical package for social sciences (SPSS). First, the reliability and validity of the variables (positive emotions, negative emotions, SPCC, and WTC) were ensured. Reliability was assessed through the alpha values and, according to the rule of thumb, above 0.70 is good, above 0.80 is better, and above 0.90 is the best.

Table 2 indicates that every variable depicted the best reliability, as their alpha values were higher than 0.90. On the other side, the validity of the variables was assessed through factor loading of every item from each variable. The findings indicated that each item loaded significantly (see Table 2) in their respective variables and exceeded the minimum value of retainment. Two items of positive emotions were deleted (PE1 and PE2) because the loadings could not cross the minimum limit of factor loading.

Second, the relationship between the variables (positive emotions, negative emotions, SPCC, and WTC) was addressed by considering the Pearson correlation test and interpreted according to the guidelines provided by the study [58]. The findings revealed a moderate and positive relationship between positive emotions and SPCC ( $r = 0.622, p < 0.05$ ), positive emotions and WTC ( $r = 0.588, p < 0.05$ ), and SPCC and WTC ( $r = 0.749, p < 0.05$ ). On the contrary, a moderate and negative relationship was found between negative emotions and SPCC ( $r = -0.454, p < 0.05$ ), negative emotions and WTC ( $r = -0.517, p < 0.05$ ), and positive and negative emotions ( $r = -0.467, p < 0.05$ ). Third, a multiple regression analysis was performed to examine the impact of positive emotions, negative emotions, and SPCC on WTC. The findings revealed a positive and significant impact of positive emotions ( $\beta = 0.142, t = 3.437, p < 0.001$ ) and SPCC ( $\beta = 0.574, t = 13.942, p < 0.001$ ) on WTC. On the other side, a negative and significant influence of negative emotions ( $\beta = -0.190, t = -5.222, p < 0.001$ ) on WTC was witnessed from the findings of this study. Table 3 represents the details of regression analyses.

**Table 2.** Loadings and alpha values.

Variable	Alpha	Item	Loadings		
Positive emotions	0.91	PE3	0.738		
		PE4	0.821		
		PE5	0.824		
		PE6	0.750		
		PE7	0.853		
		PE8	0.805		
		PE9	0.717		
		PE10	0.713		
		Negative emotions	0.92	NE1	0.769
				NE2	0.776
NE3	0.781				
NE4	0.699				
NE5	0.827				
NE6	0.747				
NE7	0.746				
NE8	0.777				
NE9	0.805				
NE10	0.770				
Self-perceived communication competence (SPCC)	0.94	SC1	0.910		
		SC2	0.911		
		SC3	0.932		
		SC4	0.920		
		SC5	0.840		
		SC6	0.752		
		SC7	0.893		
		SC8	0.939		
		SC9	0.943		
		SC10	0.808		
		SC11	0.933		
		SC12	0.933		

**Table 2.** *Cont.*

Variable	Alpha	Item	Loadings
Willingness to communicate (WTC)	0.95	WT1	0.683
		WT2	0.771
		WT3	0.671
		WT4	0.612
		WT5	0.628
		WT6	0.615
		WT7	0.765
		WT8	0.840
		WT9	0.793
		WT10	0.804
		WT11	0.800
		WT12	0.794
		WT13	0.771
		WT14	0.697
		WT15	0.844
		WT16	0.779
		WT17	0.863
		WT18	0.840
		WT19	0.765
		WT20	0.822
		WT21	0.809
		WT22	0.836
		WT23	0.755
		WT24	0.757
		WT25	0.772
		WT26	0.838
		WT27	0.765

**Table 3.** Regression analysis.

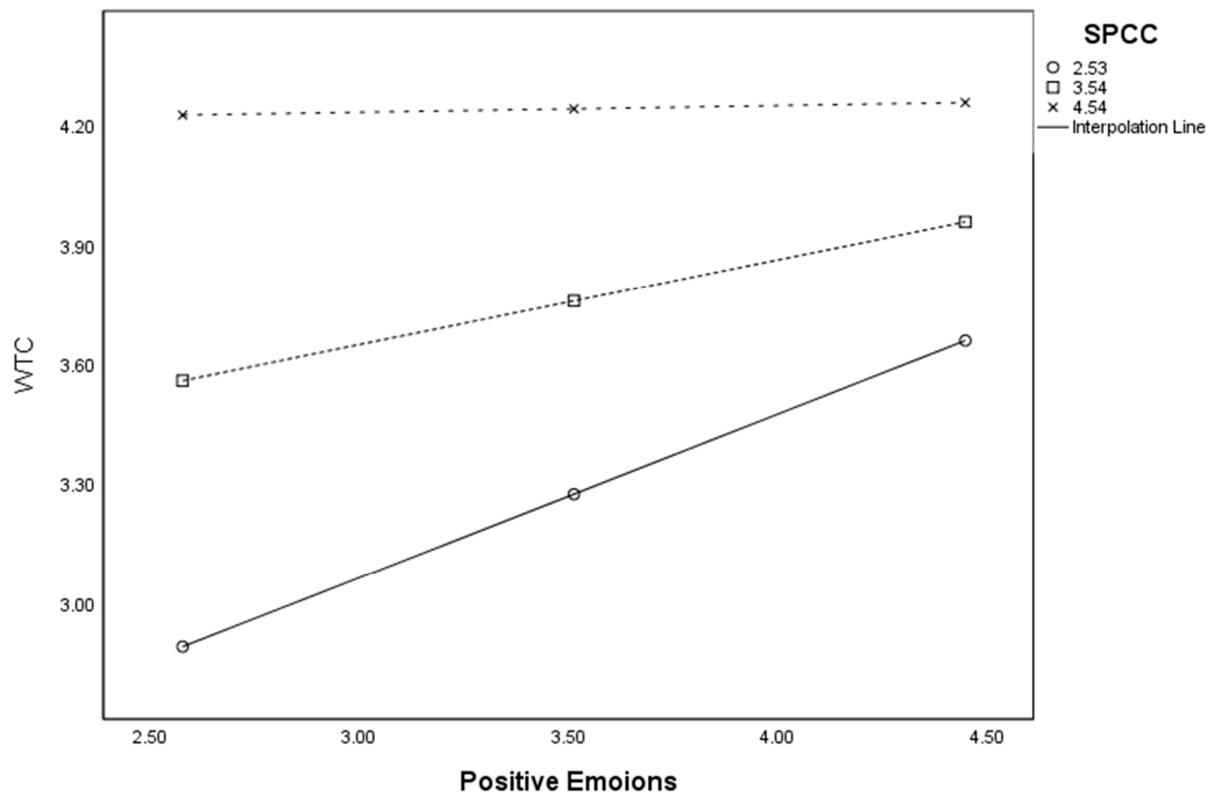
Path			$\beta$	S.E.	t	p
Positive Emotions	→	WTC	0.142	0.041	3.437	***
Negative Emotions	→	WTC	−0.190	0.036	−5.222	***
SPCC	→	WTC	0.574	0.038	13.942	***

WTC: willingness to communicate; \*\*\*  $p < 0.001$ .

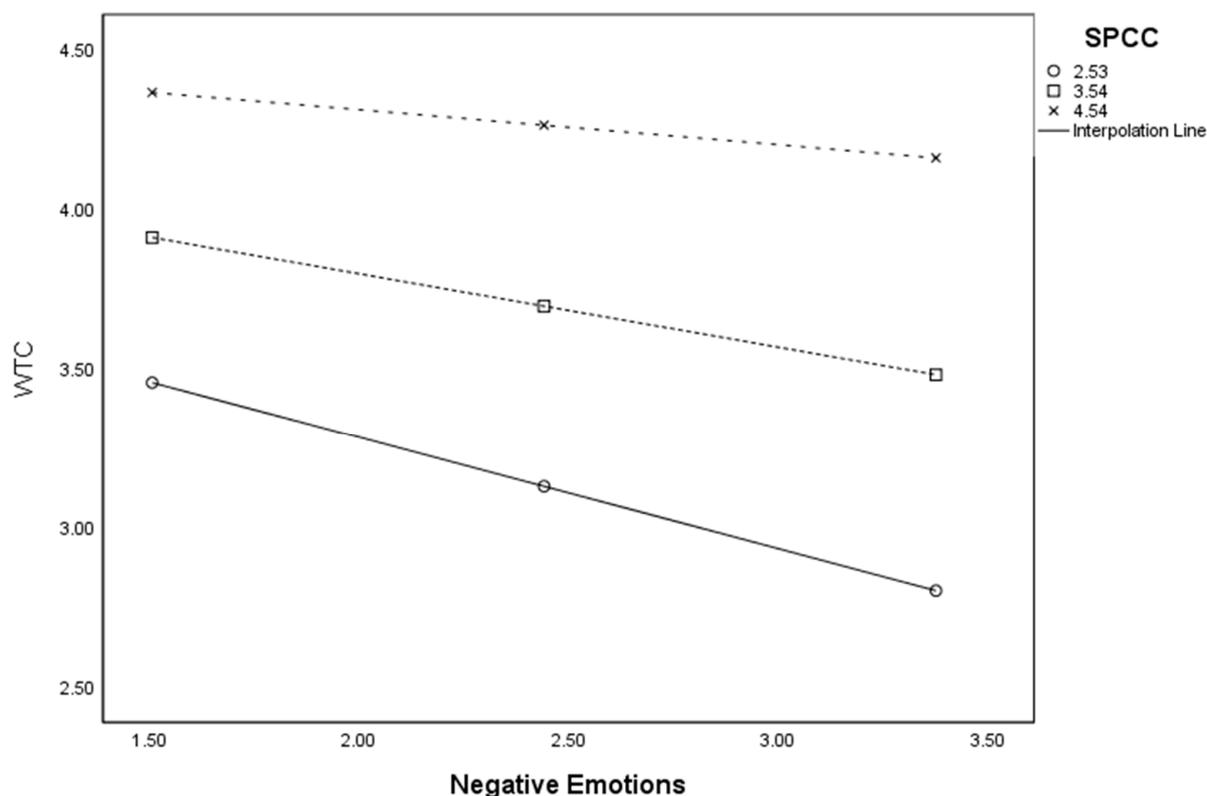
Fourth, for moderation analysis, a PROCESS macro (Model 1) was used to investigate the moderating role of SPCC on the relationship between emotions (positive and negative) and WTC [59,60]. The interaction effect of SPCC on the relationship between positive emotions and WTC in an L2 was significant ( $\beta = -0.20$ ,  $SE = 0.03$ ,  $p < 0.05$ ), 95% CI =  $[-0.26, -0.13]$ . To visualize the moderation process, SPCC was divided into three levels (see Table 4). At a low level of SPCC (−1SD below mean), the impact of positive emotions on WTC in an L2 was positive and significant ( $\beta = 0.42$ ,  $p < 0.05$ ), whereas at the mean position of SPCC, the impact of positive emotions on WTC in an L2 was comparatively low but significant ( $\beta = 0.21$ ,  $p < 0.05$ ). As shown in Figure 2, at a high level of SPCC (+1SD above mean), the impact of positive emotions on WTC in an L2 was negligible and insignificant ( $\beta = 0.02$ ,  $p > 0.05$ ). The results indicate that at a high level, SPCC has no interaction effect on the relationship between positive emotions and students' WTC in an L2.

**Table 4.** Conditional effects of emotions (positive and negative) on values of the moderator (SPCC).

Variable	SPCC	Effect	S.E.	t	Sig.	LLCI	ULCI
Positive Emotions	2.54	0.42	0.05	7.69	0.0000	0.31	0.52
	3.54	0.21	0.04	5.43	0.0000	0.14	0.29
	4.54	0.02	0.05	0.34	0.7365	−0.08	0.11
Negative Emotions	2.54	−0.35	0.05	−7.31	0.0000	−0.44	−0.26
	3.54	−0.23	0.03	−6.63	0.0000	−0.30	−0.16
	4.54	−0.11	0.04	−2.45	0.0148	−0.20	−0.02

**Figure 2.** Conditional effects of positive emotions on the values of the moderator (SPCC).

Moreover, the interaction effect of SPCC on the relationship between negative emotions and WTC in an L2 was also significant ( $\beta = 0.12$ ,  $SE = 0.03$ ,  $p < 0.05$ ), 95% CI = [0.06, 0.18]. To better understand the moderation process, SPCC was divided into three levels (see Table 4). At a low level of SPCC (−1SD below mean), the impact of negative emotions on WTC in an L2 was negative and significant ( $\beta = -0.35$ ,  $p < 0.05$ ), whereas at the mean position of SPCC, the impact of negative emotions on WTC in an L2 was comparatively low but significant ( $\beta = -0.23$ ,  $p < 0.05$ ). As shown in Figure 3, at a high level of SPCC (+1SD above mean), the impact of negative emotions on WTC in an L2 was lowest but significant ( $\beta = -0.11$ ,  $p < 0.05$ ). Thus, it can be concluded that SPCC reduces the negative impact of negative emotions on students' WTC in an L2.



**Figure 3.** Conditional effects of negative emotions on the values of the moderator (SPCC).

## 5. Discussion

The current study was conducted to achieve multiple objectives. First, to address the impact of emotions (positive and negative) on students' WTC in an L2 in the context of the classroom. Second, to investigate the moderating role of SPCC on the relationship between emotions (positive and negative) and WTC in an L2. Third, to further explore the relationship of the abovementioned variables in a new cultural context (Pakistan) in the classroom setting. In order to address these objectives, the current study considered the broad range of positive and negative emotions regarding WTC in an L2. In earlier attempts, the researchers focused more on specific emotions (like joy, excitement, anxiety, depression, etc.) and found inconsistent results. The findings of this study revealed that the relationship between emotions (positive and negative) and WTC in an L2 varies depending on the SPCC of higher education students in Pakistan.

The study's findings revealed a positive and significant relationship between the positive emotions of students and their WTC in an L2. The findings are consistent with the previous work [7,26], which highlighted the role of positive emotions in predicting WTC in an L2 inside the classroom. On the contrary, negative emotions showed a negative and significant relationship with students' WTC in an L2. This association is in line with the study [26] where the importance of negative emotions in impeding WTC in an L2 was emphasized. Similarly, a study [61] reported that students with low negative emotions have a low desire to communicate. The study's findings also revealed that SPCC moderates the relationship between emotions (positive and negative) and students' WTC in an L2. Specifically, the results indicated that students' SPCC reduces the impact of their emotions (positive and negative) on WTC in an L2. However, at a high level, SPCC has no interaction effect on the relationship between positive emotions and students' WTC in an L2. The current study does offer some theoretical and practical contributions.

In terms of theory, this study examined the influence of emotions (positive and negative) on WTC in an L2 by incorporating the broaden-and-build theory of positive emotions [32]. First, the current study extends the broaden-and-build theory of positive

emotions in Pakistan's context and has added new variables to the theoretical reasoning. Adding new variables to a theory is considered an incremental theoretical contribution to any research study [62]. Therefore, the study contributes to the advancement of existing knowledge by investigating the role of emotions (positive and negative) and SPCC in predicting WTC in an L2. Second, the study has given representation to the cultural context of Pakistan, which was predominantly ignored in the conventional investigations of WTC in an L2. The context always plays a significant role in terms of findings. It is evident from the findings of this study that the context of Pakistan played a crucial role in reconfirming the findings of previous research conducted in the West, East, and Asia. To sum up, it can be concluded that the current study has significantly contributed in terms of knowledge and the literature regarding WTC in an L2 in the context of Pakistan.

In terms of practice, the findings of this study can assist the teachers at higher education institutes of Pakistan. They will enhance the teachers' understanding of their students' communication behaviors in the classroom environment regarding an L2. The study findings revealed the role of emotions in predicting WTC in an L2. Thus, teachers have the capacity to regulate emotions to promote and optimize their students' L2 communication. Teachers can effectively assist the students' learning process by understanding the dynamics of WTC in an L2 in a classroom environment. Therefore, teachers can take part in cultivating factors (other than the variables of this study) that can contribute to favorable outcomes for students. The study's findings could be a learning paradigm for the higher educational institutes (HEIs) to take potential initiatives for students that will help them develop better communication skills concerning an L2.

Practically, the findings of the study can also assist the Higher Education Commission (HEC) of Pakistan in developing and implementing policies and practices for HEIs that focus on coupling academics and emotions to facilitate students' L2 learning. In addition, the HEC can conduct teacher training workshops in Pakistan, improving trainees' knowledge of regulating higher education classroom environments concerning L2s. The training sessions or workshops will ultimately help students to become more efficient L2 communicators within a classroom environment, as the training can enable the students to develop intercultural competence [63]. Lastly, the issues of self-reporting and social desirability bias should be kept in mind before drawing conclusions from the findings of this study.

## 6. Conclusions

The purpose of this study was to investigate the impact of emotions (negative and positive) and SPCC on WTC in an L2 inside the higher education classroom setting of Pakistan. The findings of the study revealed that Pakistani higher education students' WTC in an L2 was impeded by negative emotions but strengthened by positive emotions in the context of the classroom. The findings also revealed that students' SPCC not only directly impacts their WTC in an L2 but also moderates the relationship between their emotions (positive and negative) and WTC in an L2. Specifically, the results indicated that students' SPCC reduces the impact of their emotions (positive and negative) on WTC in an L2. The overall findings revealed that SPCC can influence the students' WTC in an L2 directly and through interaction. Theoretically, this study has extended the understanding of the broaden-and-build theory of positive emotions by considering that additive predictors like negative emotions and SPCC impact WTC in an L2. Apart from this, the current study has contributed to the advancement of existing knowledge of WTC in an L2 in the context of Pakistan. Practically, a wide range of policies, strategies, initiatives, training, and workshops could be developed or conducted by the HEC as well as HEIs for the students and teachers concerning L2 communication by looking into the findings of this study. Future studies should retest the framework of this study in diverse contexts. It would be worthy to examine and compare students' WTC in both L1s and L2s in upcoming research.

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