

# Willingness to Communication among Japanese college students

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## Abstract

Motivation including individual difference variables, and English proficiency have been believed to be sufficient for language learners to use their second or foreign language; however, facing real English speaking context, these two factors are not necessarily sufficient. The notion of willingness to communicate (WTC) is useful in investigating why the standard of Japanese communicative competence in English is not high enough to allow many Japanese college students to communicate effectively in English.

This study examined correlational and causal interrelationships among individual difference variables, willingness to communicate (WTC), and English proficiency, based on the data from 180 Japanese college students majoring in nursing.

Individual difference variables made up of international posture, introversion, communication apprehension, compulsivity, motivational intensity, and perceived competence, were extracted from factor-analyzing the questionnaire items, and were scored by 6 likert scaled point. WTC in English was measured by WTC test consisting of three subscales, i.e., desire, tension, and confidence. English proficiency was tested using the Computer Assessment System of English Communication (CASEC), which was developed for gauging English communication competence via computer, by utilizing the item response theory.

Multiple regression analyses revealed that introversion, motivational intensity, communication apprehension, international posture, were predictors to WTC in English, and that perceived competence and WTC could be predictors to English proficiency.

Structural equation modeling supported that *Introversion* and *Communication Apprehension* be the direct negative predictors, and that *Self-Efficacy* composing of *Perceived Competence* and *Motivational Intensity* be the direct positive predictors of WTC in English. *Compulsivity* and *International Posture* were found out to be indirect predictors.

The results implied that the learners' WTC would be enhanced when they have a high level of motivational intensity and international posture; on the other hand, the learners' WTC would be lowered when they are introvert and project high level of communication apprehension.

## Introduction

Many language-teaching professionals agree that motivation is a key part of the process of learning a second or foreign language. However, in communicative situations outside of the classroom where language learners are exposed to real English-speaking contexts, motivation and proficiency are not necessarily sufficient for them to initiate or participate in communication in their less familiar language. The notion of Willingness to Communicate (WTC), which can be roughly defined as the intention to initiate communication, is useful in investigating why the standard of Japanese communicative competence in English is not high enough to allow most Japanese to communicate comfortably in English.

The concept of WTC was originally developed in the field of first language (L1) communication by McCroskey and Richmond (1987), based on the notion of Unwillingness to Communicate (Burgoon, 1976). McCroskey, however, applied his earlier framework of Communication Apprehension, which is roughly defined as fear or anxiety in oral communication and which is regarded as the main component underlying WTC, into the second language context, including Japan (McCroskey, Gudykunst, & Nishida, 1985). McCroskey, Fayer, and Richmond (1985) investigated levels of Communication Apprehension among Japanese college students in speaking Japanese and English. The results showed a high degree of Communication Apprehension in both languages among those students.

In the area of second language (L2) WTC research, MacIntyre, Clément, Dörnyei, and Noels (1998) combined communication studies in L1 WTC and motivation studies in L2, and developed a conceptualized model made up of twelve variables, some of which were hypothesized to influence L2 learners' WTC, the factor that was hypothesized to eventually lead to their communication behaviors. Based mainly on MacIntyre et al.'s model, Yashima (2002), one of the few second language acquisition researchers who has investigated WTC, examined how individual difference variables, such as attitude (international posture), English learning motivation, and English communication confidence, influence WTC in English in the Japanese context.

We are all familiar with the proverb that says 'Where there is a will, there is a way'. This suggests that even less proficient learners may communicate in English when they are willing to and that highly proficient learners may not be willing to communicate in situations in which 'there is not a will'. However, I have witnessed cases in which there are both a will or desire and a way (i.e., sufficient proficiency), but there is little communication in English. In the Japanese socio-cultural context, certain cultural norms, such as valuing reticence, may hinder some English learners from actively verbalizing their thoughts and feelings, even when they desire to communicate and their proficiency level is sufficient. If the ultimate purpose of learning language is authentic communication between persons of different languages and cultures, as MacIntyre and colleagues (1998) have suggested, language teaching professionals must analyze the way in which WTC, the key factor underlying learners' actual use of English, is situated in the process of learning English, because all the efforts expended in learning English by learners destitute of WTC could be in vain. The primary purpose of this study is to investigate the interrelationships among the WTC of Japanese college students, the individual difference factors that are related to WTC in English, and students' English proficiency.

## **METHODS**

### **Participants**

One hundred sixty-four female and 16 male students majoring in nursing at a national university in Tokyo, Japan participated in this study. As Table 1 shows, their ages ranged from 18 to

36, and 91.1% of them were between the ages of 18 and 21.

The students who participated in this study are hard workers who passed a highly competitive entrance examination in order to enter this university. They have fundamental knowledge of English grammar and vocabulary as a result of six years of study at the secondary level. Many of them appear to be interested in English and its culture and to be highly motivated to improve their English, particularly their speaking skills. However, despite their desire to improve, it is difficult for many of them to communicate easily in English.

### **Materials**

Three instruments were employed in this study, an individual difference questionnaire, a WTC test, and the CASEC (Computer Assisted System of English Communication) test. The CASEC was utilized in order to estimate the participants' general English proficiency,

### **Pilot Questionnaire**

The individual difference questionnaire was first piloted with 81 items that were collected and modified from a number of previous studies (e.g., Gardner, & Smythe, 1981; MacIntyre & Clément, 1996; Yashima, 2002). The items, which were randomized in order to avoid any possible order effects (Brown, 2001), were measured with a 6-point Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Slightly disagree; 4 = Partly agree; 5 = Agree; 6 = Strongly agree). The 6-point scale was chosen in order to avoid including an undecided category.

In order to reduce the number of items and to confirm the existence of the factors that the questionnaire was hypothesized to measure, the questionnaire was piloted with 226 Japanese students studying at four colleges in eastern Japan. Only items that loaded on a factor at .50 or greater were retained in order to reduce the number of questionnaire items for the main study. This resulted in the retention of forty items.

### **WTC test**

Following the belief that WTC, rather than English proficiency, should be the ultimate goal of language learning, Sick (2001) suggested that WTC makes a good candidate as an object of assessment. Sick proposed five conditions that are necessary or desirable for a WTC test. The test should be informative, moderately stable, reliable, valid, and it should have positive backwash. The WTC test that Sick and Nagasaka (2000) developed is made up of 41 items that are designed to measure four underlying traits; in-class speaking, in-class writing, out-of-class speaking and out-of-class writing. Because this study focuses on speaking, the items concerning in- and out-of-class writing were eliminated. As the result, the number of items included on the WTC test was reduced to 30. Some items were modified in order to better fit the nursing context.

For each item, participants provided three ratings, one each for Confidence, Tension, and Desire, using a four-point Likert scale. The reliability of this test as estimated by Cronbach's alpha was .97.

### **Computerized assessment system of English communication (CASEC)**

Assessment system using computers was employed for measuring English Proficiency in the present study, because Computer-assisted Testing has been recognized as valid for testing language proficiency (Chappelle, 2001).

The CASEC was originally developed by the Society for Teaching English Proficiency, Inc. (STEP, hereafter). STEP, which is the largest testing institution in Japan, spent more than seven years for fundamental research for the development of the CASEC. In 2000, The Japan Institute for Research on Testing (JIEM, hereafter) took over the operation of the CASEC. JIEM was established in 2000 as an Obunsha Group company and is engaged in activities related to the research and development of accurate measuring techniques or testing in the field of education. Further information is available at <http://casec.evidus.com/hojin/english.html>.

The CASEC is composed of four sections. Section 1 assesses vocabulary knowledge. There are 15 four-option multiple-choice questions and the time limit is 60 seconds per question. Section 2 assesses the knowledge of idioms and useful expressions with 15 four-option multiple-choice questions. The time limit is 90 seconds per question. Section 3 assesses listening comprehension by focusing on examinees' ability to grasp the main point. There are 15 four-option multiple-choice questions and the time limit for one question is 60 seconds. Section 4 is a dictation test consisting of ten questions. The test takers input the words using a computer keyboard. The time limit per question is 120 seconds.

## **RESULTS**

### **Data Analyses**

The results of the individual difference questionnaire, the WTC scores, and the CASEC scores were analyzed using SPSS 12.0 J (2003).

### **Principal Components Analysis**

A principal components analysis with Promax rotation was selected, because it can yield a better solution when correlations exist among the elicited factors (e.g., Tabachnick & Fidell, 2001; Toyoda, 2004).

Factor 1, *International Posture*, is made up of eight items ( $\alpha = .82$ ).

Factor 2, which received strong loadings from five items, was labeled *Perceived Competence* ( $\alpha = .84$ ). Factor 3, which received strong loadings from six items, was labeled as *Motivational*

*Intensity* ( $\alpha = .81$ ). Factor 4, which received strong loadings from four items, was named *Communication Apprehension*. This term has been used by communication researchers (e.g., McCroskey & Richmond, 1990a) because the items specify apprehension in communicating in English ( $\alpha = .69$ ). Factor 5 received strong loadings from six items and named *Compulsivity* ( $\alpha = .68$ ). Factor 6, which was labeled *Introversion*, received strong loadings from four items ( $\alpha = .52$ ).

The results of the principal components analysis suggested that the psychological construct of nursing students in learning English is made up in part of (a) *International Posture*, (b) *Communication Apprehension*, (c) *Motivational Intensity*, (d) *Perceived Competence*, (e) *Compulsivity*, and (f) *Introversion*.

### **Stepwise Multiple Regression Analyses**

In the first step, *Introversion* showed up as a predictor with an adjusted  $\beta$  coefficient of  $-.47$ ; in the second step, *Introversion* and *Motivational Intensity* were identified as predictors with adjusted  $\beta$  coefficients of  $-.38$  and  $.35$ , respectively; in the third step, *Introversion*, *Motivational Intensity*, and *Communication Apprehension* were predictors with adjusted  $\beta$  coefficients of  $-.29$ ,  $.33$ , and  $-.33$ , respectively; finally, in the fourth step, the beta weights for the four factors identified as predictors of WTC in English were *Introversion*  $-.22$ , *Motivational Intensity*  $.26$ , *Communication Apprehension*  $.37$ , and *International Posture*  $.20$ . This finding suggested that *Communication Apprehension* functioned as the strongest predictor of WTC in English.

In summary, the multiple regression analysis revealed that *Introversion*, *Motivational Intensity*, *Communication Apprehension*, and *International Posture* influenced L2 WTC and among these affective factors, *Introversion* was first entered as the most influential predictor though *Communication Apprehension* generated the highest beta value. The plot of this analysis shows nearly complete linearity, which suggests that L2 WTC is plausibly influenced by the four individual difference variables.

### **Structural Equation Modeling: A Causal Analysis**

Bivariate correlations were calculated in order to determine the relationships among the WTC scores, general English proficiency as measured by the CASEC scores, and the six individual difference variables that were identified on the individual difference questionnaire, (i.e., *International Posture*, *Perceived Competence*, *Motivational Intensity*, *Compulsivity*, *Communication Apprehension*, and *Introversion*), for the structural equation modeling analysis.

### **Structural Equation Model**

In order to examine hypothesized causal relationships among L2 WTC, English proficiency, and the six affective factors, a structural equation model was constructed. The structural model shown in Figure 1 was tested, using AMOS 5.0 (Arbuckle, 2004). Because the sample size of the

present study was less than 500 and the multivariate data of the sample for this study was non-normally distributed, the scale-free least square method, which is appropriate for relatively small data set with non-normal distributions, was used in this study. The analysis revealed good model fit among the hypothesized variables. The goodness of fit index (GFI) = .935, the adjusted GFI = .905, and Root Mean Square Residual (RMSR) = .060 all indicated that this model accounts for the data well. Goodness of fit indexes with a value of 1.0 indicates a model that fully accounts for the correlations obtained. RMSR value close to 0 also shows that the model is plausible.

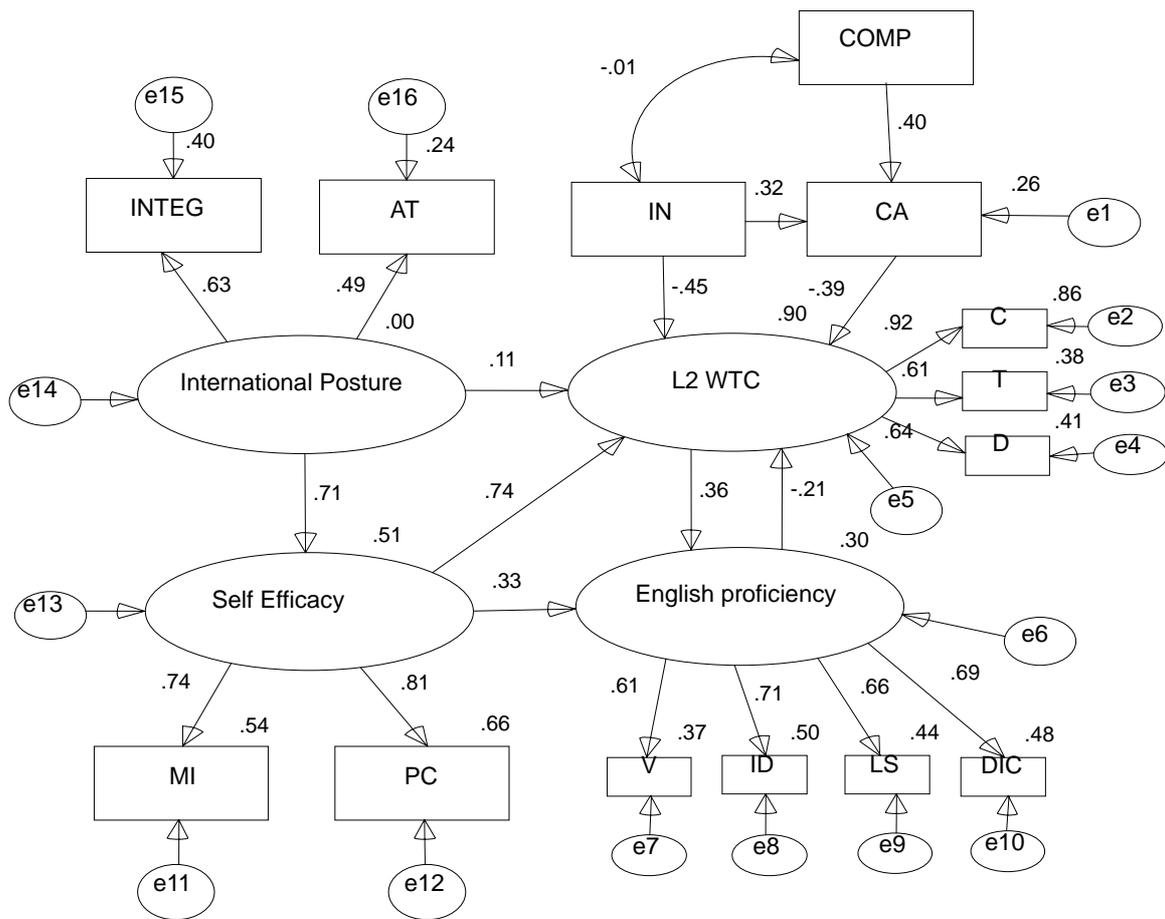


Figure 1. L2 WTC Model in for Japanese Nursing Students with Standardized Estimates.

INTEG = Integrativeness; AT = Attitudes; IN = Introversion; COMP = Compulsivity; CA = Communication Apprehension; C = Confidence; T = Tension; D = Desire; MI = Motivational Intensity; PC = Perceived Competence; V = Vocabulary; ID = Idiom; LS = Listening Comprehension; DIC = Dictation.

*Communication Apprehension* with a significant path from *Compulsivity*, *Introversion* with a significant path to *Communication Apprehension* was found to be negative predictor to *L2 WTC*. *English Proficiency*, whose absolute value of  $\beta$  value (.21) was not very strong, was also found to be

a negative predictor to *L2 WTC*. Positive predictors were *Self-Efficacy* with significant paths to *Motivational Intensity* and *Perceived Competence* and a significant path from *International Posture* with significant paths from *Attitudes* and *Integrativeness*. The path from *International Posture* to *L2 WTC* was not significant, which reflected that *International Posture* had no direct effect on *L2 WTC*, even though it had an indirect effect via *Self-Efficacy*. The statistically significant path from *L2 WTC* to *English Proficiency* revealed that *L2 WTC* could positively influence on *English Proficiency*.

## SUMMARY

MacIntyre et al. (1998) stated that a language program that fails to develop learners' *L2 WTC* in the *L2* is a failed program. This holds true when learners possess sufficient *L2* proficiency, which is the case for the majority of the Japanese nursing majors who took part in the present study. Thus, this study was carried out in order to investigate a lack of *L2 WTC* among learners with sufficient proficiency and with needs to communicate in *L2*. This was accomplished by investigating how individual difference variables affect *L2 WTC* and English proficiency and how individual difference variables, *L2 WTC*, and English proficiency are causally related to one another.

First, seven individual difference variables were identified using a principal components analysis: *Integrativeness*, *Motivational Intensity*, *Perceived Competence*, *Communication Apprehension*, *Attitudes*, *Compulsivity*, and *Introversion*. *Integrativeness* and *Attitudes* were combined to form *International Posture*. *Compulsivity*, which was hypothesized to be partially caused by socio-cultural mores in Japan, had not been included in previous studies.

Second, a multiple regression analysis was performed in order to investigate which individual difference factors best predicted *L2 WTC*. The results of the analysis indicated that *Introversion*, *Motivational Intensity*, *Communication Apprehension*, and *International Posture* were significant predictors of *L2 WTC*. One significant finding was that *Introversion*, which had not been included in previous *L2 WTC* studies, was the most powerful predictor in the present study. Another multiple regression analysis was conducted in order to investigate the degree to which *L2 WTC* and the individual difference factors predicted *L2* proficiency. The result revealed that *Perceived Competence* and *L2 WTC* were significant predictors of *L2 Proficiency*. Thus, *L2 WTC* predicted *L2 Proficiency*, although *L2 Proficiency* was not a statistically significant predictor of *L2 WTC*.

Third, a structural equation model was constructed based on the results of the multiple regression analyses and a correlation analysis, in order to test hypothesized causal relations among the individual difference factors, *L2* proficiency, and *L2 WTC*. The structural model showed that three strong direct effects on *L2 WTC*; two of which were negative, and the other was positive. The first negative effect on the participants' *WTC* arose from *Introversion*, and the other negative effect was from *Communication Apprehension*. Positive effect on *WTC* arose from *Self-Efficacy*, which was composed of *Perceived Competence*, *Motivational Intensity*, and *L2 Proficiency*. *Compulsivity*

and *International Posture* affected *L2 WTC* indirectly. *Compulsivity* affected *Communication Apprehension*; therefore, *Compulsivity* had a negative indirect effect on *L2 WTC*. *International Posture*, which was composed of *Integrativeness* and *Attitudes*, positively affected *Self-Efficacy L2 WTC*; therefore, *International Posture* had a positive indirect effect on *L2 WTC*. In addition, to a lesser degree, *Introversion* affected *Communication Apprehension* positively; thus *Introversion* was both direct and indirect predictor of *L2 WTC*. The relationship between *L2 Proficiency* and *L2 WTC* was complicated; *L2 WTC* affected *L2 Proficiency* positively to a moderate degree, whereas *L2 Proficiency* affected *L2 WTC* somewhat negatively. The goodness of fit index (GFI) was .935, the adjusted GFI was .905, and Root Mean Square Residual (RMSR) was .060; all indicated that this model accounts for the data well. .

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