Influences of International Attitudes and Possible Selves on Willingness to Communicate in English: A Comparative Analysis of Models for Japanese High School and University Learners of English

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Abstract

The importance of the willingness to communicate (WTC) in English has been emphasized in contemporary English education in Japan. Past research identified key elements of the WTC, but the relationships with individuals' future vision, which have been the focus of recent research on second language motivation, have not been explored in detail. Our study uses Markus and associates' theory of possible selves as a framework to capture the future-oriented self-cognition, and aims to investigate the internal structure of the Japanese youth's WTC in English. The initial model was composed of WTC inside and outside of EFL classroom, English anxiety, motivation to learn English, attitudes toward international environment, and three elements of the possible selves combined with perceived English communication competence. Using questionnaire data collected from 216 high school and 199 university students, we conducted statistical path analyses to test the model. In finalizing the model, our study confirmed not only the influences of the newly-explored dimensions on the WTC but distinctive features in each student group. Implications of the developmental process of the WTC are discussed as well as pedagogical suggestions for how to cultivate motivational capacity of activating positive possible selves as an English speaker/user.

Key words: willingness to communicate, possible selves, motivation, anxiety, attitudes toward international environment

Introduction

Willingness to communicate (WTC) was originally conceptualized as the probability that an individual would engage in talk when free to do so (McCroskey & Richmond, 1987). WTC has been the object of intensive research on individual differences (IDs) in second language acquisition (SLA) (see Ellis, 2008). Previous studies demonstrated that WTC in a second language (L2) is affected by crucial learner variables such as L2 attitudes/motivation, language anxiety, and perceived communication competence (see reviews by Dörnyei, 2005; MacIntyre, 2007).

Ever since WTC was identified as a powerful ID factor that facilitates L2 communication and acquisition, the importance of WTC has been acknowledged in contemporary English education in Japan (see Ministry of Education, Culture, Sports, Science, and Technology in Japan, 2011). Laborious efforts have been made to enhance people's attitudes toward the use of English in an international business network. However, recent studies of Japanese university students have suggested the existence of IDs in the capacity to form a future self-image as a competent English speaker, which seems to be a strong determinant of intended efforts to acquire the language (see Sugawara, 2012, for discussion). A significant role of future-oriented self-cognitions, named as *possible selves* in psychology (Markus & Nurius, 1986), has been the focus of current L2 motivation research by Dörnyei (2005, 2009) in conceptualizing *the L2 motivational self system*. Despite much attention on L2 learners' future thinking, little effort has been made to understand the development of L2 WTC in relation to possible selves, especially among Japanese youth learning English as a foreign language (EFL). Therefore, the present study attempts to add multi-components of possible selves attached to communication competence in English into the L2 WTC model for Japanese EFL learners, and aims to investigate links of the possible selves with other potential factors of the L2 WTC in real communicative settings. The other factors investigated are the L2 WTC inside EFL classroom, motivation to learn English, English anxiety, and *attitudes toward international environment* (conceptualized in this study). Using the same measurement scales and data from high school and university students, we conduct statistical path analyses to compare how the WTC's internal structures of the two groups differ and reveal a part of the developmental process of the Japanese youth's WTC in English. The obtained knowledge will possibly contribute to upper secondary and tertiary English education collaboratively to promote the WTC by cultivating the motivational capacity of the envisioning and functioning of positive possible selves with the features of competent English users/speakers in global society.

Review of Literature

To explore the internal structure and developmental process of the L2 WTC for Japanese learners of English, we first reviewed the literature on L2 WTC and the recent research in L2 attitudes/motivation. We focused on Dörnyei's (2005, 2009) L2 motivational self system, a construct partially generated by adapting Markus and her associates' ideas of possible selves and goal-directed behavior (Markus & Nurius, 1986; Markus & Ruvolo, 1989).

Research in L2 WTC

Explorations of WTC originated in research on interpersonal communication in a first language (L1), and the main interest of researchers was to conceptualize WTC as a stable personality trait that influences IDs in the amount of initiating talk when the opportunity arises (McCroskey & Richmond, 1987). The earlier work of conceptualizing L1 WTC was extended to describe a more complex principle of generation of L2 WTC and then to provide practical implications for the language teaching toward promoting authentic communication between peoples from different cultural backgrounds (see MacIntyre, Clément, Dörnyei, & Noels, 1998). According to a comprehensive conceptual model developed in MacIntyre et al., L2 WTC, defined specifically as readiness to use an L2 to communicate with others when free to do so, was regarded as the final psychological step toward actual communication behavior in an L2. Their model, composed of linguistic and psychological variables, has shown that both stable personal/social and unstable situational characteristics contribute to the behavioral intention of L2 WTC. The former (concerning motivational propensities toward the L2 community, intergroup attitudes, L2 self-confidence, social situation, communicative competence, intergroup climate, and personality) are elements that may serve to stabilize an individual's level of WTC in the L2, while the latter (desire to communicate with a specific person and state communicative confidence) are proximate factors, presumably bringing moment-to-moment changes on a person's L2 WTC in a particular situation. As MacIntyre and his associates (e.g., MacIntyre & Doucette, 2010) argue, our understanding of the SLA process is surely enhanced by considering both stabilizing and fluctuating aspects in the L2 WTC's generation or its inhibition, but research focusing on one side may serve to identify new factors and specify interrelations among the variables.

The main interest of our study is the stable attributes influencing L2 WTC. A number of studies have demonstrated empirically that WTC in the L2 is linked with L2 anxiety, perceived communication competence, and other psychological/ethnolinguistic factors including Gardner's (1985) integrative motivation (MacIntyre & Charos, 1996), action control processes (MacIntyre & Doucette, 2010), learner belief (Peng & Woodrow, 2010), and quality of the L2 contact and its subjective norms (Clément, Baker, & MacIntyre, 2003). The effects of age-related differences on WTC were examined in a junior high French immersion program (MacIntyre, Baker, Clément, & Donovan, 2002). Their study found that correlations between L2 WTC, L2 competence, and L2 anxiety were lowest in the grade 7 students, increased in grade 8, but decreased again in the grade 9 students, suggesting a complex developmental process of their L2 WTC. In a Japanese EFL context, Yashima (2002) examined the role of a potential WTC factor named *international posture*, indicating an individual's tendency concerning preferences for intercultural friendships, non-ethnocentric attitudes, and interest in foreign affairs. The results of structural equation modeling (SEM) analyses confirmed that the international posture predicts L2 WTC and L2 motivation; the motivation in turn predicts L2 proficiency and perceived L2 communication confidence that has a strong effect on the L2 WTC. Yashima (2009) has argued that those who possess higher international posture are more inclined to envision English-using future selves in an international community. This claim has been supported by the correlation between international posture and Dörnyei's ideal L2 self, the concept containing elements of the possible selves, which is thoroughly

explored in our research.

Possible Selves, the L2 Motivational Self System, and International Attitudes

Personality and motivational psychology have focused on the concept of "possible selves," future oriented self-knowledge. The aim of possible selves research has been to reveal self-based mechanisms that generate personalized goal-directed behavior in certain tasks or activities (see a review by Markus, 2006). Examining the nature and function of possible selves, Markus and Nurius (1986, p. 954) pointed to the existence of three types of individual's ideas: *the ideal selves that we would very much like to become, the selves we could become*, and *the selves we are afraid of becoming*. These human capacities to think about the unrealized states serve to activate the creations of both 'hoped for possible selves' (e.g., 'the successful self,' 'the creative self,' 'the thin self,' or 'the loved and admired self') and 'dreaded possible selves' (e.g., 'the alone self,' 'the depressed self,' 'the incompetent self,' and 'the unemployed self'). These constructed or retrieved individuals' self-relevant images have the potential to be used as guides for avoiding undesired states and approaching desired end-states. Among various possible selves, the ones frequently active in thought and memory, termed *working self-concepts*, are believed to have powerful effects on the regulation of behavior. According to Markus and Ruvolo's (1989) conceptual model, an individual's action will be energized and organized when his/her self-system is dominated by working positive possible selves, whereas his/her action will be disorganized with discomfort by the dominance of working negative possible selves. Their ideas have been supported with theoretical considerations and empirical findings from educational, sports, and clinical fields of research (see Markus, 2006; Markus & Nurius, 1986; Markus & Ruvolo, 1989). In their literature, Markus and her colleagues conclude that the individuals' ability to recruit vivid, elaborated, and desired possible selves motivate them to move into their own attractive states by appropriating cognitive processes and managing emotion, which allows them to enhance effective performances and feelings of efficacy in the target domain.

As emphasized above, the possible selves approach, framing goals with self-concepts, is effective at revealing an individual's mental life as actually experienced when engaged in goal-directed/motivated behavior. The advantageous aspects of this approach were drawn by Dörnyei's (2005, 2009) work of conceptualizing L2 motivation with the self-framework. His L2 motivational self system consists of three dimensions: the ideal L2 self, ought-to L2 self, and L2 learning experience. The ideal L2 self refers to the L2 speaker you would really like to become, ought-to L2 self refers to the self-relevant L2 abilities that others believe you should possess, and L2 learning experience comprises situation-specific motives fluctuating in response to immediate L2 use/learning environment and experiences. Dörnyei (2005, 2009) explains that the individuals' desire to reduce discrepancies between the hoped-for L2 selves (especially ideal L2 self) and the present self-perceived L2 competences motivate them to learn the L2. These future thoughts of L2 users/learners have not yet been explored thoroughly in previous L2 motivation research. He also states that this self-based approach is more suitable to describe current world English learners' motivation than the prevailing social psychological approach (Gardner, 1985) with its core concept of integrativeness that limits discussion on an attitudinal disposition toward the target language community. As he explains,

exploring learners' self-concepts gives us the broader perspective necessary to investigate how the English learning motivation is linked with complex developmental process of the language self, social identity, and beliefs constructed by global/local cultural experiences. In fact, recent empirical studies conducted in various EFL contexts have demonstrated that the strength of the ideal L2 self, containing domains of both the integrativeness and the instrumental motives in the L2 learning related to career enhancement, plays a key role in determining the intended effort to learn the L2 (Taguchi, Magid, & Papi, 2009). The strength of the ideal L2 self is also affected by the L2 learning experiences, the aforementioned international posture (Csizér & Kormos, 2009), and the social values pertaining to the L2, which have been found to have an influence on the ought-to L2 self (Sugawara, 2012), the domain of the self contributing to L2 anxiety (Papi, 2010).

Based on these findings, it seems that individuals who possess strong international attitudes motivate themselves to associate the study of English as a school subject with use of the language to express themselves in an international community related to their own specialties (see Sugawara, 2012, for discussion). If these L2-using self-images are highly available in their thoughts and perceived as their own possible future, they may be more willing to enter into the L2 discourse to enhance the L2 communication competence to the level they believe they should attain, which stems from the desire to live an active life in their attracted self-embedded environment. According to these considerations, we came to believe that the activation of individuals' future-oriented thoughts in their own L2 communication competence and the desire to move themselves into a hoped-for international environment regulate the behavioral intentions of the L2 WTC in real communicative settings. To examine this self-based WTC generation mechanism in detail, possible L2 selves were assessed multi-dimensionally in terms of their 'emotional involvement,' 'frequent activation,' and 'perceived possibility' by referring to Dörnyei's (2009) theoretical considerations and the measurement approach devised by MacIntyre, Mackinnon, and Clément (2009).[1] To measure individuals' attitudes toward an international environment, we created a self-report questionnaire, consisting of items assessing preferences for multicultural school/work environment, the vision of international careers, and opinions of internationalization of one's own surroundings. Adequate internal consistencies of the developed measures were confirmed in our preliminary study,[2] which made it possible to assess these motivational capacities and personal characteristics together with other potential WTC factors (described earlier) within a single model.

Hypothesized Model

Based on previous research and the possible selves perspective, the present study constructed an initial WTC model (Figure 1), aiming to test the relationships among 8 variables: WTC in English outside an EFL classroom (reflecting real communicative settings), WTC in English inside an EFL classroom, English anxiety, motivation to learn English, three dimensions of possible selves (emotional involvement, frequent activation, and perceived possibility) attached to perceived communication competence in English, and attitudes toward the international environment. The model specification was based on the following theoretical considerations.
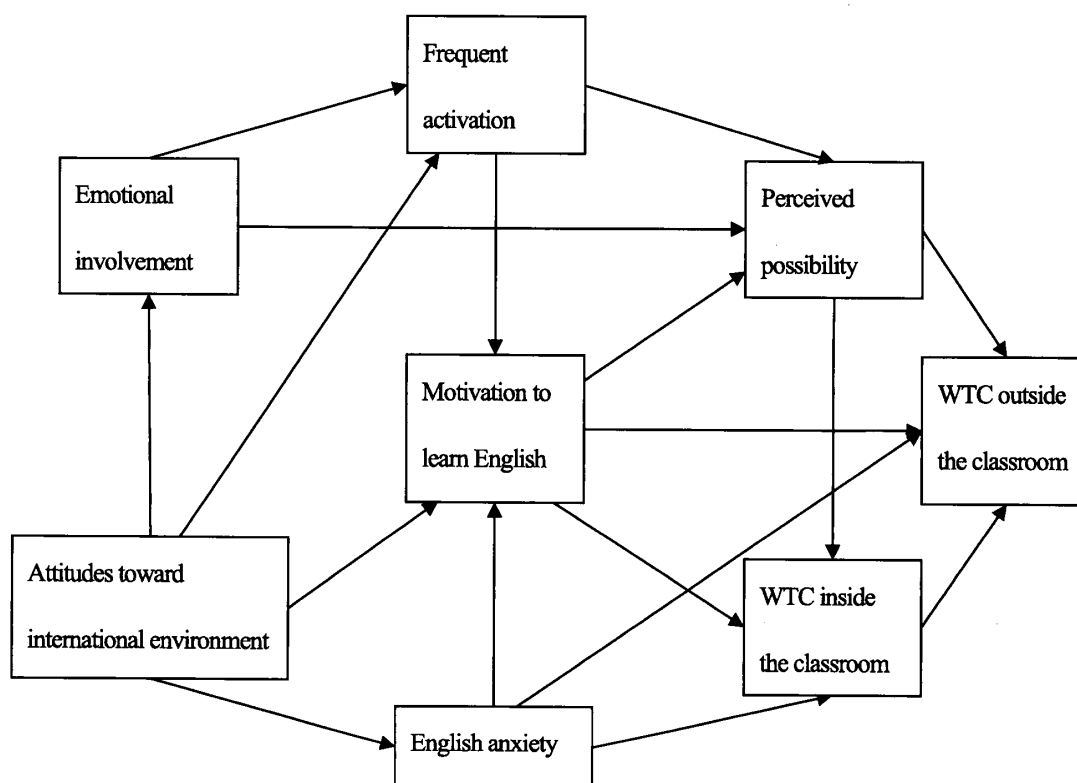
Figure 1. Initial model to be tested

Individuals' attitudes toward the international environment are thought to be formed by their long-term socio-cultural experiences (Csizér & Kormos, 2009; Dörnyei, 2009; Sugawara, 2012). Therefore, the attitudes towards the international environment can be viewed as a powerful trait-like element that positively affects emotional involvement, frequent activation, and motivation. In addition, a negative path from the attitudes to anxiety was expected, based on the principle that the more individuals are goal-directed by working positive possible selves, the less they are dominated by debilitating anxiety that inhibits intended actions (Markus & Ruvolo, 1989). Furthermore, by looking at the role of the possible selves in goal-directed behavior, we drew a negative path from anxiety to motivation (supported in Papi, 2010) and positive paths from motivation to the WTC both inside and outside the classroom. Similarly, positive paths from emotional involvement to motivation, via frequent activation, and positive direct effects of all these dimensions on perceived possibility were anticipated based on the function of the desired possible selves generating feelings of efficacy in given tasks (Markus & Nurius, 1986; Markus & Ruvolo, 1989), which let us further predict positive direct effects of the perceived possibility on the WTCs. A positive path from the WTC inside the classroom to the WTC outside the classroom was anticipated, as confirmed in MacIntyre and Doucette (2010). Their study, which examined students studying French as a minority language, did not support a direct influence of anxiety on WTC outside the classroom. However, we expected anxiety to have a negative effect on the WTC both inside and outside the classroom, based on findings by Sugawara (2012) that indicate that the target Japanese EFL students seem to have more difficulties in the creation of language-using self-images but

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are also more pressured by the social importance of obtaining language abilities than other ethnic groups.

Method

Participants

The present research investigated high school and university students from Sapporo, the capital of Hokkaido, Japan. The high school participants were 216 students recruited from two high schools offering a general studies program (male, n = 97; female, n = 107; unknown, n = 12). At the time of the survey, the students ranged in age from 15 to 19 with an average age 16.0 (11 students did not indicated their age). No one reported his/her mother tongue was other than Japanese. Only 7 (3.2%) students had experienced spending more than 3 months in an English-speaking country. The university participants consisted of 199 students recruited from one private and two national universities (male, n = 115; female, n = 80; unknown, n = 4). At the time of survey, the students ranged in age from 18 to 24 with an average of 19.4 (6 students did not indicate their age). One hundred and ninety three of them were non-English major undergraduate students from various fields of study: economics, education, engineering, law, fisherman science, literature, medical science, dental science, health science, veterinary science, and humanities or science in general. One was a graduate student, and status data were missing for 5 students. All students except one reported that they spoke Japanese as their mother tongue (for 5 language data were missing). Only 8 (4%) of the university students had experienced spending more than 3 months in an English-speaking country. Based on earlier information, both high school and university samples in this study are representative of the general characteristics of non-English major Japanese students.

For statistical analyses, data from 188 high school students with an average age 16 (89 or 47.3% males, 96 or 51.1% females, 3 unknown) and data from 190 university students with an average age 19.4 (109 or 57.4 % males, 77 or 40.5% females, 4 unknown) were used (data with missing values in the measurement scales were eliminated).

Materials

Scales for measuring WTC outside and inside EFL classroom, English anxiety, and motivation to learn English were adapted from previous research. To assess the three dimensions of possible selves attached to English communication competence, a new scale was devised by modifying and combining measures developed in previous research. Those scales were translated into Japanese through a series of rigorous translations by the researchers and English teachers who had studied procedures for item-translations. By referring to previous research, the scale for measuring attitudes toward the international environment was developed by the first author and peer-reviewed for use in the current study by his co-authors. Below is a brief description of each of scales with Cronbach's α coefficients.

WTC in English outside the classroom (α = .96)

Twelve items were adapted from a WTC scale reported in McCroskey and Richmond (1987). These items assess WTC in 12 situations, which consist of crossing contexts (dyads, groups, meetings, and public presentations) with types of receivers (friends, acquaintances,

and strangers). Example items are "Talk in a small group of friends" and "Talk in a large meeting of strangers." Participants in this study were asked to rate the items, according to the degree to which they would be willing to communicate in English outside the classroom, using a 6-point Likert scale ranging from *almost never willing* (1) to *almost always willing* (6).

WTC in English inside the classroom (α = .93)

To measure students' willingness to speak in various communication tasks implemented in an L2 classroom, 12 items from Weaver's (2005) WTC scale were taken and slightly modified, based on the results of our preliminary study and the past study by Peng and Woodrow (2010) which had adapted items from his WTC scale. Example items are "Interview my classmates in English asking questions from the textbook" and "Give a short speech in English to the class about your hometown with notes." These items were rated on the above-mentioned 6-point Likert scale.

English anxiety (α = .90)

Sixteen items from Gardner's French use anxiety and French class anxiety (reported in MacIntyre & Gardner, 1988) were modified to assess English use/speaking anxiety in EFL students. Example items are "When making a telephone call, I would get flustered if it were necessary to speak English" and "I was always afraid that other students would laugh at me if I spoke up in English class." A 6-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (6), was used to measure the items. The scoring of 5 negatively worded items was reversed so that a higher score on the measure indicated a higher degree of anxiety.

Motivation to learn English (α = .87)

To measure the dimensions of motivation or desire to learn English, 8 items were adapted from Gardner's (1985) Attitude/motivation test battery (AMTB) and formatted as the above 6-point Likert scale. Example items are "If English were not taught in school, I would try to obtain lessons in English somewhere else" and "I find studying English very interesting."

Possible selves attached to English communication competence

The scale was created by adapting 12 items from McCroskey and McCroskey's (1988) Self-perceived communication competence scale (SPCC) and combining these items with possible selves measures adapted from MacIntyre, Mackinnon, and Clément (2009). The items in SPCC, which are very similar to McCroskey and Richmond's (1987) WTC items (described earlier), were slightly modified to assess communication competence in English, such as "Talk with a friend in English" and "Present a talk to a group of acquaintances in English." In order to make them clearly distinguish between present and future selves, respondents were at first asked to score the items with a question to assess the present L2 self, "describe your competence now," using a 6-point Likert scale, ranging from *not able to do at all* (1) to *able to do very well* (6). Then, they scored the same items using 6-point Likert scales with questions to think about the following possible L2 selves domains in turn: *Perceived possibility (α = .98)* was indicated in question "How likely is this in the future?" and measured ranging from *not likely at all* (1) to *very likely* (6), *Emotional involvement (α = .98)* was indicated in "How strongly do you feel you want this in the future?" and measured ranging from *not desired at all* (1) to *strongly desired* (6), *Frequent activation (α = .98)* was indicated in "How often have you thought about this future?" and measured ranging from *never thought about it* (1) to *always thought about it* (6).

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Attitudes toward international environment (α = .94)

As described earlier, this concept was generated to indicate preferences for multicultural school/work environment, the vision of international careers, and opinions of internationalization of one's own surroundings. With this in mind, 16 items were developed by referring to Yashima's (2002, 2009) scales to assess international posture, the items for measuring the domains of ideal L2 self (used in Taguchi et al., 2009), and Hartmann's (1991) boundaries questionnaire, assessing personal characteristics of openness to foreign objects and preference for less sharp dividing lines between people or groups and nations (adapted in Sugawara, 2010, 2012). Using a 6-point Likert scale (*strongly disagree* to *strongly agree*), those items were pilot-tested and then 12 items were retained for use in the current study. All the items are described in the appendix of this paper.

Procedures

Questionnaires containing the 9 scales and a demographic section (described earlier) were pilot-tested in our preliminary study. Based on the results from reliability and exploratory factor analyses, unreliable items were omitted or modified. The finalized questionnaires were administered to the high school students during September-October, 2012 and to the university students during September-December, 2012. After receiving instructions, both groups of students who agreed to participate in this research completed the questionnaires during class or outside class time.

Data Analyses

The data were at first entered into SPSS statistics 21 to examine the internal consistency reliability of the scales. Subsequently, these SPSS data (with no missing values) were used to carry out Pearson product-moment correlation analyses to examine the relationships among the 8 variables. As MacIntyre and Doucette (2010) argue, if research is designed to perform path analysis for model specification, it is necessary to confirm results from correlation analysis in advance and interpretations of findings should be done based on both analyses results because of problems inherent to path analysis which is a type of multiple regression analysis. To be specific, unlike the correlation coefficient between 2 variables, path (or regression) coefficients could change if variable(s) in a path model are added or reduced. Therefore, path analyses for the two groups were conducted after the correlation analyses, by transferring the SPSS data into AMOS 21. In the path analyses, we followed generally recommended modeling procedures described in Tabei (2011) and past studies (e.g., MacIntyre & Charos, 1996; MacIntyre & Doucette 2010). The estimation of parameters was fixed on the maximum likelihood method. To assess the model's overall fit to the data, we used conventionally employed criteria, chi-square (χ^2) and chi-square divided by the degree of freedom (χ^2/df). In addition, the following fit indices were selected for use by referring to a review and recommendations by Hoshino, Okada, and Maeda (2005) and past studies (e.g., MacIntyre & Doucette 2010; Papi, 2010); goodness of fit index (GFI), normed fit index (NFI), Tucker-Lewis index (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA).

Results

Correlations among the Scales

Table 1 presents the significant correlations among the scales within each sample studied. For these student groups, the expected pattern of correlations among the scales was shown in the analyses. The 2 WTC scales were positively correlated with each other and with motivation but negatively correlated with anxiety. Moreover, both WTC scales and motivation were found to be positively correlated with the newly-developed scale of attitudes toward the international environment, and as for the other scales, this attitudinal dimension was negatively correlated with anxiety. Except for anxiety, all the scales described earlier were found to be positively correlated with the possible L2 selves' scales of perceived possibility, emotional involvement, and frequent activation. As expected, these 3 scales were positively intercorrelated and were negatively correlated with anxiety.

It should be noted that anxiety was more strongly related to all the possible L2 selves' scales as well as to both WTC scales in the university student group compared to the high school students. In the high school group, motivation was slightly more strongly related to perceived possibility.

Table 1

Correlations among the Scales

	1	2	3	4	5	6	7
High school students							
1.WTC outside the classroom							
2. WTC inside the classroom	.78**						
3. Motivation to learn English	.58**	.61**					
4. English anxiety	-.44**	-.30**	-.37**				
5. ATIE	.60**	.56**	.72**	-.33**			
6. Perceived possibility	.56**	.57**	.59**	-.28**	.58**		
7. Emotional involvement	.50**	.54**	.59**	-.15*	.63**	.76**	
8. Frequent activation	.52**	.52**	.61**	-.24**	.60**	.66**	.75**
University students							
1.WTC outside the classroom							
2. WTC inside the classroom	.72**						
3. Motivation to learn English	.46**	.66**					
4. English anxiety	-.58**	-.43**	-.38**				
5. ATIE	.57**	.57**	.61**	-.50**			
6. Perceived possibility	.67**	.60**	.47**	-.53**	.56**		
7. Emotional involvement	.53**	.52**	.54**	-.39**	.68**	.67**	
8. Frequent activation	.54**	.57**	.57**	-.38**	.62**	.60**	.75**

Note. WTC = willingness to communicate in English; ATIE = attitudes toward international environment.
*$p < .05$, **$p < .01$

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Path Analysis Modeling

Table 2 presents the fit indices in the initial model for both student samples studied and the improved fit indices obtained by the revising steps toward finalizing the model. As it can be seen in Table 2, goodness-of-fit indexes (GFI, NFI, TLI, and CFI) in the initial model displayed values within conventionally acceptable level of above .90, providing evidence that the proposed model fit the data well for those populations. However, the χ^2 statistic and the RMSEA value in the high school group as well as the χ^2 statistic, the χ^2/df ratio, and the RMSEA in the university group were below the usually recommended levels. The χ^2 statistic meets accepted levels with $p > .05$, and χ^2/df and RMSEA are considered acceptable with a value below 3 and the .05-.08 range, respectively. Since a significant χ^2 statistic indicates that additional variance may be explained if new path(s) were entered into a model, we added the following paths for each model by looking at modification indices: English anxiety → perceived possibility (path 1) and attitudes toward international environment → WTC outside the classroom (path 2) for the high school model, and English anxiety → perceived possibility (path 1) for the university model. It should be noted that these 3 paths were all significant at the $p < .01$ level or below, but they are tentative "data-driven" paths which need to be replicated in further research. Although adding these data-driven paths adequately improved the fit-indices in each group's model, there were non-significant paths that needed removal. In both models those paths were English anxiety → WTC inside the classroom and motivation to learn English → WTC outside the classroom. In addition, the non-significant paths of frequent activation → perceived possibility and perceived possibility → WTC outside the classroom in the high school model as well as English anxiety → the motivation in the university model were removed. As their fit-indices show, the revised models for each group provided a close-fit to the data when all non-significant paths were eliminated and the earlier-mentioned data-driven paths were added, so the revised models regarded as final for these populations.

Table 2

Fit Indices for Path Analysis Models

Models	χ^2	df	p	χ^2/df	GFI	NFI	TLI	CFI	RMSEA
High school students									
Initial model	27.59	11	.00	2.51	.97	.97	.95	.98	.09
Adding path 1	21.46	10	.02	2.15	.97	.98	.97	.99	.08
Adding path 2	13.31	9	.15	1.48	.98	.99	.99	.99	.05
Final model	18.35	13	.14	1.41	.98	.98	.99	.99	.05
University students									
Initial model	42.42	11	.00	3.86	.95	.96	.91	.97	.12
Adding path 1	14.93	10	.13	1.49	.98	.98	.98	.99	.05
Final model	21.23	14	.10	1.52	.97	.98	.98	.99	.05

Note. Path 1 = English anxiety → perceived possibility; Path 2 = attitudes toward international environment → WTC outside the classroom

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Figure 2 and Figure 3 present schematic representation of the final models with the standardized path coefficients for each student group surveyed. As seen in Figure 2 and Figure 3, the data-driven paths described earlier are indicated in dotted lines. In both groups, the following 11 paths remained and were significant at the $p < .01$ level or below: attitudes → emotional involvement, attitudes → frequent activation, attitudes → motivation, attitudes → English anxiety, English anxiety → WTC outside the classroom, motivation → WTC inside the classroom, emotional involvement → perceived possibility, emotional involvement → frequent activation, frequent activation → motivation, perceived possibility → WTC inside the classroom, WTC inside the classroom → WTC outside the classroom. Besides these paths, in the high school sample English anxiety → motivation and motivation → perceived possibility were significant at the $p < .01$ level; in the university sample, frequent activation → perceived possibility and perceived possibility → WTC outside the classroom were significant at the $p < .05$ level and at the $p < .001$ level, respectively.
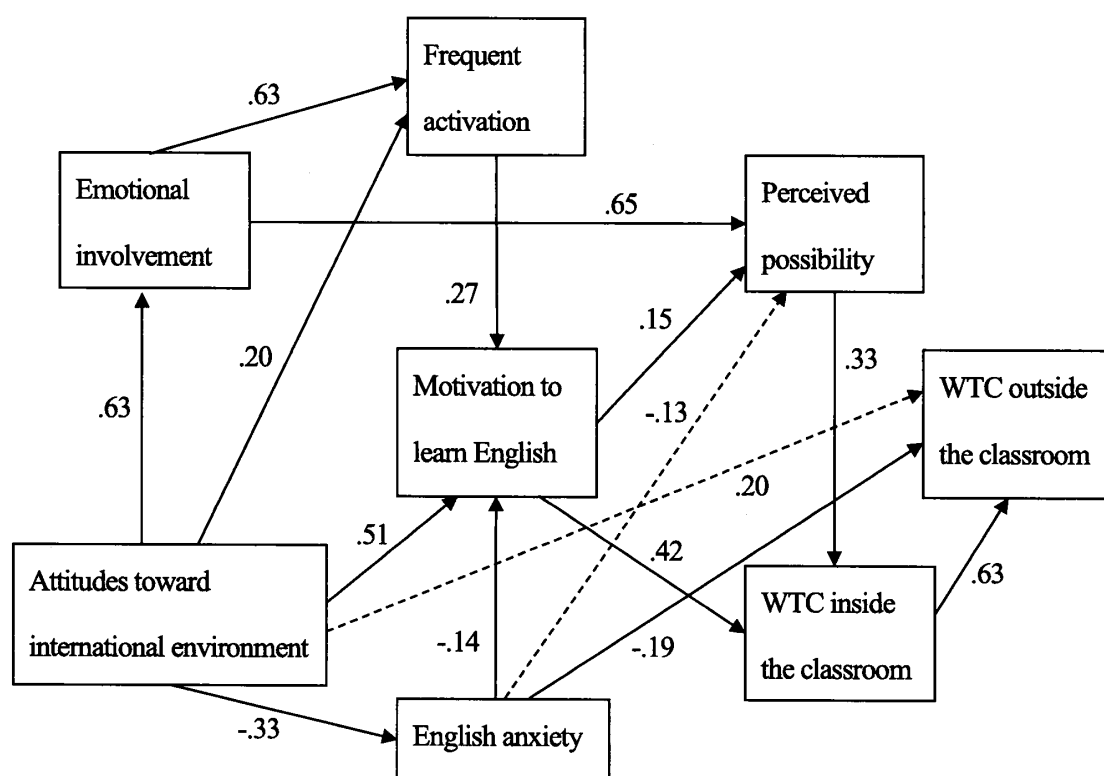

Figure 2. The final model with standardized path coefficients for Japanese high school students
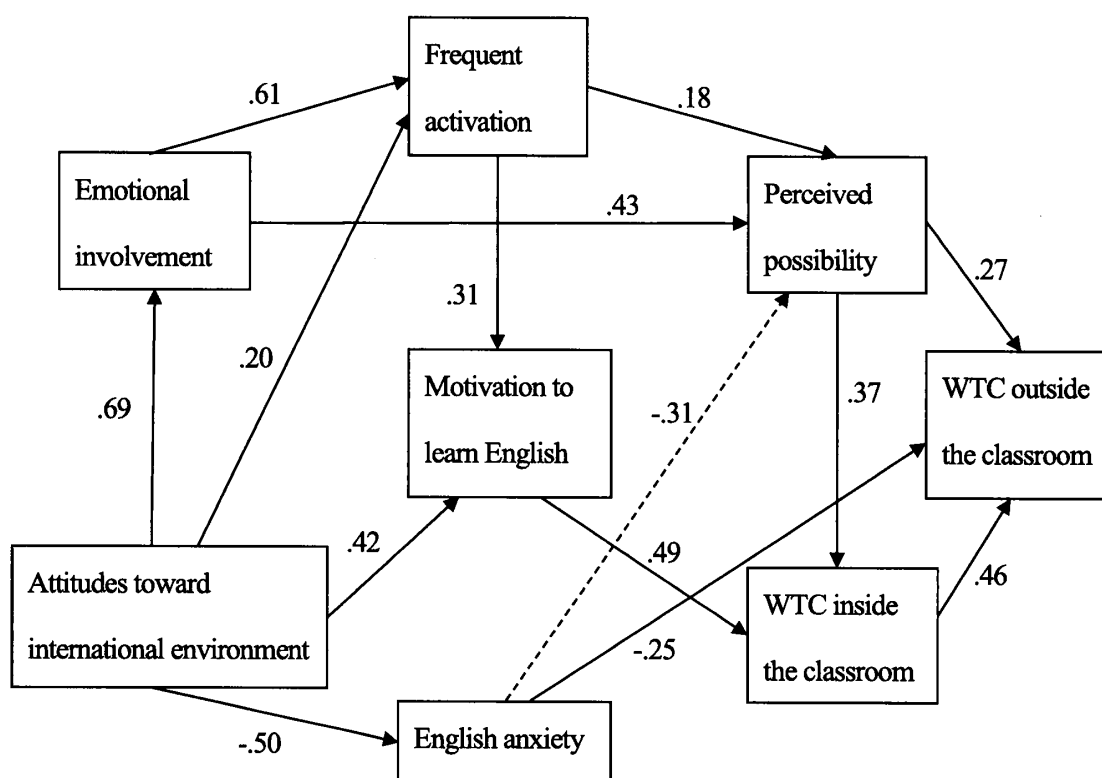
Figure 3. The final model with standardized path coefficients for Japanese university students

Discussion

The results of the correlations and the path analyses provide support for the proposed interrelationships among WTC outside the classroom, WTC inside the classroom, English anxiety, motivation to learn English, the possible L2 selves of emotional involvement, frequent activation, and perceived possibility, and attitudes toward international environment. The induced final models adequately fit the data, supporting that each model is an appropriate description of the internal structure of the WTC in English for the investigated populations living in a Japanese EFL context. The interpretation of these results may expand our understandings of the self-based mechanism of the WTC generation in real communicative settings and reveal part of the developmental process of the future-oriented self-cognition that stabilizes IDs in the WTC.

The three elements of the possible selves assessed within English communication competence were found to be interrelated. The dimension measuring the perceived possibility contributes significantly to the WTC outside the classroom, via impacting the WTC inside the classroom in both of the populations. This finding indicates the likelihood that students believe they could become a competent English speaker is an important determinant of how much they are willing to speak in English during class time, which seems to play a substantial role in forming their behavioral intention of the WTC in communication situations beyond the classroom context. Thus, the significant role of this future self-cognition in the generation of the WTC was validated in our research. This finding expands knowledge obtained in previous research that showed the present perceived communication competence in an L2 has an

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impact on the L2 WTC (MacIntyre, Baker, Clément, & Donovan, 2002; MacIntyre & Charos, 1996; MacIntyre & Doucette 2010; Yashima, 2002, and others).

As shown in the final models, the antecedents of the perceived possibility were confirmed. In both of the samples studied, emotional involvement was found to be a predictor variable, having a great influence on the perceived possibility. This finding suggests that the existence of a hoped-for self as a competent English user/speaker in individuals' mind is a prerequisite for the formation of the idea regarding how they feel their desired L2-using self-image reflects a part of their achievable future state. Besides emotional involvement, other variables had direct or indirect effects on the perceived possibility but partially in different ways between the samples. In case of the high school students, motivation, which was affected by frequent activation, had a weak but direct effect on perceived possibility. In the university students, although the effect of frequent activation on motivation was confirmed, only frequent activation had an impact on perceived possibility. The common path supported in both groups (frequent activation to motivation) provides empirical evidence for Dörnyei's (2005, 2009) theoretical consideration that the accessibility of the possible L2 selves in working memory would be associated with the motivational capacity of the L2 learning. Furthermore, the different predictors of perceived possibility found in each group indicates that in the high school students how likely they feel they can manage the encountered L2 communication tasks tends to be affected by the strength of the motivation and desire to learn the L2. In the university students, the feeling of efficacy might be affected by how often they think about the L2-using self-images. We assume that this difference between the two age-groups represent students' developmental process of the capacity to multi-dimensionally perceive self in relation to their embedded social contexts, which was partially discussed in recent L2 self-related motivation research (Csizér & Kormos, 2009; Dörnyei, 2009; Sugawara, 2012). The discussions of these previous studies and Markus and Nurius's (1986) original work of possible selves let us further interpret the present findings as follows. Compared to high school students, university students may come across more opportunities to envision hoped-for professions and careers, so university students, especially those who embrace the L2-using self-image as a form of working self-concept, would be able to more extensively evaluate their actual L2 competence and compare it with a required L2 competence in their community beyond immediate classroom situations. Perhaps, these mental activities might allow university students to precisely estimate the probability of success in entering into L2 talk in real communicative settings, as can be inferred from the direct path from perceived possibility to the WTC outside the classroom that was supported only in the university sample.

Another difference between the models for the two student groups was found in the hypothesized path from English anxiety to motivation, supported in the high school group but not in the university group. In addition, the data-driven path and the results of the correlation analyses indicate that compared to the high school students, English anxiety had a stronger negative effect on perceived possibility in the university students. As part of the differences between the final models discussed earlier, we believe these findings can be explained based on the original work of Markus and Ruvolo (1989) on the function and development of the possible selves. Combining their theory with our interpretation of the target populations, university students who are able to evaluate their L2 competence extensively by situating the

self in authentic L2 communication contexts but whose self-system are dominated by the feared possible selves in the L2 use/speaking might underestimate the probability of success in projected L2 communication tasks. This would contribute to an unwillingness to talk in the L2, as implied from our university student model revealing the influence of English anxiety on the WTC outside the classroom in the mediation of the perceived possibility. In case of the high school students, however, since their self-knowledge attached to L2 use/speaking is likely perceived within immediate classroom learning experiences, our finding indicating that the established influence of English anxiety on perceived possibility was mediated by the effect of motivation is not an inaccurate representation of those students' characteristics.

It should be noted that both models supported the hypothesized direct path from English anxiety to the WTC outside the classroom but not to the WTC inside the classroom. These results deepened our understanding of students' mental life experienced when falling into anxiety-provoking states in situations of the L2 use/learning. According to our model, students associate the rise of their L2 anxiety more strongly with the perceived probability of success in entering into the L2 discourse in real communicative situations rather than with the task-relevant events occurring within the familiar classroom learning contexts. However, given the results of our correlations analysis, if learning tasks encourage students to recruit incompetent L2 self-images into their future self-cognition, the associated negative emotion might inhibit their intentions toward L2 communication, even in an EFL classroom. Our findings are compatible with MacIntyre and Doucette's (2010) path analysis model regarding the mediating role of this type of debilitating affect in the L2 WTC. In their study, L2 anxiety contributes directly to WTC inside the classroom and indirectly to WTC outside the classroom by impacting the present perceived communication competence. Based on the findings of both studies, further research to investigate interrelationships among the measures of perceived L2 communication competence classified with past, present, and future self-perspectives and the links of these dimensions with types of an L2 anxiety related to particular tasks or situations may provide new insights into the self-based mechanism to inhibit the generation of the L2 WTC.

Finally, the models support our initial hypotheses that the attitudes toward international environment would positively contribute to emotional involvement, frequent activation, and motivation, as well as negatively contribute to English anxiety for both student groups. As described earlier, this attitudinal dimension was conceptualized in our research to capture individuals' disposition attached to preferences for multicultural school/work environment, visions of international careers, and opinions of internationalization of one's own surroundings. Our statistical analyses validated the importance of this type of disposition as a factor, having direct and indirect influences on all the possible selves and the WTC factors dealt with in this study. Students who were characterized with strong international attitudes are seemingly inclined to motivate themselves to study English by frequently activating their desired L2-speaking self-images that may create the strong intention to enter into the L2 discourse in learning tasks and real communicative situations. Furthermore, by interpreting the confirmed negative effect of international attitudes on anxiety with Markus and Ruvolo's (1989) theory in goal-directed behavior, these students' self-systems dominated by positive possible L2 selves act to oust the negative affect that defeats their motivated actions toward

the cultivation of their desired L2 competence. This type of emotional management might further encourage these students to focus on the hoped-for L2 selves with the qualities reflected in the attitudes toward international environment. Our research focusing on these personal characteristics may be compatible with Yashima (2002, 2009), whose studies have discussed in detail IDs in the internalization or personalization of learning English by exploring the links among international posture (reflecting intercultural friendships, non-ethnocentric attitudes, and interest in foreign affairs), WTC in English, and the vision to be an active participant in an international community. A careful examination of the links between the attitudes to international environment and the international posture is necessary to extract their superordinate concept covering all domains of the attributes that contribute to development of the motivational capacity to acquire the communication competence required in the globalized world. Furthermore, our discussions presented here may offer a partial account of Papi's (2010) data indicating that the strength of L2 anxiety would be negatively affected by the ideal L2 self but positively by the ought-to L2 self. The ought-to L2 self, which might be associated with the possible L2 selves in individuals' minds, should be explored in WTC research. SEM analyses by recent studies have revealed links of this domain of self-cognition with the belief constructed by parents/family (Csizér & Kormos, 2009), avoidance of negative outcomes in test or grade (Taguchi et al., 2009), and the values pertaining to the social importance of learning English (Sugawara, 2012). The empirical investigation of how the attributes of the ought-to L2 self are related to each of the WTC factors may provide further insight into the internal structure and developmental process of the WTC for the studied populations.

Pedagogical Implications, Limitations, and Directions for Future Research

In this study, we investigated the internal structure and part of the developmental process of WTC in English for Japanese high school and university students. The findings not only expand and deepen our understandings of L2 WTC/motivation, but also provide important practical implications for upper secondary and tertiary English education in Japan.

As described in the introduction of this paper, national level efforts have been made to develop Japanese youth's WTC in English for promoting the use of the language in the international business community. This background has focused contemporary English education on teaching English for specific purposes (ESP) with the aim to foster the required communicative competence pertaining to specialties. However, as demonstrated in the present study, the behavioral intention of the WTC is induced by interactions among existing elements of visualizing and functioning hoped-for L2 selves: emotional involvement, frequent activation, and perceived possibility. Furthermore, this domain of motivational capacity might be supported by the attitudes toward international environment, forming the vision of international careers and positive attitudes to multicultural work/school environment or internationalization. Thus, these motivational capacities and international attitudes should be developed with English as an international language competence that may be integrated into knowledge and skills for doing presentations, discussions/argumentations, and negotiations in real communicative settings. With this in mind, it is important to design teaching materials and learning tasks to encourage students to embody their hoped-for L2 selves in the creations

of discourse events through both individual and group-based activities. These include exploring and summarizing information from social media and writing detailed scripts for practicing the earlier-mentioned communication tasks after showing their models for effective and competent performances. During each of these task-induced performances and created discourses, ongoing support and feedback should be given by the teacher and peers to develop communicative competence in immediate situations. Furthermore, these classroom tasks and activities will have the potential to be expanded to whole program-based projects that offer students opportunities for public speaking and meetings together with people from different cultural backgrounds (as in the practice of the Model United Nations).[3] The knowledge, ideas, and performances obtained through the tasks/activities described earlier are frequently recorded or uploaded, so students could reflect their developmental process of actual selves that encourage them to think about the hoped-for selves attached to their own profession/careers with the importance of learning English for personal-branding in global society. In order to accomplish this goal, exploring collaboration between upper secondary and tertiary English education is further encouraged, as both high school and university models presented in our study indicate the influences of the international attitudes and possible selves on the WTC.

Regarding the limitations of our study, our samples for the target populations were collected from only three universities and two high schools all located in a relatively large city within a particular region in Japan. It is possible that data from a different group of students would display an alternative pattern of relationships among the variables in our path model. Another limiting factor is the existence of unexplored dimensions, presumably having influences on the target characteristics. That is, although we focused our investigation on future-oriented L2 self-cognition, this domain would interact with other self-concepts, including past and present state-representations, as well as with knowledge constructed by parents/family and school contexts, or unique features of Japanese culture and current social situations. All these components and functions of the self-system may interact with more proximal various WTC-factors and determine the level of the WTC according to situation/ context-specific characteristics. Furthermore, although our research aimed to investigate the internal structure of the trait-like WTC, we should remember the WTC studies concerning the dynamically-changing side of state WTC linked with immediate L2 use/learning experiences. For instance, a recent study by MacIntyre, Burns, and Jessome (2011) has described in detail the intertwined nature of situations/contexts and self-perceptions that affect the level of state L2 WTC by analyzing qualitative data and using the concept of "ambivalence" about L2 communication. This has more focus on the relationships between personal characteristics and environment. Thus, a direction for future research is to conduct both quantitative and qualitative studies in order to understand the entire picture and developmental process of the self-based mechanism influencing the L2 WTC, which must be an important component of individuals' motivational capacity to live an active life in global society.

Notes

1. For the operationalization of the possible selves examined in this study, we slightly modified

the names of the three dimensions which were described and classified in Dörnyei (2009) and MacIntyre, Mackinnon, and Clément (2009), based on the possible selves literature (see reviews by Markus & Nurius, 1986; Markus & Ruvolo, 1989).

2. A part of the process to develop the measures was presented at the 13th Annual Meeting of the Hokkaido English Language Education Society in October 2012.

3. See Yashima and Zenuk-Nishide (2008) for additional information regarding the impact of learning contexts on international posture, WTC, and self-initiated communication explored in a Japanese high school where global content-based teaching, including the practice of the Model United Nations, is conducted (for a review, see Yashima, 2009).

Acknowledgements

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Appendix
The scale used to measure attitudes toward international environment

1. I would like to work in an international environment, with people from different cultural backgrounds.（様々な出身国の人々が集まる国際的な職場で働きたい）

2. I want to play an internationally active role in my future job.（自分が将来就いた仕事で国際的に活躍したい）

3. I have a strong desire to study abroad.（海外留学をぜひしたい）

4. I would like to become acquainted with the people who are successful abroad.（海外で活躍している人々と知り合いになりたい）

5. I have a strong desire to become acquainted with the foreigners who take an active part in the job I am interested.（自分の興味がある仕事で活躍する外国人とぜひ知り合いになりたい）

6. I can imagine myself being internationally successful.（将来、国際的に活躍する自分の姿を思い描く）

7. I think I want to make myself grow up by meeting and conversing with people from various countries.（様々な出身国の人々と交流する中で自分を成長させたい）

8. I would like to find and work in a company flourished by people from various countries.（様々な出身国の人々が活躍する会社に就職したい）

9. I want to live together with people from different cultural backgrounds.（異なる文化的背景を持つ人々と共に生きて行きたい）

10. Japanese should aim to be more active in in international settings.（日本人は国際的な場で活躍することをもっと目指すべきだ）

11. I hope that many more international students from various countries come to our university (or high school).（自分が通う大学（高校）には様々な国から留学生がもっと来てほしい）

12. The thing I hope is that Japan will be further internationalized.（日本がもっと国際化してほしい）