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The Effect of a Communication Strategy Instruction Program on Chinese EFL Learners' Willingness to Communicate

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Abstract

Though willingness to communicate (WTC) and communication strategy (CS) are both heavily researched fields, the relationship between them has rarely been explored. The purpose of this study is to examine the effect of a CS instruction program on WTC in a group of Chinese students. Results show that the WTC of students who took part in CS instruction program significantly improved, whereas there was no such difference in the control group, a finding supporting the hypothesis that CS instruction is conducive to the improvement of learners' WTC, and agreeing with results of previous empirical study. Based on the finding, a heuristic model is proposed to show the relationship between CS and WTC, in which communication apprehension and self-perceived communicative competence are seen as the most immediate factors bridging them.

Keywords

Communication Strategy, Willingness to Communicate, Effect, Chinese EFL Learners, Model

1. Introduction

English is learned throughout China as a foreign language (EFL): It is a compulsory academic subject in college entrance examination and a major subject in many universities. In EFL classes, a salient feature of Chinese students is their maintenance of silence. More specifically, there is usually no response to teachers' questions but avoidance of participation and communication in class (Chen, 2003;

Cortazzi & Jin, 1996; Davis, 2001; Flowerdew & Miller, 1995; Jackson, 2002; Liu, 2000; Nakane, 2006). These students' unwillingness to communicate, in spite of years of effort to learn English, often results in their failure to be able to converse in simple English in real-life situations. This is true even for students who are proficient in grammar and vocabulary and achieve remarkably high scores in some world-famed exams (e.g. GRE and TOEFL).

In contrast to learners' low level of class verbal production, speaking proficiency is gaining an increasingly pivotal importance in modern world. Widdowson (1990: p. 95) claims that "for language learners to learn only the intricacies of the device of language without knowing how to put it to use is rather like learning about the delicate mechanisms of a clock without knowing how to tell the time". MacIntyre et al. (1998: p. 547) argue that "a proper objective for second language education is to create willingness to communicate (WTC). A program that fails to produce students who are willing to use the language is simply a failed program". The ultimate goal of L2 teaching should be to engender in language students the willingness to seek out communication opportunities and exploit them. Wen and Clément (2003) stress that "the fundamental issue of L2 research in China is how to generate students' WTC in classroom settings in order to improve their speaking proficiency and thus further improve the effectiveness of language teaching".

With the increased emphasis upon communication as the ultimate goal of language learning in modern language pedagogy, it behoves us to examine WTC, which is seen to be an important variable in the quality of communication practice and one that can facilitate L2 learning.

2. Literature Review

2.1. Willingness to Communicate in Second Language Learning (L2 WTC)

WTC was originally conceptualized by McCroskey and Baer (1985), with reference to first or native language (L1) communication, as the probability of engaging in communication when free to choose to do so. It was enriched by being extended to L2 usage by MacIntyre et al. (1998) who conceptualized L2 WTC as a situational tendency with both transient and enduring influences rather than the trait-like variable proposed by McCroskey and Baer. That is, while L1 WTC essentially functions as a stable personality trait that presents in a consistent way over time and across situations (McCroskey & Richmond, 1990), the situation of L2 WTC is more complex and can vary depending upon the interlocutor, topic, and conversational context, among other potential situational variables (Kang, 2005). In short, L2 WTC is the product of many factors pertaining to the learner on the one hand and the learning situation on the other. The diversity and complexity that result from the interplay of these two sets of factors have attracted the interest of many researchers, and a number of variables influencing L2 WTC have been identified in the bulk of research in the past.

L2 anxiety and self-perceived communicative competence have been consistently found to be the most immediate antecedents of L2 WTC. For example, in MacIntyre and Charos's (1996) research, L2 anxiety and self-perceived communicative competence were found to influence L2 WTC. Similarly, Hashimoto (2002) indicated that L2 anxiety and self-perceived communicative competence were the precursors of L2 WTC. These findings have been frequently replicated in studies among East Asian populations (e.g. Kim, 2004; Yashima, 2002; Balouchi & Samad, 2021; Amirian et al., 2022).

Other variables that have been found to influence L2 WTC include motivation (MacIntyre et al., 2002, 2003; Ryan, 2009; Anani Sarab & Jabbarzadeh Sani, 2022), personality traits (Ghonsooly, Khajavy, & Asadpour, 2012; MacIntyre, Clément, & Noels, 2007), language attitude (Gardner, 1985; Anani Sarab & Jabbarzadeh Sani, 2022), international posture (Yashima, 2002, 2009; Balouchi & Samad, 2021), gender (Baker & MacIntyre, 2000), L2 communication frequency (Clément, Baker, & MacIntyre, 2003; Balouchi & Samad, 2021), social media (Shamsi & Bozorgian, 2022), and learners' grit (Cheng, 2021; Ebn-Abbasi & Nushi, 2022; Wang, 2023).

Factors such as perceived politeness, physical locality, the presence of the opposite sex, mood, and the topic under discussion have also been found to have minor influences on L2 WTC (Cao & Philp, 2006). Kang (2005) reported that situational L2 WTC emerges from the joint effect of three interacting psychological conditions—excitement, responsibility, and security—each of which is co-constructed by the interaction of situational factors such as topic, interlocutors, and conversational context. Peng (2007) investigated possible factors underlying L2 WTC among Chinese university students and identified the presence of eight factors: communicative competence, language anxiety, risk-taking, learners' beliefs about language learning, classroom climate, group cohesiveness, teacher support, and classroom organization (also Cao, 2011; Liu & Jackson, 2008; Peng, 2013; Wang et al., 2020). In addition, cultural factors (Cheng, 2000; Ferris & Tagg, 1996), classroom environment (Freiermuth & Jarrell, 2006; Peng & Woodrow, 2010), self-confidence, and affiliation (Clément, 1986) have been found to influence L2 WTC.

The above-mentioned L2 WTC literature reveals that most research has been predominantly theory-oriented. It is only recently that research has started to investigate how pedagogy can go about enhancing WTC among language learners. For example, Ayedoun, Hayashi, and Seta (2019) adopted an approach to build embodied conversational agents that can help learners surmount their apprehension towards communication in L2. The results suggested that combining communication strategies and affective backchannels empowers the conversational agent and leads to higher expected WTC among L2 learners; in another study, Anani Sarab and Jabbarzadeh Sani (2022) investigated the possibility of enhancing elementary-level EFL learners' WTC using communication strategy training with mixed-methods intervention. Results of an analysis of covariance and two paired samples t-tests indicated that the treatment had resulted in a significant increase in self-reported WTC.

In line with research that seeks to enhance L2 learners WTC using practical pedagogical interventions, the present study proposes communication strategy (CS) as a means to provide learners with strategies to overcome gaps in their language skills in an endeavour to enhance their WTC and facilitate language learning in Chinese context.

2.2. Communication Strategy (CS)

The term *communication strategy* (CS) was coined by Selinker (1972) in his account of the processes responsible for interlanguage emergence. Since then, there has been a steady increase in interest in learner CS. Much of this interest, however, has been around the problems of definition. Two key concepts characterize most discussions of how to define CS: *problematicity* and co*nsciousness*.

Problematicity means that the learner, in using a communication strategy, must have first recognized that there is a problem of communication that must be overcome and CSs are employed by the learner who lacks or cannot gain access to the linguistic resources required to express an intended meaning. As Corder (1983) puts it, in these cases there is a lack of balance between means and ends. Færch and Kasper (1980) classify CS as part of a particular kind of backup plan activated when the original plan cannot be implemented. Learners are forced to substitute a *strategic plan* for the initial production plan when they discover that they have insufficient means to implement the original plan. Either "a lack of balance between means and ends" or "the failed original plan" or "insufficient means" is a reflection of problematicity in CS component.

Consciousness means that learners must be aware that they have encountered a problem and be aware of the fact that they are, in fact, doing something to overcome that problem. To put it more specifically, consciousness is meant that CS is consciously employed in order to reduce or replace some element of meaning or form in the initial plan. Færch and Kasper (1980) consider consciousness to be a defining characteristic of CS in this way, but also recognize the difficulty of deciding empirically whether a strategy is conscious or otherwise, as learners may be only sometimes or to some degree aware of their use of CS. Therefore, they suggest that a better definition of CS is one that refers to them as "potentially conscious".

In some later discussions, Tarone (1981) takes an interactional perspective in which CS is seen as attempts to bridge the gap between the linguistic knowledge of a given L2 learner and that of the interlocutor (regardless of whether the interlocutor is an L2 learner) in real communication situations. These situations are characterized by the "negotiation of an agreement on meaning" between interlocutors (Tarone, 1981). Tarone therefore sees CS as constituting the learner's contribution to the interactional work required to overcome a communication problem.

In the light of the foregoing discussion, Ellis (1999: p. 182) defines CSs as follows: "CSs are psycholinguistic plans which exist as part of the language user's communicative competence. They are potentially conscious and serve as substi-

tutes for production plans which the learner is unable to implement". This will be the definition of CSs adopted in this study.

3. Methods

3.1. Hypothesis

Ellis' psycholinguistic definition of CSs in relation to the fact that WTC is influenced by linguistic, social, and psychological variables as can be seen in the literature suggests a linguistic and psychological links between them. On the basis of this, a possible way of fostering EFL learners' WTC could be through CSs instruction. Thus, the hypothesis of present study is: CS instruction is conducive to the improvement of EFL learners' WTC.

3.2. Research Model

The model used in this research employed pre-test and post-test groups with an independent variable of CS instruction program and a dependent variable of WTC, as shown in Table 1.

Table 1. The experimental model applied in the research.

Groups	Pre-test	Process	Post-test
Experimental Group	T1	CS Instruction Program	T2
Control Group	T1	Reading-practicing Program	T2

As can be seen from the model, subjects in the study are divided into two groups—experimental group and control group—and are pre-tested (T1) prior to a process to measure their baseline WTC level and post-tested (T2) at the end of the process to measure their WTC change.

During the process, a CS instruction program was given to the former group and a reading-practicing program was assigned to the latter with careful and deliberate controls implemented so that the control group would not be affected by CS content that might be reflected in the reading program. It is believed that the resultant significant difference, if any, between T2 and T1 in the experimental group or between the two T2s in the two groups should be an indication of the effect of the CS instruction program on WTC.

3.3. Participants

The participants in this study were 60 sophomore university students randomly chosen from seven non-English majors—30 male and 30 female, ages ranging from 19 to 22, randomly divided into experimental and control groups, each consisting of 15 male and 15 female. The baseline WTC level (T1) between these two groups was found by independent t-test not significantly different ($p = .459 > .05$, as shown in Table 2).

Table 2. Independent samples test.

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
WTC Equal Variances Assumed	.530	.470	−.746	58	.459
Equal Variances Not Assumed			−.746	57.936	.459

3.4. Instruments

Data were collected using a questionnaire on learners' WTC and analysed using the SPSS software (version 26.0).

The questionnaire was designed by Weaver (2005) based on the efforts of MacIntyre et al. (2001) and Sick (2001) together with Weaver's own interviews with students (Japanese non-English-majors) and both foreign and Japanese instructors of English. It features 17 items asking students about their willingness to speak English and 17 measuring their willingness to write in English in their university L2 classes. Given the fact that the main aim of this study was to examine whether CS instruction contributes to reducing silence and avoidance of participation in speaking, that is, increasing willingness to speak rather than to write, only the 17 items asking students about their willingness to speak were adopted for this study. Participants scored their degree of willingness on a four-point Likert-type scale (1 = definitely not willing; 2 = probably not willing; 3 = probably willing; and 4 = definitely willing).

After measuring participants' WTC before and after CS instruction and reading practice, data were entered into SPSS and subjected to a variety of analyses.

3.5. Procedures

As shown in the research model, the study was carried out in three steps: For both groups, the first and third steps were the same, namely the administering of questionnaires to test subjects' WTC level, but the second step differed in the program involved: a reading-practice program for the control group while for the experimental group a CS instruction program, a somewhat complicated process that is elaborated in the following section.

3.5.1. Procedures for Experimental Group

The CS instruction program for experimental group was based on the model of Kong (2004), which involved two stages, with the first aiming at introducing fundamental knowledge about CS, so as to lay a foundation for further development and the second focusing on consolidating and improving what had been achieved in stage one. The whole program took in total 16 class hours (each one actually lasts 45 minutes) implemented over four weeks, as shown in **Table 3**.

Table 3. CS instruction program.

Stages	Content	Time Allocation (hr)
Stage 1: Introduction and practice of CSs.	Substage 1: Raising awareness.	2
	Substage 2: Introducing CSs systematically.	2
	Substage 3: Comparing CSs.	2
	Substage 4: Local practice.	4
Stage 2: Consolidation of CSs.	Global practice.	6

***Stage* 1: Introduction and practice of CSs.**

***Substage* 1. Raising awareness.**

Recorded dialogues or written examples were presented and discussed with students, with a focus on what problems the speakers encountered and how they were solved. The following example was given by Færch and Kasper (1983: p. 233):

Native speaker: … *How do you get on with girls* …?

Learner: *Oh* (*giggles*) *I'm very oh … what do you call it … you know* (*laughs*) *I get a red in my head…* (*giggles*)

Native speaker: *yes shy*

Learner: *shy yer* (*giggles*)

In the dialogue, the learner was apparently not able to recall the word "shy". As an alternative, the strategy of paraphrasing, an L2-based strategy, was used as a resort and thus the native speaker successfully got the meaning (or the "feeling") of the term.

As can be seen, the purpose and emphasis of this stage was to raise learners' awareness of the existence of CSs and enlighten them about what CSs were and how they were used by examples and explanation (rather than by definition), or in other words, to give them some empirical evidence or knowledge of CS use. Obviously and understandably, these randomly-chosen examples at this awareness-raising and enlightening stage were not presented in a strictly ordered way and did not cover all cases of CS use. A better grasp of CSs required a more systematic and complete introduction.

***Substage* 2. Introducing CSs systematically.**

Though desired, the attempt to provide a full introduction and description of CSs simply failed primarily because of the problems of definition and lack of generally agreed typology. It should be noted therefore that among the various typologies proposed by different researchers no one was able to provide an exhaustive description of CSs, i.e. all being a partial listing of the CSs repertoire. No exception was the CSs typology introduced here, which was given in Færch and Kasper (1984) and summarized by Ellis (1999: pp. 184-185), as elaborated in Table 4.

The systematical introduction of CSs at this stage was conducted in the order of explanation and example, as opposed to the order of example and explanation

at substage 1. The difference underlying these two approaches lies in one being deductive and one inductive. In the following case, the teacher explained what "waiting" strategy was before an example in point was provided.

Table 4. A typology of CSs.

A: *Reduction strategies*: These are attempts to do away with a problem. They involve the learner giving up part of his original communicative goal.

1. *Formal reduction strategies*: These involve the avoidance of L2 rules of which the learner is not certain (i.e. tentative hypotheses) or which he cannot readily gain access to. For example: *He made him to go…* → *He asked him to go…*
2. *Functional reduction strategies*: These involve the learner avoiding certain speech acts or discourse functions; avoiding or abandoning or replacing certain topics; and avoiding modality markers. For example: *He plays…* → *He does sport.*

B: *Achievement strategies*: These are activated when the learner decides to keep to the original communicative goal but compensate for insufficient means or makes the effort to retrieve the required items.

1. *Compensatory strategies*
   a) *Non-cooperative strategies*: These are compensatory strategies which do not call for the assistance of the interlocutor.
      i) *L1/L3-based strategies*: The learner makes use of a language other than the L2.
         - *Code-switching*: The learner uses a form in the non-L2 language. For example: *I don't have any* Geschwister (German "siblings").
         - *Foreignizing*: The learner uses a non-L2 form but adapts it to make it appear like a L2 form. For example: Danish *papirkurv* (meaning "papercurve" or "trash bin").
         - *Literal translation*: The learner translates an L1/L3 form. For example: Danish *grontsager* (meaning "green things" or "vegetables").
      ii) *L2-based strategies*: The learner makes use of alternative L2 forms.
         - *Substitution*: The learner replaces one L2 form with another. For example: *rabbit* → *animal*
         - *Paraphrase*: The learner replaces an L2 item by describing or exemplifying it. For example: *He cleaned the house with a…*; *it sucks in air*.
         - *Word coinage*: The learner replaces an L2 item with an item made up from L2 forms. For example: *gallery* → *picture place*.
         - *Restructuring*: The learner develops an alternative constituent plan. For example: *I have two…* → *I have a brother and a sister*.
      iii) *Non-linguistic strategies*: The learner compensates using non-linguistic means such as mime or gesture.
   b) *Co-operative strategies*: These involve a joint problem-solving effort by the learner and the interlocutor.
      i) *Direct appeal*: The learner overtly requests assistance. For example: *What's this*?
      ii) *Indirect appeal*: The learner does not request assistance, but indicates the need for help by means of a pause, eye-gaze, etc.
2. *Retrieval strategies*: These are used when the learner has a problem locating the required item but decides to persevere rather than use a compensatory strategy.
   a) *Waiting*: The learner waits for the item to come to him.
   b) *Using semantic field*: The learner identifies the semantic field to which the item belongs and runs through items belonging to this field until he locates the item.
   c) *Using other languages*: The learner recalls the form in another language and then translates it into the L2.

Explanation: "Waiting" strategy refers to the strategy used at the moment when the speaker cannot retrieve or recall the item or answer and uses, for example, some hesitation fillers such as "well", "erh", "let me see", "as a matter of fact" and "you know" to win time for "fishing" idea and avoid interruption of the conversation.

Example:

Teacher: Do you think second-hand books are worth buying?

Learner: Well, let me see. You know, some books are dirty or even smelly, some fall into pieces with some pages missing, and still some are out-of-date. So I don't think they are worth buying.

***Substage* 3. Comparing CSs.**

After a systematic introduction of CSs, their advantages and disadvantages were then generally compared in the belief that CSs were not equal in their popularity, effectiveness and appropriacy of use. Learners were instructed that achievement strategies are preferred to reduction strategies and L2-based strategies to L1-based strategies in terms of popularity, that strategies using synonyms and antonyms are more effective than those using description and exemplification (but make heavier linguistic demands on learners), and that the strategy of word coinage may result in inappropriate output but is still helpful for learning and the improvement of communication skills.

***Substage* 4. Local practice.**

The systematical introduction and general impression of CSs in the three preceding stages served as a necessary prelude to CS practice, a crucial part in CS instruction program. Practice at this stage focused merely on certain single problem (though the solution may be diversified) arising from communication, thus the term local practice.

One such local practice activity required learners to express the idea of "I want to be an air hostess in the future". However, as "air hostess" was an unfamiliar expression for them, they had to resort to other means. These include "air sister", "air lady", "air assistant", "waitress on the plane", "a girl serving people on the plane", "a woman that works on the plane", "I don't know how to say '空中小姐'[1]", "what is '空中小姐'?", etc. Their solutions involved strategies from definition and description to word coinage and direct appeal, all concerning the same problem. After their speaking activities, they received feedback from teachers about the effects and appropriateness of the CSs they used.

***Stage* 2: Consolidation of CSs.**

Global practice was the main activity in this stage, shifting from strictly controlled activities such as picture description to loosely controlled activities such as storytelling and finally to real-life-like communication activities, all of which required learners to practice CSs. One such global practice activity went as follows:

Teacher: What is the greatest advantage of online shopping?

[1]Pronounced *kongzhongxiaojie*.

Learner: Well, the best thing I know is that the shopper does not need to leave his home. There is no need to drive a car, stay a car or wait on a line. The buyer can just… (a gesture suggesting clicking a computer mouse) and the goods will be sent. In a word, the greatest benefit of online shopping is its "便捷"[2] (ease and promptness).

As shown above, unlike the focused and somewhat artificial communication problems that emerged in local practice, the difficulties involved in the global practice, as the name indicated, are more inclusive and natural. For example, the problems involved here are more than one and consequently more than one strategy such as waiting strategy ("well"), word coinage ("stay a car" meaning "park a car"), paraphrase ("wait on a line" meaning "wait in a queue"), non-linguistic strategy (gesture) and code-switching ("便捷") was employed by the learner to facilitate communication. In real-life communication situation it was less likely that only certain isolated problem would appear as that in local practice, more likely, more than one unpredictable difficulty would occur. Thus, the shift from local practice to global practice was an indication of increasing approximation to real-life situation.

3.5.2. Procedures for Control Group

While the experimental group was receiving CS instruction, a reading-practice program was administered to the control group. In it, participants were assigned to do some reading from 8 selections taken from *Voices and Values*: *A Reader for Writers* (Goldstein & Johnson, 2005). Two class hours were devoted to each selection: the first for reading and exercises, the second for discussion. During discussion, the teachers exchanged views with participants about the topic being discussed, intentionally and carefully minimizing, or even, whenever possible, avoiding, the use of CSs.

The purpose of this process was to give the two groups equivalent instruction in their respective approaches in order to match them to the greatest extent possible. Without it, the experimental group would have received 16 hours of instruction on CSs during the four-week period and the control group none at all. In that case, it would have been possible that *longer instructional time* (or more time spent with the English teacher, or more opportunities speaking English) had also had an effect on the outcome variable, meaning that *instruction on CSs* would not be the sole independent variable that could plausibly contribute to the differences on the post-test.

4. Results

After the post-test, the data obtained were entered into SPSS for Windows and subjected to descriptive analysis and one-way ANOVA.

4.1. Descriptive Analysis

The descriptive statistics presented in Table 5 show that the mean WTC score of

[2]Pronounced *bianjie*.

the experimental group on the post-test (EGT2) is higher than that of the experimental group on the pre-test (EGT1)—these scores are respectively 40.83 and 23.37—while, in contrast, those of the control group on the pre-test (CGT1) and on the post-test (CGT2) are only slightly different, respectively 24.73 and 24.13.

Table 5. Descriptive statistics.

Tests	*N*	Mean	Std. Dev.
=EGT1[a]	30	23.37	6.980
=EGT2[b]	30	40.83	8.039
=CGT1[c]	30	24.73	7.216
=CGT2[d]	30	24.13	6.857
Total	120	28.27	10.251

Notes: a: Experimental group pre-test; b: Experimental group post-test; c: Control group pre-test; d: Control group post-test.

4.2. One-Way Analysis of Variance (ANOVA)

The ANOVA test of WTC returned a result of significance (F = 39.825, $p = .000 < .05$) for the differences among the four groups (see Table 6).

Table 6. One-way ANOVA.

Category	Sum of Squares	Mean Square	F	Sig.
Between Groups	6345.000	2115.000	39.825	.000
Within Groups	6160.467	53.107		
Total	12505.467			

Multiple comparison analysis yields the details (see Table 7): WTC difference is significant between EGT1 and EGT2 (Mean difference = −17.467, $p = .000 < .05$).

Table 7. Multiple comparisons.

(*I*) Type 1	(*J*) Type 1	Mean Difference (*I*-*J*)	Sig.
=EGT1	=EGT2	−17.467[e]	.000
=EGT1	=CGT1	−1.367	.469
=EGT1	=CGT2	−.767	.684
=EGT2	=CGT1	16.100[e]	.000
=EGT2	=CGT2	16.700[e]	.000
=CGT1	=CGT2	.600	.750

Note: e: The mean difference is significant at the .05 level.

In summary, the mean WTC score of EGT2 on the descriptive analysis is notably higher than those of the other three tests. In the one-way ANOVA, a significant difference was found between EGT2 and the other three tests, while no significant difference exists between EGT1 and CGT1, or CGT1 and CGT2, or

EGT1 and CGT2.

4.3. Observations

Observing the behavioural shifts, specifically referring to changes in learners' attitudes towards English communication within the class setting, in both the control and experimental groups post the 16 class hours and then correlating such observations with the survey results can offer a more holistic understanding.

Empirical data of observations show that while both classroom dynamics and learners' perceptions of their communicative competence in the experimental group have evolved noticeably, the change in the control group is comparatively slight. This approach, though highly subjective, strengthens the coherence and reliability of the survey results presented.

5. Discussion

In looking at a composite picture of these data, one finds that the WTC of learners participating in the CS instruction program improved significantly from the pre-test (EGT1) to the post-test (EGT2), whereas no such difference was found for the control group, a finding suggesting that the CS instruction program had a positive impact on improving Chinese EFL learners' WTC, as is shown in Figure 1. The obtained results support the relationship between CS and WTC, as has been previously hypothesized, and are in agreement with previous empirical study (Mesgarshahr & Abdollahzadeh, 2014; Anani Sarab & Jabbarzadeh Sani, 2022).

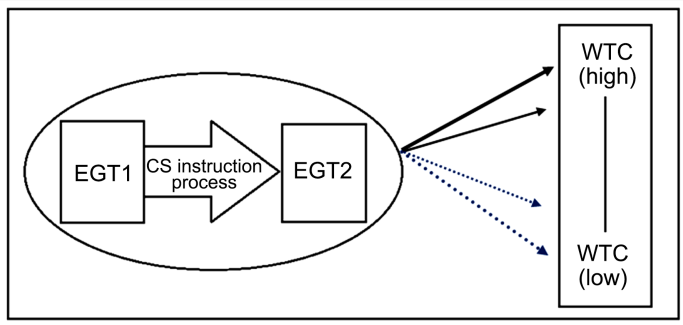

Figure 1. The effect of CS instruction on WTC.

5.1. WTC and CS

In coming to an understanding of the reasons why CS training resulted in enhanced WTC and the extent to which a relationship could be found between them, one needs to consider the wide range of variables that influence WTC, and the functions and components of CS.

WTC in relation to self-perceived communicative competence and communication apprehension

With regard to variables that might exert an effect on WTC, they are, as noted

earlier, mainly of two kinds, namely, factors pertaining to the learner on the one hand and those to the learning situation on the other. WTC can be viewed as a product mediated between these two kinds.

In dealing with the first kind, i.e. personal factors, one of centrality is learners' linguistic competence, in particular communicative competence, as it is assumed that when learners are (or perceive themselves) competent in conveying ideas to others, they will be more willing to communicate. This was supported by previous research in which a substantial association between *self-perceived communicative competence* and WTC has been shown (e.g. Kim, 2004; Yashima, 2002; Balouchi & Samad, 2021; Amirian et al., 2022). The highest such correlation was found by Burroughs and Marie (1990). In a further study conducted by Burroughs, Marie, and McCroskey (2003), the correlation was found to be consistent across cultures.

Another factor central to personal factors is *communication apprehension* from a psychological point of view. L2 learning situations, characterized by its novelty, complexity, insolubility and unstructuredness (Chapelle & Roberts, 1986), can be considered a major source of communication apprehension. As a result, learners may experience psychological discomfort or a sense of threat (Budner, 1962). More specifically, they may feel anxious about their inability either to express themselves, to comprehend others, or to make a proper social impression. In such a state of mind, it stands to reason that they will try to avoid or withdraw from communication. To put it another way, the higher communication apprehension, the lower WTC; the more secure and less apprehensive, the more willing to be engaged in communication.

The relations between these linguistic and psychological factors and WTC can be show in **Figure 2**.

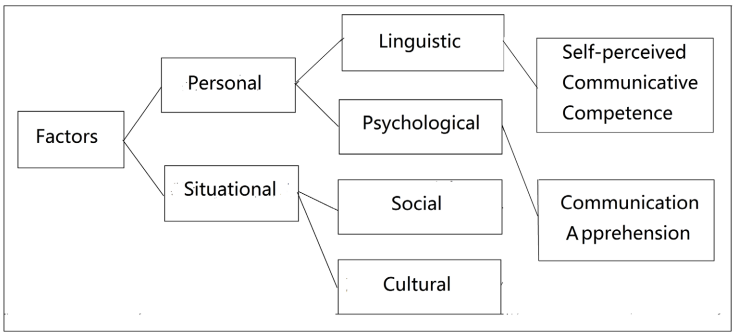

Figure 2. Factors influencing WTC.

As can be seen in **Figure 2**, only two specific personal factors, i.e. self-perceived communicative competence and communication apprehension are presented, from linguistic and psychological aspect respectively. But, of course, they are not the only area that are related to the discussion (factors influencing WTC). We are aware that there are not only a number of other psycholinguistic factors that are relevant, such as motivation, attitude, syntactical competence, etc., alongside

other personal factors such as gender and age, but also a diversity and complexity of sociocultural factors that are relevant—such as topic, interlocutors, context, perceived politeness, physical locality, face-saving, sensitivity to others' judgment, risk-taking, etc. (as mentioned in literature review), all being potential contributors to an understanding of the nature of WTC. Nevertheless, we limit our perspective to these two psycholinguistic variables on the ground that their correlation was found to be closest and most consistent, and that our primary concern is to establish a connection between CS and WTC through exploring the effect of CS instruction on WTC, as opposed to a full delineation and discussion of factors influencing WTC.

CS in relation to self-perceived communicative competence and communication apprehension

To demonstrate the psycholinguistic association bridging WTC and CS, we then turn to the functions and components of CS in the hope of finding the effect of CS on self-perceived communicative competence and communication apprehension.

One major function and contribution of CS, as identified by Canale and Swain (1980: p. 25), is its role in keeping communication channels open. The effect of this open channel is seen from two aspects based on the assumption that language learning is stimulated and benefited by language production (communication here). Cognitively, open channels should create more chances for "testing hypotheses about the structure and meanings of the target language, receiving crucial feedback for the verification of these hypotheses, developing automaticity in interlanguage production, and forcing a shift from more meaning-based processing of the second language to a more syntactic mode" (Gass & Selinker, 2008: p. 328), and ultimately enhance their actual and self-perceived communicative competence. Psychologically, on-going communication should give learners a sense of success as the conversation proceeds in step-wise fashion. This success, in turn, if repeated and reinforced, should lead to increased confidence. In this context, it is plausible to say that learners' communication apprehension will be alleviated as a result of the raised cognitive competence (either actual or self-perceived) and psychological confidence through keeping the communication going.

From the perspective of CS components, both problematicity and consciousness are of liability to the alleviation of communication apprehension. Intrinsically, CS is problem-oriented, i.e. CS is tactical means at their disposal if need be to solve potential communication problems regarding the uncertain and ambiguous L2 learning situations. Extrinsically, the problem-solving nature of CS is expected, through a consciously explicit instruction, to trigger learners' communicative confidence. In other words, learners' realization that CS in nature serves as backup plans when due to insufficient linguistic resources the initial production plan is unable to implement will contribute to increasing their communicative confidence and lowering their communication apprehension.

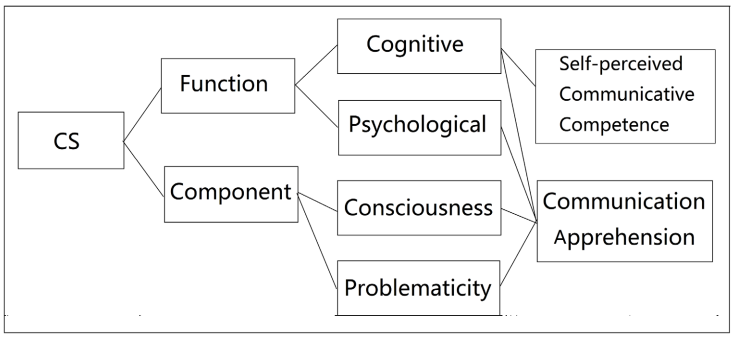

Figure 3. Function and component of CS.

The functions and components of CS in relation to self-perceived communicative competence and communication apprehension are reflected in **Figure 3**. As can be seen, with regard to functions, both cognitive and psychological aspects of CS are beneficial to learners' self-perceived communicative competence and inhibitory to their communication apprehension. As regard to components, the built-in problem-solving nature coupled with the extrinsic awareness of this nature jointly function in shaping learners' anticipation of a problem-free communication situation and thus facilitating their communicative confidence and debilitating their communication apprehension.

The effect of CS on WTC

On the basis of the above discussion, on close inspection of **Figure 2** and **Figure 3**, one can find that both WTC and CS are closely related with self-perceived communicative competence and communication apprehension, which serve as an interface in a further analysis of the relationship between WTC and CS, as modelled in a diamond-shaped structure in **Figure 4**.

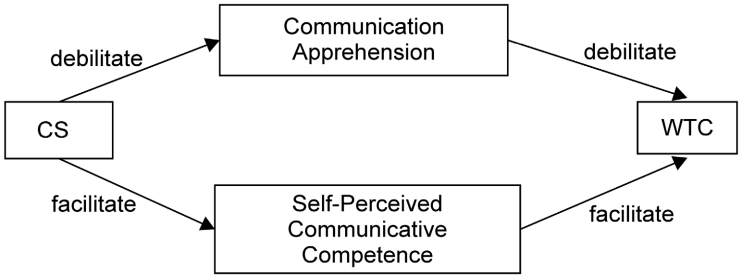

Figure 4. The connection between CS and WTC.

We propose this model, with an eye toward understanding how CS instruction affect WTC, that there are two immediate precursors of WTC, communication apprehension and self-perceived communicative competence, and that CS has a debilitative impact on communication apprehension and a facilitative one on self-perceived communicative competence, and these two in turn have debilitative and facilitative effects, respectively, on WTC.

This model has explained to some extent why, in terms of WTC level, participants involved in the CS instruction program outperformed their counterparts

who did not receive such treatment. However, the explanation is far from complete since, as with many areas of SLA research, the relations are not always clear cut. For example, beyond mere focus on communication apprehension and self-perceived communicative competence, there are other variables that need to be considered when trying to understand the effect, such as motivation: It is likely that when learners are equipped with CS they will be better motivated, and on the other way round, better motivation will lead to more willing to communicate. It is unlikely that the interaction between CS and WTC is a linear one; rather, there are complex influences and interplay between these variables and the relevant effects. Besides, the effect between these variables is more likely to be bidirectional rather than unidirectional as indicated in **Figure 4** by arrows. The picture in actuality is far too complex and more future and further studies are called for.

Given this fact and limited space, the purpose and significance of the present model is to demonstrate an immediate juxtaposition of CS and WTC in order to gain an insight into the effectiveness of CS instruction on WTC and its implications on language teaching.

5.2. Pedagogical Implications for Language Teaching

In this section, we briefly consider how an understanding of CS effect might inform classroom practices.

The first consideration is the necessity and effectiveness of formal CS instruction. Some scholars (e.g. Bialystok, 1990; Kellerman, 1991) hold that once learners' language proficiency has reached a certain level, the CS they have already acquired for their mother tongue will transfer automatically to the L2, because all languages share the same CS. Therefore, the argument goes, there is no need to teach CS. However, while it is likely that learners may transfer some knowledge of CS from their mother tongue to their L2 over time, the question is how long the transfer takes. CS can only fulfil its function as immediate "first aid" devices if its use has reached some degree of automaticity, which will not always occur without specific focused practice. By taking part in real-life communication activities or simply talking with native English speakers, EFL learners can gradually come to be able to use CS almost as naturally as children use those of their mother tongue CS, but this will surely be a long process. In contrast, the results in this study showed that learners' WTC significantly improved within four weeks and the statistical analysis indicated that this may be mostly due to learners' better grasp of CS after undergoing the CS instruction program, implying that formal CS instruction can quicken learners' pace at mastering CS as compared with the pace of natural CS development. This project thus appears to lend some support to Tarone and Yule's (1989), and Dörnyei's (1995) claim concerning the direct teaching of CSs.

The second consideration is the approach to WTC improvement. Let us recall MacIntyre et al.'s (1998: p. 547) argument that "'a proper objective for L2 education is to create WTC. A program that fails to produce students who are willing

to use the language is simply a failed program". This argument clearly assigns WTC a centrally important role in language teaching and learning, and renders how to generate and improve WTC in learners a fundamental issue in language teaching. Such being the case, the findings of this study have shed some lights on the approach to WTC improvement by suggesting the potential effectiveness of CS instruction program, either independently or integrated with other instruction or approaches.

To sum up, formal CS instruction is desirable both as a new way of improving WTC and to speed up development of awareness and mastery of CS.

5.3. Cultural Difference

While the influence of CS on WTC seems to have been demonstrated beyond doubt, the cultural factor should also be taken into consideration in interpreting results like those of the present paper, given the sensitivity of WTC to cultural differences.

As Wen and Clément (2003: p. 19) pointed out, "…Chinese students' unwillingness to communicate in public is not a language phenomenon that is specific to learning the English language. It is deeply rooted in Chinese philosophy and culture….". In such a culture, the social and moral process of "conducting oneself" properly depends greatly on awareness of one's relations with others. Consequently, children come to care more deeply about their own self as perceived by others. In an L2 learning context, which involves "an alternation of self-image, and the adoption of new social and cultural behaviours and ways of being" (Williams & Burden, 1997: p. 115), it is likely that Chinese students will become even more sensitive to the judgment of the (L2-speaking, thus largely foreign) public upon their linguistic behaviours. They will not feel emotionally secure unless they know they will be rewarded by social approbation or will avoid negative consequences like punishment or embarrassment. This worry about social expectations and external opinions makes students even more anxious when speaking English. As such, CS plays an even more important role in alleviating communication apprehension and improving WTC in the Chinese setting than in some other cultures (such as a culture valuing "squeaking wheel gets the oil"). Thus, the degree of influence of CS on WTC is also likely to be greater in Chinese culture than in other cultures (e.g. Mesgarshahr & Abdollahzadeh, 2014; Anani Sarab & Jabbarzadeh Sani, 2022). In any case, more studies across cultures will need to test the generalizability of the results of the study.

5.4. Limitations

To provide a more balanced and comprehensive view of the study's scope, implications, potential biases, and areas of refinement for future research, a few aspects of limitations are discussed in this section.

Lack of long-term evaluations

It is crucial to acknowledge that changes in WTC may not manifest immedi-

ately. The study would benefit from incorporating long-term evaluations to better capture the evolution of WTC in learners over an extended period.

Reliability of questionnaires

While questionnaires are a common tool in research, they come with the caveat of potential insincerity from participants. It's important to recognize this limitation and, if possible, incorporate methods to minimize misleading answers or emphasize the importance of genuine responses.

Objective evaluation

Although subjective measures have their merits, developing and incorporating methods to evaluate learners' WTC more objectively could provide a balanced view. This approach can complement the existing subjective measures and enhance the study's overall validity.

CS categorization

A deeper dive into which categories of CS prove more beneficial for specific types of learners would be valuable. By doing this, future research could offer more targeted recommendations for educators and curriculum developers.

Sample size

The limited sample size is a constraint and should be recognized as a potential limitation in the study.

6. Conclusion

Because a significant proportion of CS aims to cope with performance problems arising from daily communication, EFL learners might benefit from instruction in such strategies and thus become more willing to communicate. The effect of this probability is demonstrated by the results of this study, which points to the possibility of improving learners' WTC through focused CS instruction. Based on this finding, a heuristic model is proposed to show the association between CS and WTC, in which communication apprehension and self-perceived communicative competence are seen as the most immediate bridges linking these two. Though more studies across cultures are needed to test the generalizability of the results, the model broadens and enriches the theoretical field of WTC, and in practical terms suggests a new approach to WTC improvement that can be considered alongside those identified in past research in the context of the rising importance of WTC in language learning.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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