

# Learner Autonomy, Self-Efficacy, and Willingness to Communicate : Developing Learner Agency

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# Learner Autonomy, Self-Efficacy, and Willingness to Communicate : Developing Learner Agency

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## Abstract

Research on willingness to communicate (WTC) in foreign languages has evaluated motivation (MacIntyre & Charos, 1996), learner autonomy (LA) (Khaki, 2013), and perceived competence (Matsuoka, 2009). How learner autonomy and self-efficacy (SE) contribute to WTC is unclear. This is important because WTC is essential for learning a language. We explored this question by fostering participants' ( $n=87$ ) LA, SE, and WTC through scaffolded micro-debates. Research questions: (1) Is LA correlated with WTC over time? (2) Is SE correlated with WTC over time? And, (3) Are SE and LA correlated over time? Participants completed weekly English-study reports. Additionally, they completed three questionnaires on LA, SE, and WTC over 15 weeks. The analysis revealed significant positive correlations between LA, SE, and WTC at weeks one, seven, and 15. Although autonomy, SE, and WTC were positively correlated, SE declined at the third data point. We discuss theoretical and pedagogical implications.

外国語でのコミュニケーションの意欲 (WTC) に関する研究では、動機付け (MacIntyre & Charos, 1996)、学習者の自律性 (LA) (Khaki, 2013) および知覚能力 (松岡, 2009) が評価されているが、学習者の自律性 (LA) と自己効力感 (SE) が WTC にどのように寄与するかに関しては明らかにされていない。

い。WTCは言語学習に不可欠であり、どのように関わるかを検証することは重要となる。本研究では、学部生(87名)を対象に、マイクロディベートを通してLA, SE, およびWTCを育成することにより、LAとSEがWTCにどのように寄与するかを検証した。研究課題は次の通りである。(1) LAは時の経過とともにWTCと相関関係があるのか。(2) SEは時の経過とともにWTCと相関関係があるのか。(3) SEとLAは時の経過とともに相関関係を示しているのか。参加者は英語学習に関する自己評価シートに毎週記入した。さらに、質問紙票によるLA, SE, およびWTCに関しての調査を15週で3回実施し、自己評価を求めた。分析により、LA, SE, およびWTCの相関関係は1週目、7週目、15週目で有意であることが明らかになった。LA, SE, およびWTCとの相関関係は有意性が示されたが、SEに関しては3回目の調査で低下を示している。本論文では、理論的および教育的影響について、その効果を検証することを目的とする。

**Keywords :** willingness to communicate, learner autonomy, self-efficacy, self-assessment, discussion and debate

## 1. Introduction

In English as a foreign language (EFL) classrooms in Japan, many of us have encountered the problem that Japanese EFL students often lack the willingness to communicate (WTC) in their second language, or L2 (English). One reason they have this problem is that they have low levels of self-efficacy or the sense of their competence in the L2. Often, they are unaware of the power of their learner autonomy to support them – students give up their power to their teachers, becoming mute and passive receptors of the teacher's instruction. As a result, teachers sometimes face classrooms with silent and unmotivated students. However, while

speaking in English is both the means and the end in an EFL course, talking is essential for learning a language (MacIntyre & Charos, 1996). So, it is essential to find a way to support and develop students' WTC. The problem is, in a situation where students feel that it is unlikely that they will ever use English in a practical way outside of the classroom, how are teachers to overcome this passive mindset ?

### **1.1 Willingness to Communicate**

The WTC differs individually in terms of context, personality, and perceived ability, and has been researched at the state (transitory), situation-specific, and trait (enduring personality) levels (Peng & Woodrow, 2010). Willingness to communicate has been defined as “a readiness to enter into discourse, at a particular time, with a specific person or persons, using L2,” (MacIntyre, Clement, Dörnyei, and Noels, 1998, p.547). MacIntyre describes the differences in the different conceptual levels of WTC as follows :

At the trait level, the concern is for concepts that endure over long periods of time and across situations ; at the trait level the concern is for finding and establishing broad, typical patterns of behaviour. At the situation-specific level of conceptualization, the concern is for concepts that are defined over time within a situation ; at the situation-specific level, the concern is for establishing specific, typical patterns of behaviour. At the state level, the concern is for experiences rooted in a specific moment in time without much concern for how frequently those experiences occurred in the past or whether they might occur again in the future. (MacIntyre, 2007, p. 565.)

The difference between trait and state variables is important because state

variables are changeable and thus may be amenable to classroom training. This is particularly important in EFL conditions. While enduring trait variables appear to be more operative in native language communication situations, in contrast, transitory state variables appear to be predominant variables in foreign language classrooms (MacIntyre, 2007). A person might tend to be highly communicative in their native language (trait) but be unwilling to speak in their L2 (state).

Recent research has confirmed WTC can be manipulated, although it appears to take a combination of approaches to be effective. Munezane (2015) attempted to increase WTC through classroom interventions. She used visualization activities to encourage students to imagine themselves as fluent L2 users but found this intervention to be ineffective until she combined it with goal-setting activities. The combination of the two interventions engendered a significant increase in WTC. She concluded that personal factors such as self-regulated learning were more influential than external factors such as classroom activities designed to directly enhance WTC. In short, student WTC is more likely to increase due to student choice rather than the teacher's intervention.

Research on WTC in foreign languages has evaluated constructs like motivation (MacIntyre & Charos, 1996), the temporal influence of differing phases of motivated behavioral processes (Dörnyei, 2003), predictors of WTC including perceived competence (Matsuoka, 2009), autonomy (Khaki, 2013), behaviors, self-confidence, discussion skills, and anxiety (Zhang, Beckmann, & Beckmann, 2018), uncovering a rich array of potential factors influencing and supporting WTC. One factor that relates to autonomy and can influence students' WTC is their perception of supportive teacher behavior in the classroom (Joe, Hiver, & Al-Hoorie, 2017); Khajavy, Ghonsooly, Hosseini, & Choi, 2016; Peng & Woodrow, 2010), with the belief in the teacher's help being more instrumental than its actual existence (Joe et al., 2017; Zhang, Beckham & Beckham, 2018).

Another state-level factor found to relate positively to WTC is student cohesiveness, where students help each other and feel supported by each other (Khajavy et al., 2016 ; Peng & Woodrow, 2010). Thus, while EFL students may feel constrained by their state-level speaking inhibitions, their lack of WTC can be overcome through supportive classroom interactions with the teacher and with each other.

## 1.2 Self-Efficacy

Students' self-efficacy beliefs are necessary for the development of language acquisition. Self-efficacy is defined as, "the belief in the ability to succeed in particular situations or to complete a task (Bandura, 1997). As Bandura notes, students with a strong sense of academic self-efficacy willingly undertake challenging tasks, expend greater effort, show increased persistence in the presence of obstacles, demonstrate lower anxiety levels, display flexibility in the use of learning strategies, demonstrate accurate self-evaluation of their academic performance and greater intrinsic interest in scholastic matters, and self-regulate better than other students. Self-efficacy may be supported by student efforts at autonomous learning. Makino (2014) confirms the progress of learners' English learning and their realization that self-regulated learning is an effective method to develop an understanding of what they are learning. Moreover, their self-efficacy significantly improved, and they gained confidence in their English learning.

Several studies have found a relationship between self-efficacy and WTC. Matsuoka (2009) found that self-efficacy was a latent variable and a direct strong positive predictor of L2 WTC. She commented that in order for students to develop a high sense of self-efficacy they need to perceive their competence and effort positively. She reported that their sense of self-efficacy was formed by "personal and situational factors such as their perceived ability, the difficulty of the task, amount of effort expended, amount of evaluation received, and the number and

pattern of successes and failures ; ...perceived competence and motivational intensity are indicator variables of self-efficacy.” (Matsuoka, 2009, p.122). Her findings were supported by evidence that communicative confidence was the most significant predictor for WTC, and its finding in a variety of contexts such as Canada (Clément, Baker, & MacIntyre, 2003), Iran (Khajavy et al., 2016), Japan (Yashima, 2002), and China (Peng & Woodrow, 2010) supports the claim that “communication confidence is a primary and universal precursor to L2 WTC regardless of regional diversity” (Peng & Woodrow, 2010, p. 855).

In fact, SE can be supported by focusing student attention on it. Use of a tracking system that recorded English speaking in classes has been found to improve students’ speaking in class, an experience that led to improvements to their perceived ability to speak in English (Ismail, Rahman, Othman & Ahmad, 2020). It appears that the perception of an ability is more important than its measurement for student performance. For these reasons, self-efficacy beliefs are often said to be better predictors of academic success than are actual abilities.

### 1.3 Learner Autonomy

Learner autonomy (LA) has also inspired much discussion. Learner autonomy is defined as, “the ability to take charge of one’s own learning,” (Holec, 1981, p.3). Littlewood (1996) argues that autonomy as a capacity involves two components, ability and willingness. Willingness depends on having both the motivation and the confidence to take responsibility for the choices one makes (Littlewood, 1996). Sykes (2011) demonstrated how a self-access center in the university was designed to promote learner autonomy. As Sykes (2011) put it, to facilitate the development of learner autonomy, a support system needs to be established guiding learners through the process of analyzing their needs, setting goals, making a study plan, recording their study, measuring their progress, and

reflecting on the efficacy of their study methods. Benson (2011) raised the question of whether we can find effective ways of fostering autonomy and putting learners in control of their language learning. In his book, autonomy refers to a capacity that learners possess and display to various degrees in different contexts. Benson's classroom-based approaches (2011) have involved evaluating classroom learning. Self-assessment has been linked to the idea of autonomy in the language-testing field. Dörnyei (2001) notes that self-assessment raises the learners' awareness about the mistakes and successes of their learning and gives them a concrete sense of participation in the learning process.

A classroom that raises students' awareness of their learning process helps them participate in the learning process. This helps them to develop learner autonomy and self-efficacy. This ultimately encourages students to be willing to communicate.

#### **1.4 Self-Assessment**

Student autonomy can be guided through self-assessment. When students self-assess their progress, they are more responsible and involved with their learning than if they are assessed externally, for example, by tests administered by the teacher (Benson, 2011). Since autonomy is a complex and dynamic construct, the tools used to assess it need to take time into account (Tassinari, 2018), and that is possible if students self-assess weekly. Furthermore, if teachers respond to students' self-assessment, they can note areas needing further support and respond with that support (Everhard, 2015), giving students the sense that the teacher is involved and responding to them, which encourages them to continue self-assessment and maintain learner autonomy.



### 1.5 Discussion and Debate

One problem in EFL classrooms is that students are often expected to speak on topics they have studied for years and about which they may feel bored: for example, introductions, ordering at a restaurant, making plans to meet, or negotiating in non-Japanese contexts. Topics that are relevant in daily Japanese life are more likely to capture students' interests. Furthermore, engaging in academic discussions and debates, in which students explore a topic by building, challenging, and negotiating ideas about current issues in Japan promotes the transfer of learning from an irrelevant externally-oriented task to an internally-relevant issue, fostering critical thinking and understanding of content that may be beyond their current level (Zwiers & Crawford, 2011). In fact, debate appears to be uniquely suited for encouraging WTC. Debate encourages student to actively learn content, because they must learn how to use the content to win at debates (Zare & Othman, 2013). Furthermore, having to negotiate positions during debates with classmates helps to promote independent study to prepare for debates (Ohara, 2019). Debates provide a focus for language learning, strategy development, motivated study, and builds communication competence (Codreanu, 2016), which may foster students' self-efficacy. Thus, debate would provide an ideal platform to motivate learner autonomy and enhance students' sense of speaking competence and self-efficacy.

### 1.6 Research Aim and Questions

The purpose of this research is to investigate the contribution of learner autonomy and self-efficacy to learners' WTC. Thus, we consider three research questions: (1) Does Learner Autonomy contribute to WTC over time? (2) Does Self-Efficacy contribute to WTC over time? (3) Is there a relationship between SE and LA over time?

## 2. Method

To study Learner Autonomy and Learner Self-Efficacy, the two researchers had to promote it in class and observe student changes. We will describe the method we used to promote and study Learner Autonomy and Learner Self-Efficacy and their effect on WTC.

Teachers used identical texts, instruction methods, and evaluation techniques to teach debating skills to Japanese EFL participants in four classes. Teachers introduced language learning strategies, autonomous study, and SE through collaborative homework, in-class exercises, self-evaluations, and micro-debates.

### 2.1 Research Design

An exploratory repeated-measures design was chosen to assess the influence of teaching methods on relationships between LA, SE, and WTC. Surveys were chosen to efficiently collect a large amount of data on student attitudes for statistical analyses. Rapid acquisition of data enabled the study of changes to relationships between variables of student LA, SE, and WTC at different points in the school term (Dörnyei, & Csizér, 2012). Student surveys were administered three times : at the beginning, middle, and end of the term, as illustrated in Figure 1.

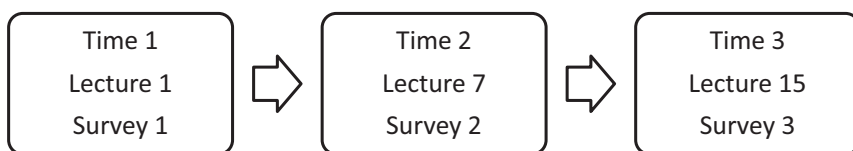


Figure 1. Research design showing survey data collection points across 15-week courses

### 2.2 Analyses

To determine the strength and direction of a relationship between LA, LE, and

WTC, we investigated trends using correlation tests. All tests for the association were bivariate to focus on one paired relationship at a time. Some statisticians recommend using Pearson to assess bivariate interval data and Spearman for any combination of bivariate interval and/or ordinal data (Laerd Statistics, 2018). However, the primary concern is that if the data is normally distributed and there is a linear relationship, then Pearson correlations are indicated, while if the data is not normally distributed then Spearman's correlations are appropriate (Maxwell, Delaney, & Kelley, 2017). Therefore, the results of normality tests would determine further assessment.

Since the current study is exploratory in nature, we chose to focus on bivariate tests of correlation for all three possible pairs of variables. Statistical analysis focused on bivariate correlations comparing responses from LA and WTC, SE and WTC, and SE and LA. Two variables, LA and SE, were ordinal variables measured with 5-point Likert scales, while WTC was a continuous variable measured by percentages. Correlation and association tests can be run without distinguishing a dependent variable (the variable of interest) from independent variables (Laerd Statistics, 2018). While our variable of interest was WTC and we hoped to discover if LA and/or SE contribute to WTC, we also evaluated correlations between LA and SE. Therefore, we decided to use tests of correlations with no set dependent variable.

Next, we chose to run and compare the results of both Pearson and Spearman correlation tests. While the Pearson product-moment correlation tests the strength and direction of linear relationships, the Spearman rank-order correlations assesses the strength and direction of monotonic relationships (where the rank-order of both variables increase or decrease together). Since the data was found to be mostly normally distributed, and an initial comparison of Spearman and Pearson correlation disclosed that results were essentially the same, we decided to report the Pearson

correlations (Laerd Statistics, 2018). These test results help to clarify findings.

### 2.3 Participants

The basic characteristics of the participants ( $n=87$ ) are described. All participants were drawn from four classes in one academic year : two classes in the first term and two classes in the second term. The participants were first- and second year EFL students at a private university in western Japan. All participants were Economics majors enrolled in mandatory general English courses taught by the two researchers. They had either one Japanese teacher of English (JTE) or one Native English-speaking teacher (NEST). Participation in this study was voluntary, confidential, and did not affect their grades.

Participants were almost equally distributed between the two teachers, with 45 (52%) being taught by the JTE and 42 (48%) being taught by the NEST. More males (57, 65%) than females (30, 35%) participated.

English proficiency was generally high among these non-English majors. Proficiency was self-rated and fell within four categories according to TOEIC ranges : Beginner Group 1 ( $<300$ ) = 10 (12%) ; Low Intermediate Group 2 ( $300-399$ ) = 30 (35%) ; High Intermediate Group 3 ( $400-539$ ) = 42 (48%) ; and Advanced Group 4 ( $540-739$ ) = 5 (6%).

### 2.4 Measures

Student attitudes were measured using instruments to assess Learner Autonomy, Self-Efficacy, and Willingness to Communicate. We used three measures of attitudes : a repeated measures survey including autonomy items adapted from Murase's (2015) Measurement in Language Learning Autonomy (MILLA) scale, SE items adapted from Pintrich and De Groot (1990), and the complete WTC scale (nd ; 1992 ; McCroskey, & Baer, 1985). Responses to all questionnaires at all

three times were found to have excellent internal consistency because their alpha scores were above 0.8 (Nunnally & Bernstein, 1994). Each instrument is outlined in turn.

The Learner Autonomy (LA) scales (Cronbach's  $\alpha = .09; .88; .86$ ) consisted of 12 items. The 12 items were a subscale selected from a larger scale, called the Measurement in Language Learning Autonomy (MILLA) scale, created and translated from Japanese to English by Murase (2015). Murase permitted us to use the Autonomy subscale.

The Self-Efficacy (SE) component (Cronbach's  $\alpha = .93; .94; .92$ ) was comprised of 8 items that had been selected from the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich and De Groot (1990). These eight items were translated into Japanese and previously appeared in an article written by one of the authors (Ochi, 2018).

The 20 items of the willingness to communicate (WTC) scale (Cronbach's  $\alpha = .96; .09; .92$ ) was used in its entirety. The original WTC scale had appeared in publications by McCroskey and Baer (1985) and later (McCroskey, nd; 1992) and was copied directly in both English and Japanese forms as they appeared in McCroskey's university website (McCroskey, nd).

All three scales were printed on the front and back of one paper and appear in appendices to this paper. The 12 items of the LA and the 8 items of the SE scales were combined sequentially into 20 questions using an identical format, and appear in Appendix A. The 20 items of the WTC scale appear in Appendix B. The WTC scale appeared in Japanese on McCroskey's website and were checked by the second researcher, and the other two instruments were translated into Japanese by the second researcher to facilitate students' ability to understand and complete the surveys.

## 2.5 Procedure

The study was comprised of a complex series of surveys and interventions. Student surveys were conducted during weeks 1 or 2 ; during week 7 ; and during weeks 14 or 15. Questionnaires were given to students in class, collected upon completion, and required about 15 minutes to complete.

Two interventions were used to prompt development of LA and SE. First, students were asked to complete weekly self-evaluation worksheets (Ochi, 2018). In order to promote a sense of self-efficacy, students were asked to set autonomous learning goals and then assess the extent to which these goals were met each week and how they performed in class. Autonomous learning goals could pertain to TOEIC study, vocabulary learning, reading, or other topics aimed to improve their English abilities. Study goals could not concern homework, since those goals were chosen by a teacher. Students completed Self-Evaluation Worksheets during every class of their 15-week term. Teachers collected these sheets, gave feedback designed to encourage accurate recording of completion of their weekly goals, and redistributed the worksheets at the beginning of the following class. Students also recorded their debate scores on this sheet. The Self-Evaluation Worksheets appear in Appendix C.

The second intervention was the study topic itself: debates in English. Student self-efficacy was supported by giving students a challenging language target along with extensive support to help them attain that target. Debate topics were taken from a low-intermediate level textbook. The topic of each unit was taught in two classes : Class A, in which they built vocabulary and understanding, and Class B, in which they exercised what they had learned in Micro-debates. Teachers emphasized that there were no right or wrong answers, only reasons for or against a topic. The combined timing of the Worksheets, preparation for debates, the debates themselves, and the surveys administered at three times appears in Table 1.

**Table 1. Intervention and data collection schedule**

L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15
p	D	p	D	p	D	p	D	p	D	p	D	p	D	
W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
S1						S2								S3

*Note.* L#=Lecture number ; W=Self-Evaluation Worksheet ; p=Preparation (Week A) ; D= micro-debate (Week B) ; S#=Survey number.

Student learning was supported by concept and language scaffolding. To promote comprehension, groups of students worked together to translate the English text to Japanese and each member of the group explained their portions of the translations to the class. Following their translations, students received a formal translation with phrases underlined, and they had to identify the equivalent English phrases in the text to make a bilingual vocabulary list.

Concept scaffolding proceeded with instruction pertaining to reasoning and linguistic markers. Debate logic was supported by having students create mind maps based on the keywords used in the entire argument, and shared what they had summarized in English alternately in pairs while showing their mind maps. They were asked to circle linguistic markers such as “First,” “Second,” “Third,” or “On one hand” and “On the other hand.” Finally, debate procedures were reinforced by teaching students useful debate phrases such as, “I see your point, but...,” and “I disagree.” Figure 2 shows the variety of interventions designed to support student performance during micro-debates, and thus their self-efficacy.

Self-efficacy was reinforced by applying new words and concepts in active debates. Debates were carried out in a game-like atmosphere. Debates were conducted via round-robin exchanges in groups of three (see Figure 3). One person was The Judge whose job it was to decide who the winner was and record the debate and scores of the participants. The other two group members argued a

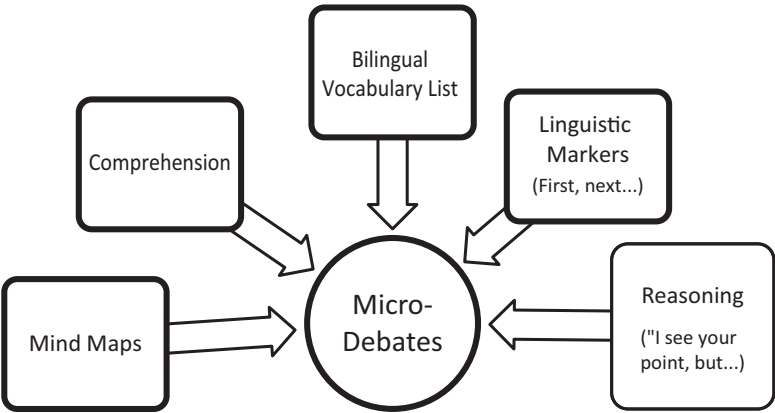


Figure 2. The five interventions to support student ability to engage in micro-debates

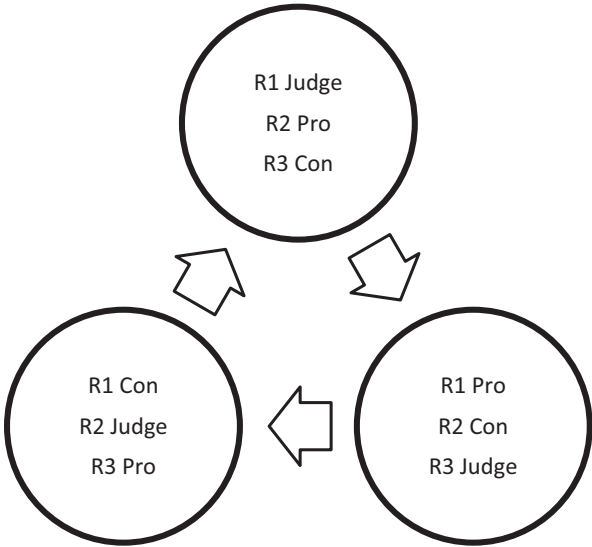


Figure 3. Example of micro-debate role changes for three 5-minute debate rounds. R#=Round number. “Pro” and “Con” represent two opposing sides of a debated issue



two-sided issue - for example, which pet is better, dogs or cats ? For each issue, one person argued in support of one side of the issue, for example, Cats, while the other person argued in support of its opposing side, for example, Dogs. Debates were carried out in three rounds of about five minutes each, with students changing roles each time. The winner was the student who acquired the highest points from three evaluation points of delivery, logic, and persuasiveness to attain three out of three possible points (the Judge got a point as well as the round winner). The roles changed and the pace was fast. Students had to argue both sides of an issue to help them see the pros and cons of each side.

3. Results

The data was cleaned and all missing values (< 2 %) were replaced using multiple imputations. Visual inspection of boxplots revealed no extreme outliers and minor negative skewness. Since most data was found to be normally distributed no further data manipulation was conducted.

3.1 RQ 1 : Does learner Autonomy Contribute to WTC over time ?

The summary descriptive statistics from the questionnaire surveys administered at the beginning, middle, and end of the 15-week courses showed that students' responses on scales of Autonomy and WTC all increased over time (see Table 2).

Table 2. Means and standard deviations for LA and WTC at three times

Time	Autonomy		WTC	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
(Time 1) Week 1	3. 01	0. 56	34. 54	22. 22
(Time 2) Week 7	3. 14	0. 66	36. 83	14. 84
(Time 3) Week 15	3. 37	0. 55	36. 97	17. 56

Note. *n* = 87 at all three times.

While the WTC mean responses increased more in the first half of the course, Autonomy increased more in the last half of the course. These general trends can be visualized by referring to Figure 4.

Next, simple scatterplots reveal that a linear relationship was found between the two variables at Times 1, 2, and 3 (see Figure 5). The first graph is for Time 1,

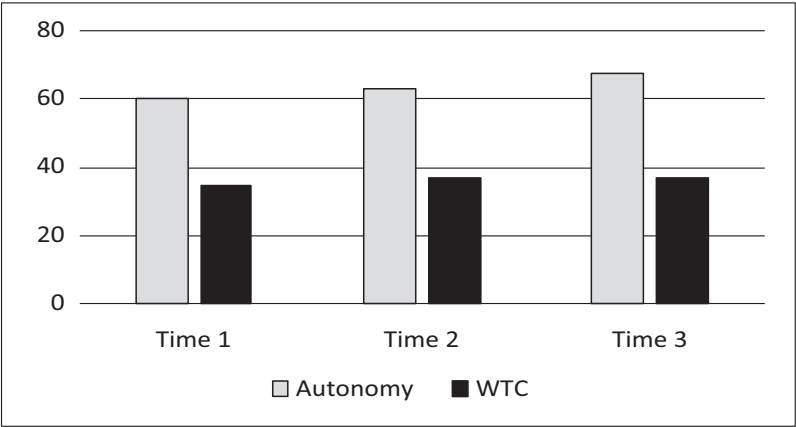


Figure 4. LA and WTC means (in %) at Time 1, Time 2, and Time 3

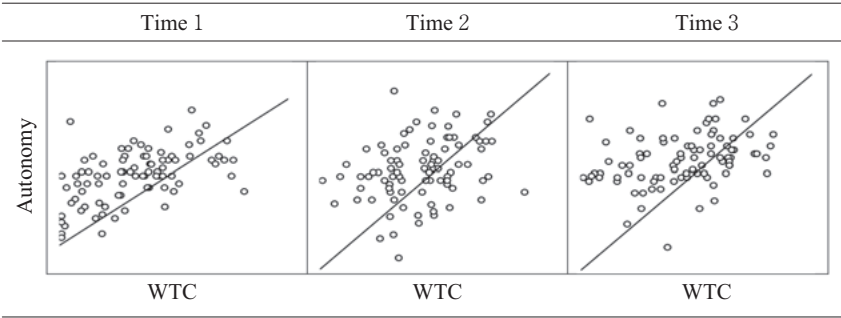


Figure 5. Scatterplots of LA (left side) and WTC (bottom) responses at Times 1, 2, and 3

the second graph is for Time 2, and the last graph is for Time 3. The pattern of the scatter plots suggests that a linear relationship exists because the general shape of all data points is linear rather than U-shaped or curved. Regression lines were fitted to the scatterplot points to reveal the trends of the relationships. A horizontal line would suggest there were no correlations, while lines slanting upward would indicate a positive relationship and lines slanting downwards would indicate a negative relationship. All three lines slanted upwards. Therefore, a positive linear relationship was found between WTC and autonomy for students at Time 1, Time 2, and Time 3.

After that, we examined the relationships between student autonomy and WTC to see if the relationships were statistically significant, i. e. not an artifact of the data. The results of the Pearson correlation tests are shown in Table 2 above. There were no missing values, and all assumptions were met. Autonomy and WTC were positively and significantly correlated at all three times, with the correlation being strong at the beginning of the term, small after 7 weeks of study, and medium by the end of the term (see Table 3).

Pearson's correlation tests at all three times revealed that LA and WTC were significantly and positively correlated. As LA responses increased, so did those for WTC.

**Table 3. Correlations between LA and WTC at three times**

Time	<i>Pearson's r</i>	<i>Sig.</i>	Strength of Association
Time 1	.519**	.000	Strong
Time 2	.289**	.007	Small
Time 3	.310**	.003	Medium

*Note.*  $n=87$ ; Strength of Association ( $r$ ), where .1 to .3 is Small, .3 to .5 is Medium, and .5 to 1.0 is Strong (Cohen, 1992);

\*\* Correlation is significant at the .01 level (2-tailed).

### 3.2 RQ 2 : Does Self-Efficacy Contribute to WTC over time ?

Descriptive statistics for self-efficacy and willingness to communicate appear in Table 4. Means for both SE and WTC increased at each of the three data points.

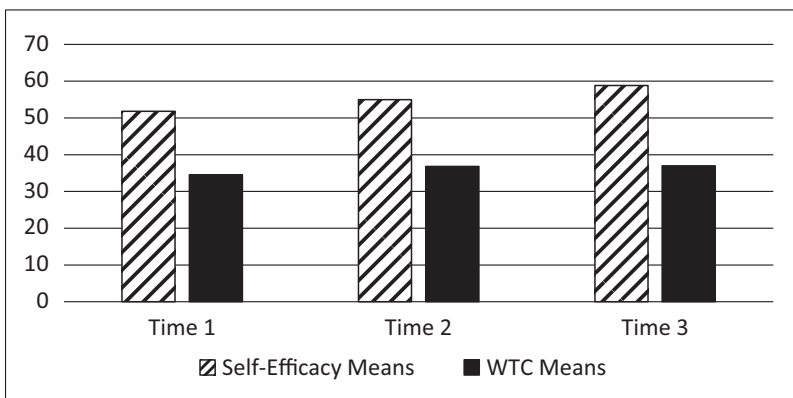
**Table 4. Means and standard deviations for SE and WTC**

Time	Self-Efficacy		WTC	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Time 1	2.59	0.69	34.54	22.22
Time 2	2.75	0.73	36.83	14.84
Time 3	2.94	0.66	36.97	17.56

*Note.*  $n = 87$  at all three times.

Figure 6 displays trends revealed in the data. Note that Self-Efficacy data were changed to percentages to facilitate comparison with the WTC scores. Self-efficacy means appear to increase steadily while WTC means appear to increase more in the first half of the course but did not change much in the second half of the course.

Upon viewing the simple scatterplots, the relationship between SE and WTC appears to be positive, linear, and strongest at Time 2. The correlation appears to



**Figure 6. Means of Self-Efficacy and WTC (in %) at Time 1, Time 2, and Time 3**

be weak at the beginning and end of the course, as can be seen by the regression lines fitted to the data in the scatterplots for responses at all three times (Figure 7). The question then is whether these means are significantly correlated.

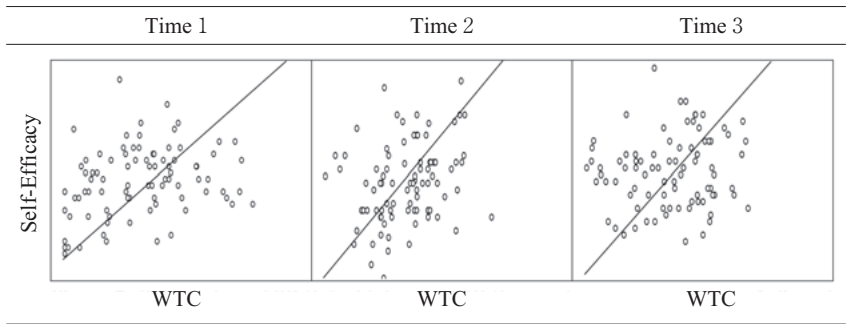


Figure 7. Scatterplots of SE (left side) and WTC (bottom) responses at Times 1, 2, and 3

A Pearson’s correlation was run to assess the relationship between SE and WTC for students at the beginning, middle, and end of one academic term (see Table 5). There was a statistically significant but weak positive correlation between student self-efficacy and WTC at Time 1 and Time 2, but there was no significant correlation at Time 3.

These findings suggest that although both SE and WTC increased over 15 weeks, the correlation between WTC and SE decreased near the end of the course. An increasing amount of SE variance was being accounted for by other factors.

Table 5. Correlations between SE and WTC at three times

Time	Pearson’s <i>r</i>	Sig.	Strength of Association
Time 1	.28**	.01	Small
Time 2	.27**	.01	Small
Time 3	.11	.33	Small

Note. \*Correlation is significant at the .05 level (2-tailed) and \*\* at the .01 level (2-tailed).

Despite having increased across the three data points, the rise in SE and WTC scores appear to be due to another factor.

### 3.3 RQ 3 : Is Self-Efficacy Correlated with Learner Autonomy ?

Since the influence of self-efficacy on WTC appeared to decline in the final weeks of 15-week terms, the research focus shifted to whether there was a change in the relationship between Self-Efficacy and Learner Autonomy over the same time. Since means and standard deviations were already reported for Learner Autonomy in Table 2 and Self-Efficacy in Table 4, the means are plotted in Figure 8 to aid with interpretation. A review of Figure 8 shows that means for both SE and LA increased from Time 1 to Time 2, and from Time 2 to Time 3.

Next, we viewed simple scatterplots of self-efficacy and learner autonomy to see if the relationship between them is linear and therefore appropriate for a test of correlation (Figure 9).

The scatterplots indicated that the relationship between autonomy and LE was

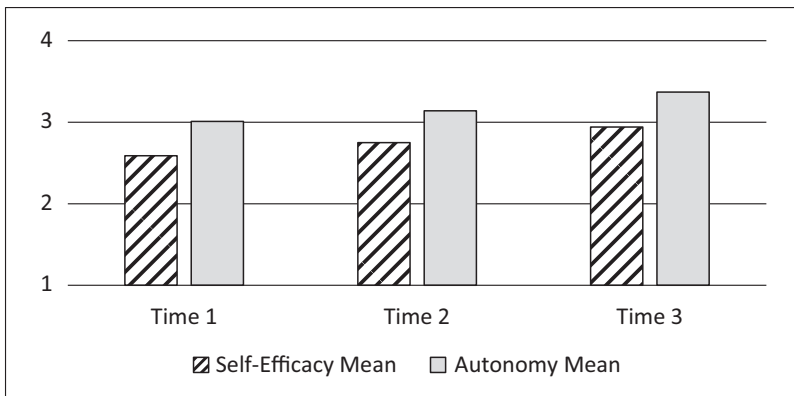


Figure 8. Means for SE and LA (on a 5-point Likert scale) at Time 1, Time 2, and Time 3

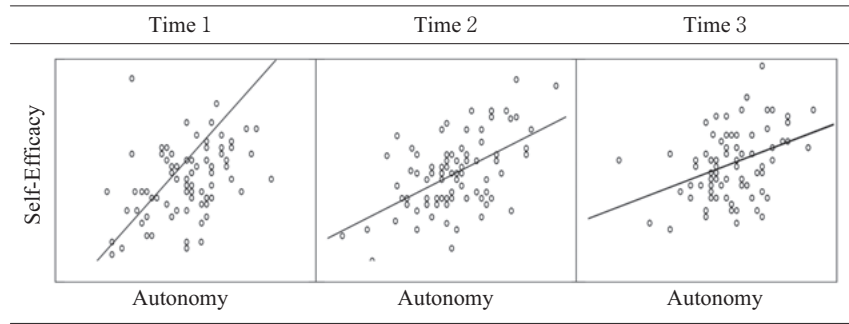


Figure 9. Scatter plots of SE (left side) and LA (bottom) responses at Times 1, 2, and 3

linear, i. e. not curved in any way. Additionally, the relationship was positive. As SE increased, so did LA. Therefore, we ran Pearson’s correlation on the data to test for significance.

Results summarized in Table 6 indicate that SE was significantly associated with LA at all three times ( $p < .0005$ ). The strength of the association was medium at the beginning and end of the term but large in the middle of the term. These findings are interpreted in the Discussion section.

Table 6. Correlations between SE and LA at three times

Time	Pearson's <i>r</i>	Sig.	Strength of Association
Time 1	.384**	.000	Medium
Time 2	.549**	.000	Large
Time 3	.387**	.000	Medium

Note. \*\* Correlation is significant at the .01 level (2-tailed).

#### 4. Discussion

The discussion will assess the findings according to each research question. Pedagogical interpretations will be offered for each question. Next, we will address theoretical implications in a separate section, followed by a section on limitations

and suggestions for future research, before turning to conclusions.

#### **4.1 RQ 1 : Does Learner Autonomy contribute to WTC ?**

Results suggested a positive answer to this RQ. Learner Autonomy was found to be significantly and positively correlated with WTC at all three times.

The strength of association between LA and WTC varied at the three time points. The relationship was the strongest at the beginning of the course, small in the middle of the course, and medium by the end of the course. These results suggest that the students in this course already had a good study ethic, possibly being a holdover from studying to pass the university entrance exams. Studying for mid-term exams is usually an autonomous activity, conducted alone and usually in silence. These characteristics might account for the decrease in correlations of LA with WTC that occurred in the middle of the course. Students may have been distracted by mid-course exams in other courses. The strength of the relationship between LA and WTC had increased to moderate levels by the end of the course, possibly as students prepared for the final exam in the current EFL course. These findings are in contrast with those of Khaki (2013), who found that LA had only a minimal correlation with state WTC compared to trait WTC. Learner Autonomy and WTC appear to be strongly correlated and may reflect their understanding that independent study helps them to speak in English.

Gains were found to differ for each variable across the three time periods. Learner autonomy means increased steadily at each time period, while WTC means increased the most in the first half of the course and almost leveled off in the second half of the course. Several implications can be drawn from these findings.

#### **4.2 RQ 1 : Pedagogical interpretation**

At this point, we consider whether the pedagogical interventions employed in



the current study influenced the results. First, these findings suggest that students' WTC benefits from their use of self-directed learning, but the reason for the leveling-off of WTC mean gains towards the end of the term as associated with LA is unclear. It is possible that the greatest gains occurred due to the novelty of the course material, Self-Evaluation Sheets, and weekly feedback from the teachers, and that students had become accustomed to them by the midpoint of the course. It is clear that time is an important factor in assessing LA and WTC, supporting similar claims by Tassinari (2018).

It is also possible that the debate topics became more difficult from the midpoint to the end of the course, and so while LA took place outside of class and was relatively unaffected by the debate topic because autonomous learning topics were chosen by the students rather than by the teachers, WTC in class was directly affected by increased challenges students associated with the class material itself. That is, students may have transferred their anxiety over difficult debate topic language to their autonomous learning activities, since it would make sense that they studied their autonomous English material and their assigned English homework together.

This possibility supports similar findings that students' WTC is linked to the ease or difficulty of the conversation topics. If the topic is of interest and is familiar to students, their confidence and WTC increases (Kang, 2005; Zwiers & Crawford, 2011). Furthermore, when teachers responded to student problems directly in the Worksheets or at class or group level by explaining and supporting learning, students felt the encouraging positive effect of teachers' interest and involvement, which would have the influence of encouraging them to continue despite challenges (Everhard, 2015). This encouragement is powerful and necessary, since even if the topic is of interest but the vocabulary is unfamiliar to students, their WTC tends to decrease until they feel that they have mastered the vocabulary.

Preparing for classroom tasks helped students to attain gains in class. Much of the debate preparation took place as homework, conducted alone outside of class (Mind Maps), or when choosing to combine efforts with peers (translation). Students who took responsibility for their learning by preparing adequately outside of class were more likely to do well in classroom debates than students who “went through the motions.” For example, those who prepared well-organized mind maps were more likely to be able to use their mind maps during debates to reason cogently and persuasively and so win the debates.

The importance of choosing tasks relevant to students’ interests was underscored by findings from several researchers (Joe et al., 2017 ; Kang, 2005). Peng and Woodrow (2010) observed that students responded when the task was perceived to be important and useful. Since they chose their own learning materials and goals, they often chose to study for upcoming TOEIC tests that were used to streamline them into future English classes. When students reported on their autonomous learning, they were reminded of their goals and became aware of their efforts and may have been encouraged to maintain progress.

#### **4.3 RQ 2 : Does Self-Efficacy contribute to WTC ?**

Results indicated a mixed answer to this question. Analyses found positive significant correlations between WTC and self-efficacy during the first half of the term, but the significant correlation vanished by the end of the course. This was puzzling since means for both SE and WTC continued to increase throughout the course. Means for SE increased more in the second half than in the first, while means for WTC increased more in the first half of the course than in the second half. How, then, does SE contribute to WTC ?

#### 4.4 RQ 2 : Pedagogical Interpretation and Implications

Students began their EFL classes unconscious of learner autonomy strategies but had the opportunity to learn strategies through teacher suggestion and responses to their Worksheets, self-reflection and adjustment of efforts or avoidance of distractions. If students discover that their self-chosen learning strategies could be transferred to homework preparation and then help them win during debates, they might be more willing to take a chance and speak. However, course materials became increasingly difficult during the course, and this might have interfered with students' sense of English competence. .

Furthermore, preparation work in class could have contributed to both SE and WTC. Teacher's encouraging attitudes, both verbal and nonverbal, might have helped to reduce anxiety and bolster WTC (Joe et al., 2017). Students who perceived good teacher support and a sense of mutual respect from their peers had high levels of WTC (Kang, 2005 ; Peng and Woodroow, 2010). Teachers' emotional support helped reinforce students' WTC (Joe et al., 2017). This possibility is supported by similar observations about state variables in WTC being task related. Having cooperative classmates for practice or during debates has been linked to increased WTC (Khajavy et al., 2014).

Although self-efficacy and WTC increased at each of the three time points, the correlation between WTC and SE decreased. An increasing amount of variance in correlations must have been accounted for by another factor. This possibility was the reason for the final research question.

#### 4.5 RQ 3 : Are SE and LA correlated ?

We tested for the possibility that the unknown mediating factor moderating the relationship between SE and WTC could be learner autonomy. We found that SE and LA were significantly and positively correlated, and the correlation was

maintained throughout the term. The correlation was medium at the beginning and end of the term and strong in the middle of the term.

When considering changes in mean scores for the two variables, both variables increased throughout the term. Means for LA were higher at all times compared to SE. LA means increased the same amount in the first and second half of the term, while SE increased more in the second half of the term than the first. At the beginning of the term, LA means were about the midpoint on the 5-point Likert scale—that is to say, neither positive nor negative. On the other hand, at the beginning of the year, SE means were below the midpoint on the Likert scale ; these students began with a negative impression of their ability to cope with English lessons. By the end of the term, means had increased almost to the neutral midpoint, suggesting that students had gained confidence in their ability to use English compared to when they started the course.

#### **4.6 RQ 3 : Pedagogical Implications**

In terms of findings specific to this investigation, we suggest the following interpretation. We suggest that students were nervous at the beginning of the term, with new courses and teachers, and might not have had much confidence in their English-speaking proficiency and therefore their SE. At the same time, they began classes with the fresh memory of studying for university entrance exams—even for 2nd-year students, the impression would have been remembered. So, they began with an awareness that by studying on their own, they were able to pass the entrance exams to enter university. This explanation accounts for the higher means for LA than LE at the beginning of the course.

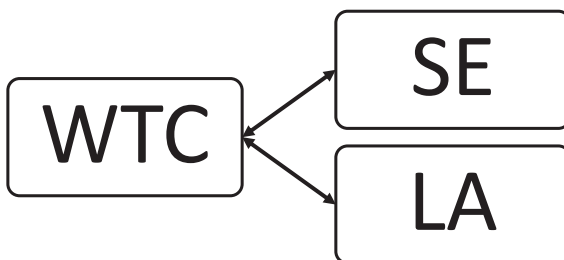
By the end of the term, their SE was established in students to some extent. It may have been automated in them, so they were not conscious about it. It could be one of the reasons that their sense of self-efficacy was most strongly associated with

their ability to learn autonomously in the middle of the term. Both researchers noted that their classroom performance on the micro-debates had improved over the 15 weeks of their courses. On the other hand, at the end of term students would be distracted and nervous about the onset of exams and may have lost confidence in their ability to produce English due to exam anxiety rather than any real change in their actual classroom performance.

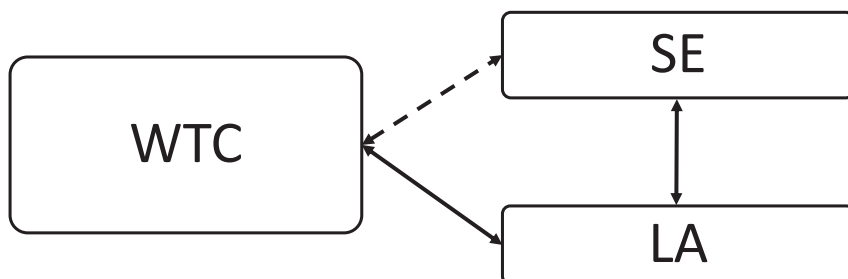
Findings generally support those previously revealed by Munezane (2015). As with her study, attempting to improve SE or WTC directly through classroom intervention may not be sufficient. Introducing the concept of LA to students at the beginning of the term may not have been enough, either. In addition, students would probably have gotten more out of LA if they had some time to discuss their chosen topics with classmates.

#### 4.7 Theoretical Implications

More general interpretations concern the theoretical relationships between LA, LE, and WTC for students when speaking is an integral part of classroom procedures. It is possible that self-efficacy contributed less to WTC directly and more indirectly over the three time periods, and instead took on a secondary role to LA. That is, before collecting data, our first visualization could be expressed in this way :



Our results suggest a modification thus :



That is, Self-efficacy appears to be more strongly correlated with learner autonomy than with WTC, while learner autonomy is strongly correlated with WTC at all three times. This suggests that self-efficacy may be increasingly influenced by learner autonomy over time, with the result that learner autonomy may take on aspects of an intermediate pathway between self-efficacy and WTC as students' understanding of their power to learn increases along with their confidence, inspired by debate.

#### 4.8 Limitations and potential research directions

The current study is limited because it used an exploratory quantitative method, which is good for analyzing large amounts of data to find patterns suggesting what students think, but it cannot be used to learn why students feel as they do. Future studies could address similar questions and variables but from a mixed-methods design. The use of follow-up interviews, particularly prompted recall using a video, could help to uncover reasons for low, high, or changing WTC.

Furthermore, state-level WTC variables only account for student attitudes at the moment they complete the questionnaire, but previous studies have indicated that student attitudes change rapidly throughout the course of a lesson (Zhang et al.,

2018). For example, low WTC at the beginning of the class might reflect student passivity while they wait for the teacher to set up class activities, while high WTC at the middle of a class but low at the end might indicate engagement followed by fatigue. Future studies could employ questionnaires eliciting high-frequency changes in attitudes through lessons. Comparing lessons in this way at the beginning, middle, and end of a term might help to account for changes in attitudes.

Study of situational antecedents for WTC such as LA and SE has only recently taken off since McCroskey and Baer first defined it (1985) and MacIntyre et al. adapted it to FL studies (1998). Since situational WTC seems to be more closely allied with EFL than ESL conditions and most early studies of WTC took place in ESL conditions (Zhang, Beckmann & Beckmann, 2018), then it would be a fruitful area to explore in EFL conditions. The relationship between LA, SE, and WTC could be explored by varying tasks from student-oriented tasks such as presentations to teacher-led tasks such as reading and grammar. Learner autonomy could be varied from self-reports, as were used in the current study, to completion of portfolios in which the topic is chosen by students but the study method is recommended by teachers. The influence of distracting pressures such as mid-term exams in other courses could be mitigated by following participants in intensive summer courses. Finally, recent events compelled many classes to shift to online delivery, resulting in changes in contact between teachers and students as well as reduction of face-to-face pair and group work. The impact of distance learning on students LA, SE and WTC should be explored.

## 5. Conclusions

Researchers investigated the influence of interventions on students' LA, SE, and WTC. Learners' autonomy was encouraged by asking students to choose an

English topic unrelated to homework to study outside of the classroom, such as preparing for upcoming TOEIC tests or learning grammar or vocabulary. They were also encouraged to tackle a challenging task in classes, in which they prepared extensively for debates in English by learning difficult vocabulary, debate strategies, and the influence of linguistic markers on orderly thinking. Efforts were tracked with Self-Evaluation Worksheets, in which students recorded their out-of-class learning goals, pledged to study them for a pre-determined length of time every week, and their actual weekly progress. On the same sheets, students also recorded their process and success in debates that took place in class.

Data pertaining to interventions were obtained through three scales. Twelve items referring to engagement in LA were obtained from Murase's MILLA (2015) scale ; eight items pertaining to students' sense of language competence were drawn from the MSLQ by Pintrich and De Groot (1990) to measure SE ; and the WTC scaled developed by McCroskey and his associates (nd ; 1985 ; 1992) were used to measure students' WTC in English in class.

All measures indicated gains in students' English learning and productivity over the 15 weeks being followed. The means of students LA, SE, and WTC all increased at each measurement point. Significant positive linear correlations were found for all three measures at all three times, except for SE and WTC at the end of the course. Learner autonomy means increased steadily for the first and second halves of the term. Correlations between LA and WTC were strongest at the beginning of the intervention, but small at Time 2 and medium at Time 3, suggesting a moderating influence as students progressed through the course. Correlations between SE and WTC were small at the beginning and mid-term and nonsignificant by the end of the term, despite means rising for both SE and WTC throughout the term. We compared correlations between SE and LA without considering WTC and found medium relationships at Time 1, a strong relationship



at Time 2, and a medium relationship at Time 3, which seemed to mirror the opposite trend with LA and WTC. Therefore, we suggest that LA may perform a moderating influence on SE correlations with WTC, and that LA has a stronger influence on WTC than SE.

In plain English, students showed more benefit from choosing their own study materials, goals, and engagement on willingness to talk in English in class than their sense of linguistic competence. It appears that motivation trumps confidence. Therefore, our recommendation to educators is to encourage students to engage in projects of their own choosing with clearly defined goals and use encouragement via tracking methods to help them sustain their efforts.

Future research could engage in more frequent observation in SE and WTC within each class, longer observations over time, and the use of mixed methods to obtain rich data from which an explanation could be drawn for findings. Study of state-level factors in WTC in EFL conditions are a rich area to explore.

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## Appendix A: Survey on Learner Autonomy and Self-Efficacy of Language Learning

This questionnaire is designed to measure the degree of your autonomy as a learner of English; in other words, how much control you have over your own learning of English and self-efficacy of language learning. Please read each statement carefully and choose the response that applies to you. Your responses will not affect your course grade.

	Never Strongly disagree	Rarely Disagree	Sometimes Neither	Often Agree	Always Strongly Agree
	1	2	3	4	5
1	I set long-term goals and plans in learning English.				
2	I set goals and make study plans before I start studying English.				
3	I try to create the conditions under which I can study English best.				
4	If I have a limited amount of time available for study, I decide in what order the things need to be done.				
5	I try to create the conditions under which I can study English best.				
6	I reflect upon what I learned after I finish studying English for the day.				
7	I assess the effectiveness of my English study plans.				
8	I take notes about how much time I spent on my English study.				
9	I am aware of the goals of the English class(es) I am taking.				
10	I sometimes want to ask my teachers and other students for advice about my English learning.				
11	Students can help each other learn English.				
12	If I study English with other students, I also learn from them.				
13	I think I'm a good student.				
14	I'm certain I can understand the ideas taught in this course.				
15	I think I will receive a good grade in this class.				
16	I am sure I can do an excellent job on the problems and tasks assigned for this class.				
17	I expect to do very well in this class.				
18	I think I know a great deal about the subject.				
19	I know that I will be able to learn the material for this class.				
20	My study skills are excellent.				

Note: Autonomy was measured using items 1 – 12, adapted from Murase's (2015) Measurement in Language Learning Autonomy (MILLA) scale. We adapted Murase's Japanese translation with minor modifications by the second author to suit our students. Items 13 – 20 were adapted from the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich & De Groot (1990). The second author adapted and translated these questions, and they appeared previously in Ochi (2018). The two subscales were combined on one paper to streamline student responses using similar formats.

**Appendix B: Willingness to Communicate Scale**

Directions: Below are 20 situations in which a person might choose to communicate or not to communicate. Presume you have completely free choice. Indicate the percentage of times you would choose to communicate in each type of situation. Indicate in the space at the left of the item what percent of the time you would choose to communicate.

(0 = Never to 100 = Always)

- \_\_\_\_\_ 1. Talk with a service station attendant.
- \_\_\_\_\_ 2. Talk with a physician.
- \_\_\_\_\_ 3. Present a talk to a group 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 of friends.
- \_\_\_\_\_ 7. Talk with a police officer.
- \_\_\_\_\_ 8. Talk in a small group 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 of acquaintances.
- \_\_\_\_\_ 12. Talk with a stranger while standing in line.
- \_\_\_\_\_ 13. Talk with a secretary.
- \_\_\_\_\_ 14. Present a talk to a group of friends.
- \_\_\_\_\_ 15. Talk in a small group of acquaintances.
- \_\_\_\_\_ 16. Talk with a garbage collector.
- \_\_\_\_\_ 17. Talk in a large meeting of strangers.
- \_\_\_\_\_ 18. Talk with a spouse (or girl / boyfriend).
- \_\_\_\_\_ 19. Talk in a small group of friends.
- \_\_\_\_\_ 20. Present a talk to a group of acquaintances.

Note: The Willingness to Communicate Scale and its Japanese translation were copied from McCroskey, J. C. (nd). <http://www.jamescmccroskey.com/measures/WTC.htm>  
On his website, McCroskey included this note: No copyright. Free to use with credit.

## Appendix C: Self-Evaluation Worksheet

Class ( ) Student Number ( ) Name ( )

	Date	Study Time (Minutes)	Autonomous Study Time/ Content	Debate Score 3 > 1	Class performance 5 > 1	Reflections /Questions (Japanese)
Goal Setting						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
Average						

### Learning Contract

I pledge to study English as an autonomous learner, following the above goals.

Date

Name