The Relationship Between ESL Learners' Motivation, Willingness to Communicate, Perceived Competence, and Frequency of L2 Use

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ABSTRACT

The present study seeks to examine the relationship between the motivation of adult ESL learners, their willingness to communicate, their perceived competence, and the frequency of L2 use. Three research questions motivate this study: (1) Is there a relationship between the motivation of L2 learners and their willingness to communicate? (2) Is there a relationship between the motivation of L2 learners and their frequency of L2 use? (3) Is there a relationship between the perceived competence of L2 learners and their frequency of L2 use? The affective variables were measured using surveys; descriptive and inferential statistics were used to investigate the relationships between the affective variables that influence L2 communication and the frequency of L2 use. The results show that there was a relationship between motivation and willingness to communicate. Motivation was also a significant predictor of the frequency of L2 communication. In addition, while there was a relationship between learners' perceived competence and the frequency of L2 use, perceived competence did not predict the frequency of L2 use. The findings indicate that teachers can utilize a variety of strategies to boost students' motivation by strengthening their desired self-image and by nurturing their communicative confidence.

Keywords: motivation, willingness to communicate, perceived competence, frequency of L2 use, L2 communication, anxiety, self-confidence

INTRODUCTION

The purpose of the current study was to investigate the relationship between the motivation of adult ESL learners, their willingness to communicate, their perceived competence, and the frequency of second language (L2) use. MacIntyre et al. (1998) argued that the language learning process should ultimately lead to learners developing the willingness to communicate and seeking opportunities to engage in communication in the L2. This study is a partial replication

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of Hashimoto's (2002) study. Hashimoto analyzed whether Japanese ESL learners' higher levels of motivation actually led to an increase in their frequency of L2 use and willingness to communicate. Her study used surveys to measure the students' motivation and how willing they were to communicate in English in different circumstances along with their perceived self-confidence in using English. Using descriptive statistics and structural equation modeling, Hashimoto's study showed that there was a strong positive correlation and significant positive paths between the participants' motivation and their willingness to communicate to the frequency of L2 use. But there was no correlation between their perceived competence and the frequency of their L2 use. While Hashimoto's results shed light on the relationships between these variables, the findings of her study are only generalizable to Japanese ESL learners.

To expand the generalizability of these findings, the current study followed the same methodology with a heterogeneous group. In this way, the group of ESL learners in the present study spoke a variety of native languages. Descriptive statistics and inferential statistics were used to explore the relationships between the affective variables that influence L2 communication and the frequency of L2 use.

REVIEW OF LITERATURE

Evolving Construct of Motivation

Gardner and Lambert (1972) proposed one of the first prominent models of motivation in the field of second language acquisition. They differentiated between two types of motivation: integrative motivation, defined as the motivation to assimilate and identify with the culture of the target language group, and instrumental motivation, the motivation to learn the language for practical purposes such as getting a job or passing an exam (Gardner & Lambert, as cited in Ellis, 2015, p. 47). This model of motivation became known as the socio-educational model. Even though this model was at the forefront of motivation research for a few decades, it was subject to criticism. For example, some researchers argued that it did not take into consideration the effect of learner success or failure on motivation, that it suffered from limited generalizability due to the context in Canada where the research took place, and others noted its failure to account for the dynamic nature of motivation (Ellis, 2015).

More than two decades later, Dörnyei and Ottó (1998) presented a motivational model which characterized motivation as a dynamic instead of a static construct. Another difference from the earlier model is that they investigated motivation inside the classroom. Their model, which was called the Process Model of L2 Motivation, was comprised of three phases. The first phase, called the preactional phase, involves setting goals and establishing intent. The following phase, the actional stage, was conceived as the period in which learners initiate action. This action, in an ideal situation, should presumably lead to an outcome. However, if an unexpected event prevented the realization of the intended outcome, the learner could still return to the preactional phrase and restart the process. The last phase, the postactional phase, was said to begin after the actional phase has been completed or stopped. The learner at that point evaluates the results of the action and decides what possible future action, if any, he or she will take. Even though this model was the first type to account for the dynamic nature of motivation, Dörnyei

acknowledged that it did not demonstrate that the processes in all three phases could happen simultaneously, nor did it show that learners' motivation might fluctuate during each stage or among the stages (Dörnyei , 2005, as cited in Ellis, 2015, p. 51).

Another major development around the same time focused on how group dynamics and context can affect motivation in L2 learning. Dörnyei (1997) emphasized the important role of cooperative learning in arguing that cooperative learning is centered around positive interdependence, which can make an important contribution to the learning. Clément, Dörnyei, and Noels' (1994) research on Hungarian students, for instance, showed that group cohesion in the language classroom led to more positive assessment from students of the classroom situation. In addition, other investigations made clear that working towards common goals also leads to an increase in motivation since it produces positive interdependence (Dörnyei, 1997). Ushioda (2009) also examined how interaction between "person in context", defined as a focus on real persons in complex and organic systems or relationships, was a crucial factor in motivation in her emphasis that learners are both shaped by and able to shape the learning context simultaneously (p. 220). She criticized what she considered to be the narrow focus on theoretical learners and on purely cognitive aspects of the learners' experience (Ushioda, 2009).

One of the most recent theories which sought to explain the role of motivation on language learning was Dörnyei's L2 Motivation Self System (L2MSS), which he developed in 2005. Strongly based on Higgins' (1998) psychological concept of the self-image, this theory highlights the learners' 'future self-guides' as a standard that they wish to attain. This system highlights the notion of the *ideal self*, which "refers to attributes that someone would ideally like to possess," and the *ought-to self*, "referring to the attributes that one believes one ought to possess" (Dörnyei, 2009, p. 4).

Higgins (1998) offered yet another angle on the process: he noted that when one imagines the ideal self, the person tends to be sensitive to positive outcomes that deal with growth, advancement, and achievement; thus, the ideal self has a promotional focus. In contrast, when one is focused on the ought-to self, they are more susceptible to negative outcomes that deal with a failure to meet standards or obligations placed on oneself by others; the ought-to self is focused on prevention. The final component of the L2MSS is the learning experience, both in the present and in the past, of the L2 learner and how this experience affects that person's L2 learning experience in the future (Dörnyei, 2009).

Teimouri (2017) expanded Dörnyei's L2MSS by bifurcating the concept of the self. Drawing upon Higgin's (1987) self-discrepancy theory, Teimouri divided the ideal self and ought-to self into four future self-guides: (a) ideal self/own, which represents the qualities that one desires to acquire, (b) ideal self/others, which represents the characteristics that one believes others would like him or her to acquire, (c) ought self/own, which represents traits that one believes one ought to or should attain, and (d) ought self/others, which represents characteristics that one ought to or should attain because it is imposed by others. Teimouri tested this 2 x 2 model by conducting a survey that included eleven motivational and emotional variables and administering it to junior and senior high school students in Iran. The items included the four bifurcated *selves*, three emotions, L2 willingness to communicate (WTC), preventative and promotional orientation, and intended effort.

The results of the study showed that while there was a distinction between the ought self/own and ought self/others, there was a lack of distinction between the ideal self/own and the ideal self/other. Teimouri (2017) suggested that it was possible that there would be a

differentiation between learners' duties and obligations which are imposed on themselves on their own volition and those which are imposed by others due to the extent of the internalization of the beliefs in the learners. In comparison, both the external and personal hopes, dreams, and goals of L2 learners were already highly internalized within L2 learners such that they were indistinguishable from one another. As a result, Teimouri developed a trichotomous model of the L2 self based on the ideal self, the ought self/own, and the ought self/others.

Similarly, Papi et al. (2018) also used the 2 x 2 model to provide a comprehensive guide to the L2MSS. The main goals of their study were to show whether the 2 x 2 model of L2 self-guides is a better representation of motivation than the previous guides developed by Dörnyei (2009) or Teimouri (2007) and to test whether the ought-to self is a significant factor in predicting motivated behavior as is the ideal-self. The participants in their study were 257 international students who were learning ESL at a major university in the United States (Papi et al., 2018). These students were given survey instruments which included categories such as ideal L2 self/own, ideal L2 self/other, ought L2 self/own, ought L2 self/other, L2 motivated learning behavior, eager L2 use, and vigilant L2 use. L2 motivated learning behavior refers to the amount of effort, time, and cognitive energy that learners put forth in learning the L2. Eager L2 use is similar to promotional focus in that the learners use strategies to maximize positive outcomes and minimize negative ones. Vigilant L2 use, like preventative focus, is the reverse situation, in which learners try to maximize the absence of negative outcomes.

The findings revealed that every single category in the 2 x 2 model was significant in predicting motivated learning behavior. In fact, the strongest predictor of motivated behavior was the ought L2 self/own. The authors argued that this predictability should be attributed to the ESL context of the study since learners in this context would be likely to face negative consequences in their social, academic, and professional careers if they did not succeed in learning English. In addition, learners who had a stronger ideal self/own employed more eager L2 strategies while those who had a stronger ought L2 self/own used more vigilant L2 learning strategies (Papi, et al., 2018). To this day, L2MSS persists as one of the most pervasive models of motivation in the field of SLA.

Approaches to Willingness to Communicate

Willingness to Communicate (WTC) was first conceptualized through the lens of communication in a speaker's native language. McCroskey and Baer (1985) defined willingness to communicate as "the variability in talking behavior…rooted in a personality variable" (p. 3). One of the main factors which have a substantial impact on whether or not a person is willing to communicate with another person is the situational context. For instance, the person's emotional state during the encounter, the constraints of the person's schedule, the perception of the other speaker, and a multitude of other situational variables can affect the individual's willingness to communicate. Nevertheless, WTC ultimately represents a single, unified trait since individuals are likely to exhibit similar patterns of willingness to communicate across different situations.

MacIntyre et al. (1998) adapted McCroskey and Baer's (1985) model to develop a heuristic model of WTC that was applicable to L2 communication contexts. MacIntyre et al. (1998) referred to WTC, the immediate precursor to L2 use, as "a readiness to enter into discourse at a particular time with a specific person or persons, using an L2" (p. 547). Their pyramid-shaped model, as shown in Figure 1, illustrates the layers of constructs that ultimately

lead to communicative behavior in an L2. The bottom three layers are enduring influences and are theorized as being constant and long-term characteristics of the individual that would remain stable in every situation. The top three layers are described as situational influences, temporary layers which fluctuate depending on the particular situation and time. In order to reach the stage of willingness to communicate, the speaker must have both a sense of self-confidence and a desire to communicate with the other person (MacIntyre et al., 1998). In contrast to McCroskey and Baer's (1985) model, the pyramid model depicts WTC as a state or condition rather than a personality trait.

FIGURE 1
MacIntyre et. al's (1998) Heuristic model of WTC. Adapted from 'Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation,' (p. 547).
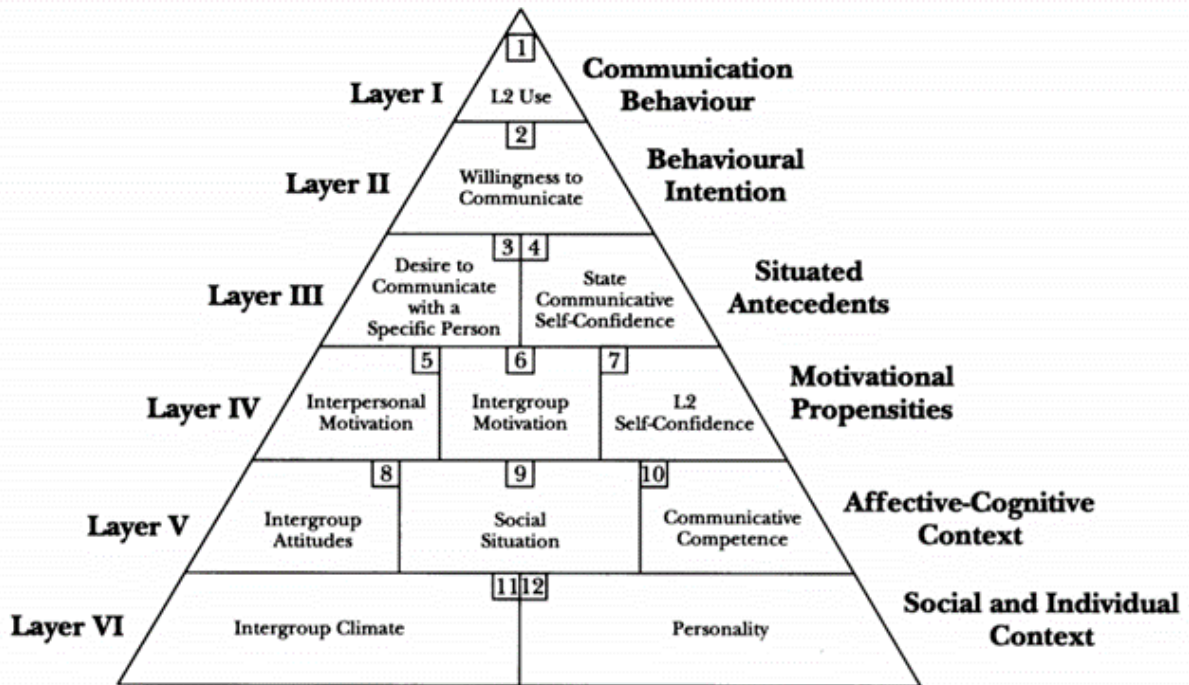
The Role of Motivation and Attitude in WTC

Drawing upon Gardner and Lambert's (1972) study, Peng (2007) investigated the role of integrative motivation in L2 WTC among 174 university students studying English in China. Using a questionnaire adapted from MacIntyre, Baker, Clément, and Conrod (2001), she measured the students' WTC in four different domains (writing, speaking, reading, and listening). To measure the participants' integrative motivation, a short version of the Attitude/Motivation Test Battery (mini AMTB) was administered. Multiple regression showed

that integrative motivation significantly predicted individuals' WTC in a second language. (Peng, 2007).

Rajabpour et al. (2015) further researched WTC in relationship to the L2MSS, examining the roles of the ideal L2 self, attitude towards the L2, and L2 anxiety in WTC. They utilized questionnaires which included items for the four variables above and administered them to 180 undergraduate and graduate students in Iran. The results revealed that the strongest correlation was between L2 attitude and WTC. In addition, both the ideal L2 self and the attitude towards English learning were not only positively correlated with WTC but also significantly predicted WTC.

Like Rajabpour et al. (2015), Kanat-Mutluoğlu (2016) explored the antecedents to WTC by focusing on three motivational self-guides: the ideal L2 self, a subject's intercultural communicative competence, and the person's academic self-concept. Academic self-concept is defined as "individuals' knowledge and perceptions about themselves in achievement situations…" (Kanat-Mutluoğlu, 2016, p. 30). The study was conducted in Turkey, where 173 undergraduate students completed a measurement set composed of items for each of the four measures. The ideal L2 self and academic self-concept were observed to have the strongest positive correlation. More importantly, the only predictor of WTC in an L2 among the three independent variables was the ideal L2 self (Kanat-Mutluoğlu, 2016). This set of studies found that motivation and attitude exert a strong influence on the willingness to communicate.

Correlates of Perceived Competence

MacIntyre et al. (1998)'s heuristic model refers to state-communicative self-confidence, one of the immediate precursors to WTC, as "the feeling that one has the capacity to communicate effectively at a particular moment" (p. 549). McCroskey and McCroskey (1988) argued that individuals' perceived competence, that is, their beliefs about their communicative competence, is more significant than their actual competence when they engage in decisions about communication behavior. Extant studies have shown that perceived competence is a critical factor in WTC and also in L2 use.

MacIntyre, Baker, Clément, and Donovan (2003) investigated the impact of language (both L1 and L2) and prior immersion experience on WTC, perceived competence, comprehension apprehension, and frequency of communication. The participants for this study, 59 undergraduate students enrolled in a first-year conversational French course, completed questionnaires on communication-related measures. The findings revealed that students in full immersion programs scored higher on all communication-related variables than non-immersion students (MacIntyre, et al., 2003). More importantly, multiple regressions were performed to assess the effects of two of the predictor variables, perceived competence and comprehension apprehension, on the outcome variable, L2 WTC. Intriguingly, only L2 perceived competence showed a significant correlation in the non-immersion group, while only communicative apprehension showed a significant correlation in the immersion group. The authors suggested that perceived competence may play a more prominent role for the non-immersion groups than for the immersion groups due to their lower language ability and lack of experience (MacIntyre, et al., 2003).

Fallah (2014) researched the potential relationships between L2 WTC, teacher immediacy, and three individual affective differences in an EFL context: communication self-

confidence, motivation, and shyness. 252 Iranian university students studying English completed questionnaires on the affective variables and structural equational modeling (SEM) was employed to analyze the relationships between the variables. SEM demonstrated that there were significant positive paths leading from perceived confidence and motivation to L2 WTC, reaffirming MacIntyre's (1998) pyramid model. Motivation was also shown to be a significant predictor of self-confidence (Fallah, 2014).

Öz, Demirezen, and Pourfeiz (2015) also explored the communicative and affective factors that influence L2 WTC. A total of 134 Turkish university students completed questionnaires on eight different scales including WTC, self-perceived communicative competence (SPCC), perceived communication apprehension, and measures of motivation. Perceived communication apprehension is defined as "an individual's level of fear or anxiety associated with real or anticipated communication with another person or persons" (Barraclough et al., 1988, p. 188). SEM was utilized to illustrate the interrelated relationships between all the affective and communicative variables. A significant positive path was observed from SPCC to WTC, as well, that "a significant negative path was found from perceived communication apprehension to WTC." (Öz et. al, 2015 p. 272).

In addition, a significant negative path was revealed from perceived communication apprehension to SPCC, which suggests that a person's anxiety about anticipated communication adversely affects the individual's self-perceived competence to communicate. Even though a significant direct path was not found from motivation to L2 WTC, motivation indirectly affected WTC with SPCC and perceived communication apprehension as mediating variables (Öz et. al, 2015). Studies above demonstrated that although perceived competence could predict the frequency of L2 use, it often wields an indirect influence over the frequency of L2 use.

Factors Affecting Frequency of L2 use

Numerous studies in the field of second language acquisition have emphasized the critical importance of output in L2 acquisition. Swain (1985) proposed the Pushed Output Hypothesis, stating that "producing the target language may be the trigger that forces the learner to pay attention to the means of expression needed in order to successfully convey his or her own intended meaning" (p. 249). Namely, output directs learners to notice the gaps between their interlanguage, defined as their current stage of production, and the target production. Another prominent theory on output that has been widely adapted in SLA studies is Anderson's (1983) skill acquisition theory. This theory refers to learning as a gradual process where controlled performance, through continual appropriate practice, is converted into automatic performance (Anderson, as cited in Ortega, 2014, p. 84). This process, called autonomation, ultimately leads to fluent production and comprehension (Ortega, 2014).

Given the crucial role of output in L2 acquisition, it is assumed that the more frequently an individual engages in L2 use, the more likely he or she will improve in using the language. Although output is emphasized in SLA theory, there are surprisingly few empirical studies which examine the factors that affect the frequency of L2 use. MacIntyre and Charos (1996) researched the way in which affective variables, communication-related variables, personality, and social context predict L2 communication. The participants, 92 Anglophone adults taking an introductory conversational French course, were living in Ottawa, Canada, a bilingual context. Path analysis of the survey responses revealed that four significant and positive paths, involving

perceived communicative competence, WTC, motivation, and context led to a higher frequency of communication (MacIntyre & Charos, 1996). The results confirm MacIntyre et. al's (1998) model of willingness to communicate. Perceived competence was found to exert the strongest influence on the frequency of communication. This could be attributed to the actual lower competence of the participants as perceived competence would play a substantial role in their decision to use the language (MacIntyre & Charos, 1996).

Hashimoto (2002) partially replicated MacIntyre and Charos's (1996) study in an ESL context by investigating the relationships between motivation, WTC, perceived competence, anxiety, and frequency of L2 communication. The participants, 56 Japanese university students studying advanced-level English at an American university, completed questionnaires on language learning affect and communication-related variables including motivation, WTC, perceived competence, communication anxiety, and frequency of communication. The correlation matrix showed that all of the correlations between the variables above were significant except that between WTC and anxiety. SEM showed significant positive paths leading from WTC and motivation to L2 frequency of communication (Hashimoto, 2002).

But in contrast to MacIntyre and Chaross' (1996) study, Hashimoto (2002) was unable to observe a significant positive path from perceived competence to L2 communication frequency. Hashimoto did speculate that this discrepancy could have been observed because the role of perceived competence could be less applicable for advanced-level learners. Nonetheless, perceived competence wielded a strong effect on WTC and "the largest single effect was obtained from perceived competence to motivation" (Hashimoto, 2002, p. 57). Ultimately, the results indicate that perceived competence indirectly leads to frequency of L2 communication modulated through WTC.

Similar to Hashimoto's (2002) study, Munezane (2016) also researched the relationships between L2 learning motivation, ideal L2 self, WTC, and observed L2 use, studying the effects of these variables both inside and outside the classroom. This study was conducted in an EFL context in Japan, in which 373 college students who were taking English classes completed questionnaires on L2 WTC, ideal L2 self, and L2 learning motivation. SEM depicted a significant positive path from the ideal L2 self to L2 WTC in both of these contexts, highlighting the importance of the learners' imagination of their future selves. Motivation and the ideal self were both mediating variables which indirectly affected L2 communication through WTC. More importantly, WTC directly predicted L2 communication in the classroom (Munezane, 2016). In summary, various affective factors were demonstrated to exert an impact on individuals' volition to engage in L2 use.

Research Questions

The aim of this study is to investigate the relationships between ESL learners' motivation, willingness to communicate, perceived competence, and their frequency of L2 use. It amounts to a partial replication of Hashimoto's (2002) study which researched whether Japanese ESL learners' higher levels of motivation actually led to an increase in their frequency of L2 use and to their willingness to communicate. Three research questions motivate this study:
1. Is there a relationship between the motivation of L2 learners and their willingness to communicate?
2. Is there a relationship between the motivation of L2 learners and their frequency of L2 use?

3.   Is there a relationship between the perceived competence of L2 learners and their frequency of L2 use?

METHOD

Participants

The participants in this study were 59 ESL students in Teachers College, Columbia University in New York, whose ages ranged from 22 to 68. Of these participants, 34 were students in an adult English as a Second Language (ESL) program, which is designed as a communicative language program for adults, who would like to take ESL courses, residing in a major city. New students are given a placement test in order to situate them at the appropriate level, ranging from elementary to advanced. The subjects had a variety of L1 backgrounds including Japanese, Korean, German, Italian, and Spanish, and their class levels ranged from Lower Intermediate to Advanced. The other 25 participants, all of whom were Chinese, were first-year masters students in TESOL and Applied Linguistics.

Instruments

Measures of Motivation

The items used to measure the motivation of the participants were based on a survey created by Papi et al. (2018) which employed 31 items divided into seven sections. The first five sections were composed of items based on the 2 x 2 model proposed by Papi et al. (2018) which used questions relating to the ideal L2 self/own, ideal L2 self/other, ought L2 self/own, and ought L2 self/other. The survey also contained items concerning L2 motivated learning behavior. The responses were then positioned on a seven-point Likert scale ranging from 1, *strongly disagree*, to 7, *strongly agree*. The other two of the seven sections included items pertaining to eager L2 use and vigilant L2 use. The responses for these two sections were placed on a five-point Likert scale, with 1 indicating *never true of me* to 5 indicating *always true of me*.

Measures of Communication-related Variables

Willingness to communicate. In order to measure participants' willingness to communicate, the study used items from a survey created by McCroskey (1992), along with a few adaptations from Hashimoto (2002). Using twenty items, respondents were asked to choose the percentage of time (ranging from 0% to 100%) they are willing to communicate in English in different scenarios. The scenarios include four different contexts for communication: 1) public speaking, 2) normal meetings, 3) small groups, and 4) communication between two people. Each situation also has different interlocutors, including strangers, acquaintances, or friends. Eight of the items are filler items (1, 2, 5, 7, 10, 13, 16, and 18).

Perceived competence. The current study used a questionnaire developed by McCroskey and McCroskey (1988) to assess the participants' perceived competence in English. The 12 items asked respondents the percentage of time (ranging from 0% to 100%) that they felt competent to speak in English in various situations. Similar to the items under willingness to communicate, these included the same four communication contexts and the same three types of receivers.

Frequency of communication. The set of 11 items for the frequency of communication was developed by the current researcher using questions taken from studies on the age effect in second language acquisition studies. These queries asked the participants how much they used English (from 0% to 100%) in 11 different situations, including at home, at work, and while using the internet, in addition to in other contexts.

Administration

Before commencing the study, the researcher obtained approval from Teachers College's Institutional Review Board and the CLP. Then the researcher briefly introduced the research in person to different CLP classes and asked the instructors of the courses to distribute the survey for the study through email. The participants were also informed that their survey responses would be anonymous and that their participation was voluntary. The participants were then emailed the survey on Qualtrics and given as much time they needed to complete the questionnaire. They did not receive any compensation for completing the survey. The average time for the participants to complete the survey was about 20 minutes.

Data Analysis

SPSS version 26 was used to conduct statistical analysis of replies received, employing descriptive statistics, reliability, multiple regression analysis, and linear regression analysis.

RESULTS

Descriptive Statistics

Descriptive statistics are applied when the goal is to present the distributions of the data and the relationships between the variables (Wiersma, 2005). This section will provide these statistics for the participants' averages of all the items in each measure. The abbreviated labels for the variables for the measures are as follows. IS OWN represents ideal L2 self/own; IS OT is ideal L2 self/others; OTS OWN refers to ought to L2 self/own; OTS OT is ought to L2 self/others; MLB represents L2 motivated learning behavior; EAGER L2 refers to Eager L2 use; VIG L2 is vigilant L2 use. WTC represents willingness to communicate; PC is perceived competence, and FREQ refers to the frequency of L2 use. Table 1 below presents the number of participants (N), number of items, (k), mean (M), median (Mdn), mode, maximum, (Max), minimum, (Min), standard deviation (SD), and skewness (Skew).

TABLE 1
Descriptive Statistics

Variable	N	k	Max Possible Score	*M*	Mdn	Mode	Max	Min	*SD*	Skew
IS OWN	59	4	7	5.40	6.00	6.00	7.00	1.50	1.43	-1.05
IS OT	59	4	7	5.19	5.50	6.00	7.00	1.50	1.38	-.76
OTS OWN	59	4	7	4.70	5.00	5.00	7.00	1.00	1.39	-.64
OTS OT	59	2	7	3.47	3.00	3.00	6.00	1.00	1.66	-.01
MLB	59	5	7	5.31	5.60	6.00	7.00	2.00	1.12	-.95
EAGER L2	59	7	5	3.30	3.14	3.00*	5.00	1.29	.86	.10
VIG L2	59	5	5	3.48	3.40	3.20	5.00	1.00	.93	-.43
WTC	59	12	100	44.82	43.92	.83*	100.00	.83	24.75	.13
PC	59	12	100	51.59	51.50	100.00	100.00	.00	25.85	.08
FREQ	59	11	100	41.78	41.64	2.00*	90.00	2.00	21.46	.02

Note: *Multiple modes exist. The smallest value is shown.

It is possible to offer several interpretations of these results. The first four measures, based on a seven-point scale, are variables in the 2 x 2 system of motivation. Of the four measures, the category with the highest mean was the ideal L2 self/own at 5.40, while the one having the lowest mean was the ought to L2 self/others, where the mean was just 3.47. For eager L2 use and vigilant L2 use, based on 5-point scales, vigilant L2 use had a mean of 3.48, higher than the mean of eager L2 use.

Following Carr's (2011) explanation, the concept of "skewness" is used to indicate "how far off to the left or right the "hump" is in a distribution" (p. 227). The results show that the distributions for the four measures under the 2 x 2 model were negatively skewed, meaning that the scores were more densely distributed on the higher end near the maximum possible score. This suggests that the participants in this study may have had a strong image of their future selves. In contrast, WTC, perceived competence, and frequency of L2 use were positively skewed, indicating that there was a relatively high number of low scores on these three measures. Furthermore, skewness had absolute values of less than 2 for all four variables, which reveals that the distributions were all reasonably normal (Bachman, 2004).

Reliability

The term "internal-consistency reliability" refers to the consistency of the instrument in measuring what it purports to measure (Wiersma, 2005). Cronbach's Alpha was computed to examine the internal consistency reliability of the instruments used in this study. Reliability coefficients can range in value from 0 to 1.0, with 0 meaning there is no "true" component in the observed score, and 1 meaning that the observed score has no error.

In addition to estimating the overall consistency of the participants' scores, the effects of measurement error, or how the participants' recorded score differ from their "true" score, should also be accounted for. To calculate the measurement error, the standard error of estimate (*sem*) was employed. The *sem* was calculated by using the formula SEM=Sx$\sqrt{1-\alpha}$, where Sx refers to the standard deviation of all the scores, and α refers to Cronbach's alpha. The smaller the value of the *sem*, the more accurate the prediction (Wiersma, 2009). Table 2 below shows the Cronbach alpha coefficients and the standard error of measurement.

TABLE 2
Cronbach's Alpha Reliability Estimates and Standard Error of Measurement

Variable	k	Cronbach's Alpha	*sem*
IS OWN	4	.93	.38
IS OT	4	.82	.56
OTS OWN	4	.83	.57
OTS OT	2	.65	.98
MLB	5	.91	.34
EAGER L2	7	.92	.24
VIG L2	5	.85	.36
TOT MOT	31	.90	.30
WTC	12	.91	7.43
PC	12	.95	5.78
FREQ	11	.89	7.12

The Cronbach alpha coefficients for all the measures were reasonably high, meaning that there is evidence of internal consistency reliability of the instruments. The measures of motivation are on a seven-point or a five-point scale, so their *sem*s were relatively low. For WTC, PC, and FREQ which are based on probability estimate scales, the *sem*s were also fairly low, meaning that the scales were consistent. Indeed, overall, all instruments appear to have high internal-reliability consistency.

Correlation

MacIntyre et al.'s (1998) heuristic model portrays motivation, willingness to communicate, perceived competence, and the frequency of L2 as interrelated variables that together influence L2 communication. Pearson product-moment procedure was used to calculate the correlation between these four variables since these means scores represented interval scales. Table 3 below shows the correlation matrix for these variables.

TABLE 3
Correlation Matrix (N=59)

	Motivation	WTC	PC	Freq
Motivation	(1.00)			
WTC	.43**	(1.00)		
PC	.26*	.72**	(1.00)	
Freq	.46*	.69**	.57**	(1.00)

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

All variables were positively, statistically significantly correlated with one another. The strongest positive correlation was the one between perceived competence and willingness to communicate, suggesting that higher perceived competence is associated with a higher willingness to communicate. On the other hand, the weakest positive correlation was observed between perceived competence and motivation, indicating that perceived competence might not be strongly related to motivation. The variable which had the closest association to the frequency of L2 use was willingness to communicate, providing evidence in support of MacIntyre et al.'s (1998) model.

Multiple and Linear Regression Analysis

To examine whether motivation, WTC, and perceived competence predict the frequency of L2 use, multiple regression was conducted. The outcome variable, frequency of L2 use, was regressed against the predictor variables of motivation, WTC, and perceived competence. Table 4 below shows the results of the multiple regression analysis.

TABLE 4
Multiple Regression Results with Frequency of L2 use as the Outcome Variable

	B	Std. Error	Beta	t	95% CI
(Constant)	-150.79	149.64		-1.01	[-450.7, 149.1]
Motivation	1.87	.91	.21	2.06*	[.05, 3.67]
WTC	.37	.11	.47	3.24**	[.14, .60]
PC	.14	.10	.18	1.36	[-.07, .34]

Note: R^2=.52
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The multiple regression model statistically significantly predicted the frequency of L2 use, $R^2 = .52$, $F(3, 55) = 20.069$, $p < .001$, predicting 52% of the variance in frequency of L2 use. While motivation and WTC emerged as significant predictors of the frequency of L2 use,

perceived competence was not a significant predictor. However, when linear regression was conducted with perceived competence as the predictor variable and WTC was employed as the outcome variable, perceived competence was found to be a significant predictor of WTC (β = .72, *p* <.001). Table 5 below shows the results of the simple linear regression analysis. This suggests that perceived competence may act as a moderating variable that indirectly affects the frequency of L2 use through WTC. More importantly, WTC (β = .47, p <.01) appeared as the strongest predictor of the frequency of L2 use, explaining more than twice as much variance as motivation did (β = .21, p = <.05).

TABLE 5
Simple Linear Regression Results with WTC as the Outcome Variable

	B	Std. Error	Beta	t	95% CI
(Constant)	112.28	61.05		1.84	[-9.97, 234.53]
PC	.69	.09	.72	7.78***	[.51, .86]

Note: R^2=.52
*** Correlation is significant at the 0.001 level (2-tailed).

DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the relationships between motivation, WTC, perceived competence, and the frequency of L2 use in an ESL community language program setting and in a graduate school setting. It also sought to examine whether these affective factors predict the frequency of L2 use. This project has enabled responses to three critical questions in the field of SLA, as posed below:

RQ 1. Is there a relationship between the motivation of L2 learners and their willingness to communicate?

In Hashimoto's (2002) original study, the mini AMTB was used to measure motivation and affective factors that affect L2 communication. Since Dörnyei's proposal of the L2MSS has been one of the most influential and widely used models in studies of motivation in the field of second language acquisition for the last 15 years, this study incorporated this model. This present research used a questionnaire from Papi et al. (2018)'s study which included items under the 2 x 2 L2MSS system in addition to items about motivated learning behavior, eager L2 self, and vigilant L2 self. The current study showed that there is a relationship between the motivation of L2 learners and their WTC, providing further supporting evidence in favor of Hashimoto's (2002) study, which also found a significant positive path from WTC to motivation. This study also confirmed the findings of several studies in EFL contexts, all of which had found relationships between the ideal self and WTC (Kanat-Mutluoğlu, 2016; Munezane, 2016; Rajabpour et al., 2015). In addition, the results here confirmed MacIntyre's (1998) heuristic model on WTC, which demonstrated that motivation is a precursor to WTC. The conformity

among these various findings suggests that the 2 x 2 motivational system, motivated learning behavior, eager L2 self, and vigilant L2 self are all related to learners' WTC.

Since the participants of the present study were either studying in a community language program or in a graduate program in an ESL context, they were likely to have both the motivation and the willingness to communicate in English. Most of the learners voluntarily enrolled in the programs, which seems to imply that they had the desire to improve their language proficiency. In sum, the findings here indicate that learners' motivation is related to their volition to communicate among learners with moderate to high levels of motivation.

RQ 2. Is there a relationship between the motivation of L2 learners and their frequency of L2 use?

This study found that there is indeed a relationship between the motivation of learners and their frequency of communication. The results confirmed studies which found significant positive paths from motivation to the frequency of L2 communication (Hashimoto, 2002; MacIntyre & Charos, 1996). Motivation also emerged as a significant predictor of the frequency of L2 communication. These results were in contrast to Munezane's (2016) study which showed that motivation had only an indirect effect on L2 use through WTC.

The findings in the current research point to the power of imagery of desired possible selves in language learning (Dörnyei, 2009). Whether the imagined future self is imposed on the learners by themselves (ideal L2 self/own and ought to L2 self/own) or by others (ideal L2 self/other and ought to L2 self/others), the results appear to signify that learners decide on the frequency with which they engage in L2 communication based on these self-images. The CLP program in this study focused on using a communicative language teaching approach to prepare L2 learners living in an ESL context to be able to successfully navigate through daily situations and tasks in English. Learners who voluntarily enroll in this program probably envision themselves as being able to effectively communicate in English in the future. Their motivation can be clearly observed considering students' willingness to invest time and money into enrollment for a non-credit language program. In addition, the participants who are ESL graduate students in the TESOL and applied linguistics program presumably chose this particular field of study with one or both of these two goals in mind: either they expected to increase their language abilities so that they could successfully teach English, and/or they hoped to conduct research in applied linguistics. In order to fulfill the image of their future possible selves, both of the populations with these aims must frequently engage in L2 use. Consequently, the results indicate that motivation is related to the frequency of L2 use.

RQ 3. Is there a relationship between the perceived competence of L2 learners and their frequency of L2 use?

While MacIntyre and Charo's (1996) study found a significant positive path between perceived competence and the frequency of L2 communication, Hashimoto (2002)'s study showed that perceived competence indirectly affects the frequency of L2 use. The results of the present study showed that while there was a relationship between perceived competence and the frequency of L2 use, perceived competence did not predict the frequency of L2 use. However,

perceived competence did in fact emerge as a significant predictor of WTC, echoing findings from Hashimoto's (2002) study. Since WTC was observed to be a significant predictor of the frequency of L2 use, it can be argued that perceived competence indirectly affects the frequency of L2 use through WTC.

The lack of significant predictive power from perceived competence to the frequency of L2 use could be attributed to the language ability of the participants in the study. Significantly on this point, MacIntyre and Charos (1996) found a significant positive path leading from perceived competence to the frequency of L2 use for learners with beginning level proficiency while Hashimoto (2002) did not find a significant path for advanced L2 learners. The language proficiency level of the participants in the current study ranged from lower-intermediate to advanced; thus, one cannot conclude that for higher-level learners, perceived competence will definitely always play a direct role in predicting the frequency of communication. Furthermore, this study was conducted in an ESL setting where learners are likely to encounter and use the L2 in their daily lives; perhaps perceived competence plays less of a role when individuals are frequently required to communicate in the L2. Nevertheless, this study has revealed that perceived competence still does have a relationship to the frequency of L2 use.

Limitations, Future Directions, and Pedagogical Implications

There are a few limitations to this study. First of all, the four concepts of the self in the 2 x 2 L2MSS model, along with motivated learning behavior, eager L2 self, and vigilant L2 use, were combined into one main holistic variable under *motivation*. Future studies should examine how each of the bifurcated selves predicts the frequency of L2 use. In addition, even though the participants were recruited from two different populations–one from the CLP and one from a first year M.A. program–their small sample size dictated that they be analyzed as one group. It would be instructive if future studies could replicate this study by separating the learners into different proficiency levels and then comparing the results between groups.

Furthermore, even though multiple regression was conducted to examine the predictive powers of motivation, WTC, and perceived competence on the frequency of L2 use, future studies should use structural equation modeling to depict the relationships between all of the variables. SEM could provide an in-depth model that explains the myriad of complex and interconnected relationships between affective variables and the frequency of L2 communication.

Nevertheless, this study has definite implications for educators. One implication is that instructors should consider the relationships between affective variables and L2 use when they are designing and implementing lessons. As this study demonstrated, motivation, WTC, and perceived competence are all related to L2 communication. Teachers can employ various strategies to increase students' motivation by strengthening their desired self-image and by boosting their communicative confidence. Such efforts should lead to an increase in the frequency of L2 use, which will be conducive to higher levels of L2 learning.

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APPENDIX A

Measure of Motivation

Directions: Please choose accordingly.

| Strongly agree | Agree | Somewhat agree | Neither agree nor disagree |

| Somewhat disagree | Disagree | Strongly disagree |

Ideal Self Own

6. I can imagine a day when I speak English like a native speaker of English.
7. I can imagine a day when I speak English fluently with international friends/colleagues.
8. I can imagine a day when I write effectively and read fluently in English.
9. I can imagine a day when I use English effectively to communicate with people from all around the world.

Ideal Self Others

10. My family hopes that one day I will speak English fluently.
11. My family will be proud of me if one day I master the English language.
12. It is my parents' hope that one day I will speak English fluently.
13. The people who are important to me hope that one day I will master the English language.

Ought-to Self Own

14. If I don't improve my English, it will have a negative impact on my future.
15. If I don't work on my English, I will fail in my future career.
16. If I don't work on my English, I will fail in my social life.
17. If I don't work on my English, I will fail in school/university.

Ought-to Self Others

18. If I don't learn English, I will disappoint my parents/teachers.
19. My family puts a lot of pressure on me to learn English.

Motivational Intensity

1. I work hard at studying English.
2. I spend a lot of time studying English.
3. I put a lot of effort in studying English.
4. I constantly think about my English learning activities.
5. Studying English is very important to me these days.

Directions: Please choose accordingly.

| Never true of me | Rarely true of me | Sometimes true of me | Often true of me |

| Always true of me |

Eager Motivated Behavior

20. I communicate with different people to improve my English.
21. To improve my English, I seek out opportunities to interact with native speakers of English.
22. I put myself in situations where I can frequently use English to interact with others.
23. I take advantage of every chance I get to use English in my classes.
24. To improve my English, I frequently ask questions and volunteer answers in my classes.
25. I take advantage of every opportunity to use my English.

26. To improve my English, I make friends with those who don't speak my native language.

Vigilant Motivated Behavior
27. I use English only when I am sure it is correct.
28. I don't speak English too much to avoid making mistakes.
29. I speak English only when I have to.
30. I speak English in my classes only when I have to.
31. I avoid speaking in English when I feel someone is going to judge me.

Measure of Willingness to Communicate

Directions: Below are 20 situations in which a person might choose to communicate or not to communicate. Please presume that you have completely free choice to initiate or avoid communication. Please indicate in the space at the left the percentage of times you would choose to communicate in English in each type of situation.

0 %= never, 100 %= always
 1. Talk with an acquaintance in an elevator.
 2. Talk with a stranger on the bus.
 3. Speak in public to a group (about 30 people) of strangers.
 4. Talk with an acquaintance while standing in line.
 5. Talk with a salesperson in a store.
 6. Talk in a large meeting (about 10 people) of friends.
 7. Talk with a janitor/resident manager.
 8. Talk in a small group (about 5 people) of strangers.
 9. Talk with a friend while standing in line.
10. Talk with a waiter/waitress in a restaurant.
11. Talk in a large meeting (about 10 people) of acquaintances.
12. Talk with a stranger while standing in line.
13. Talk with a shop clerk.
14. Speak in public to a group (about 30 people) of friends.
15. Talk in a small group (about 5 people) of acquaintances.
16. Talk with a garbage collector.
17. Talk in a large meeting (about 10 people) of strangers.
18. Talk with a librarian.
19. Talk in a small group (about 5 people) of friends.
20. Speak in public to a group (about 30 people) of acquaintances.

Measure of Perceived Competence

Directions: Below are 12 situations in which you might need to communicate.
People's abilities to communicate effectively vary a lot and sometimes the same person is more competent to communicate in one situation than in another. Please indicate how

competent you believe you are in communicating in English in each of the situations described below. Indicate in the space provided at the left of each item your estimate of your competence.

Presume 0 %= completely incompetent and 100 % = completely competent

 1. Speak in public to a group (about 30 people) of strangers.
 2. Talk with an acquaintance.
 3. Talk in a large meeting (about 10 people) of friends.
 4. Talk in a small group (about 5 people) of strangers.
 5. Talk with a friend.
 6. Talk in a large meeting (about 10 people) of acquaintances.
 7. Talk with a stranger.
 8. Speak in public to a group (about 30 people) of friends.
 9. Talk in a small group (about 5 people) of acquaintances.
10. Talk in a large meeting (about 10 people) of strangers.
11. Talk in a small group (about 5 people) of friends.
12. Speak in public to a group (about 30 people) of acquaintances.

Measure of Frequency of L2 Use

Directions: Please estimate to the nearest 10% how much you use English in the following situations.

1. During a day
2. While at home
3. At work
4. Visiting family members or relatives
5. Hanging out with friends
6. At parties and social gatherings
7. While on vacation
8. While shopping
9. On the phone
10. While watching TV
11. While using the internet