Investigating Student WTC Using Online Surveys
—Simplification or Complication?—

Jeff　Broderick*

Abstract

This study investigates the motivation and willingness to communicate (WTC) of 166 university students, in two groups, over the course of one school year. One group received discussion training, while the other group was trained in giving presentations. Their WTC regarding these tasks, as well as their general WTC and motivation, were measured at three points over eight months. This study also examines the efficacy, and drawbacks, of using online surveys to conduct research.

Keywords : Willingness to Communicate (WTC), Motivation, Task Training, Online surveys

1．Introduction

Learning a foreign language requires a large investment of time and effort, and without the necessary sense of motivation, learners may lose the desire to continue studying. On the other hand, learners with high motivation are likely to advance at a faster pace than those with low desire to learn. Motivation comes from a great variety of sources, both internal and external, and is viewed as a complex and ever-changing aspect of learner psychology. (For a review of recent theories of motivation, see Dörnyei & Ushioda, 2011; Dörnyei, Henry, & Muir, 2016.)

To become proficient at speaking a foreign language, it is necessary to produce that language communicatively. Alongside motivation, another important aspect of learner psychology is willingness to communicate (WTC) which is a measure of how likely a student is to seek out and engage in linguistic exchanges with others. WTC was once viewed as a static personality trait, but is now thought of as a highly-changeable variable, dependant on factors such as setting, interlocutors, and topic (MacIntyre & Legatto, 2011). Following on the work of Larsen-Freeman (1997) much recent research has focused on WTC and motivation as a complex dynamic system, driven by numerous interrelated variables with feedback between the system's inputs and output (for example, Dörnyei, MacIntyre, & Henry, 2015).

It may be useful, however, to focus on the teacher's role in raising WTC. This study is a continuation of the author's previous work (Broderick, 2016; 2017) to determine whether instructors can directly influence (i.e., raise) students' WTC through their classroom activities in general, and specifically through directed task training. In addition, this study seeks to examine the potential benefits of online surveys for increasing participation rates and decreasing the incidence of unacceptable responses on questionnaires. The research questions guiding this study were:

1. Can we replicate the results of previous studies (e.g., Broderick, 2017) that show task training raises WTC for that type of communication?

2. Does using online surveys improve the processing efficiency and participation rates of student questionnaires?

＊理工学部共通教育群講師　Lecturer, Division of Liberal Arts, Natural, Social and Health Sciences, School of Science and Engineering

2．Method

This study utilized intact classes of the author's first- and second-year communicative English courses. These courses are compulsory and are taken along with a Reading & Writing course (also compulsory) taught by another teacher. The first-year communicative class had a focus on teaching English discussion. Each week, students learned a new skill (for example, asking and giving opinions; taking turns; agreeing and disagreeing with others). Classroom activities were focused on the direct use of those skills, first in practice activities and then in group discussions. The second-year class focused on giving presentations in English. Again, students learned a particular skill each week (such as using gestures; voice inflection; using personal experiences) and then practiced these skills with a partner, and then in a mini-presentation to a small group. The participants who completed the study are shown in Table 1.

Table 1: Study Participants

	Males	Females	Total
Group 1 1st Year, Discussion	81	13	94
Group 2 2nd Year, Presentation	58	14	72
	139	27	**166**

Students were surveyed with regard to their attitudes concerning a variety of activities and their general motivation and willingness to speak in English. These surveys were conducted online using Google Forms, a free service. Five questions were given for each of six categories, below. Respondents answered using a 5-point Likert Scale from 1 (strongly disagree) to 5 (strongly agree) using a graphical slider. This produced a combined score for each five-question category ranging from 5 to 25. Surveys were conducted at three time points throughout the school year: in the first class in week 1, toward the end of the first semester in week 13, and toward the end of the second semester in week 26. Students who completed all three questionnaires were included in this study. A feature of the online questionnaires is that questions can be presented in a random order; this option was used. Another feature is that surveys can be closed after a certain point so they no longer accept responses; surveys were kept open for approximately two weeks. Results of the surveys were tabulated, then group means and 95% confidence intervals were calculated for each data point. This method of analysis is rather simple and does not provide a measure of the power of statistical tests but does give an indication of whether a difference between means is statistically significant at the $\alpha = 0.05$ level by checking for overlap of error bars.

3a. Results and Discussion: WTC and Motivation

A number of questions on the survey related to general motivation to study English, for example, 'How many hours a week are you willing to study English?' and 'Do you think English will be useful in your career?' The results are shown in Figure 1.
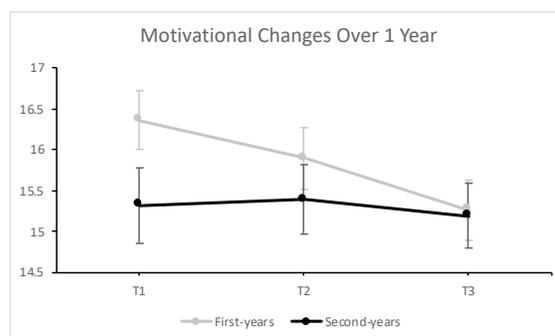
Figure 1

The results are rather remarkable as they show that first-year students start with a higher

motivation than second-year students, but that this difference gradually declines over the course of the year until it reaches the same level as the second-year students. Then, in second year, students essentially plateau at a low level of motivation. This result echoes the author's previous findings and represents a significant problem which should be addressed.

Next, students' general willingness to communicate in English was assessed through questions such as 'Do you want to talk to your classmates in English?' and 'If you don't understand something, will you ask the teacher or a classmate using English?' The results are shown in Figure 2.
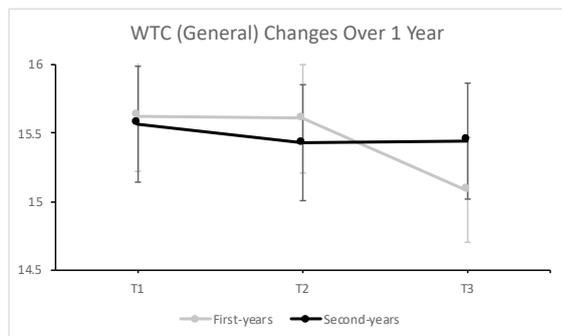

Figure 2

First, please note the scale of the vertical axis and the relative size of the error bars. In fact, there is no statistically significant change in students' general WTC over the course of the year. In light of this result, let us examine the changes in willingness (categorized as desire and confidence) to perform discussion tasks (Fig. 3).
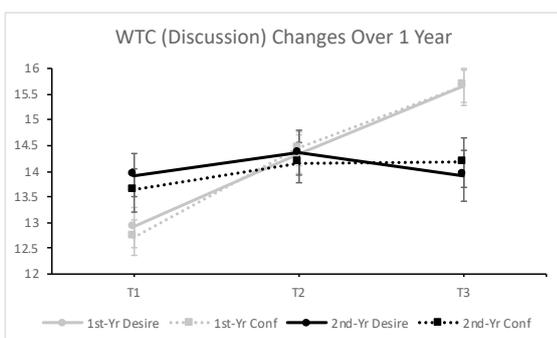

Figure 3

First-year students underwent direct training in discussion tasks, and while this group started with a lower sense of desire and confidence, both of these traits increased consistently over the academic year, reaching a high level by the conclusion of the course. In contrast, second-year students had no significant change in their WTC, which is not surprising since they received no specific training in this kind of task. It does suggest, however, that there is little 'spill-over' from general language education, i.e., teaching a student to talk about hobbies, for example, may have little impact on her desire or confidence to give directions.

Another point worth noting is the way that desire and confidence seem very closely linked in both groups. This strongly supports the notion that WTC is a composite psychological descriptor made up of sub-traits that tend to vary together.

This is not always the case, however. Students' willingness to perform presentation tasks is shown in Figure 4, below.
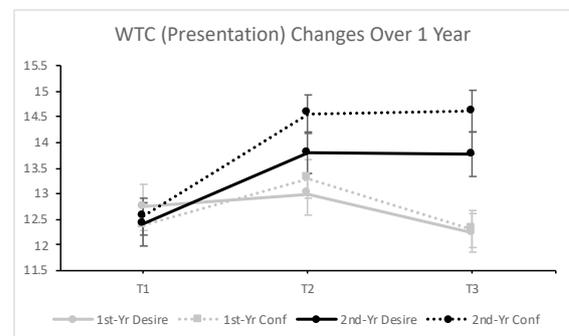

Figure 4

In this graph, both groups start with a similar, low degree of willingness (expressed as both desire and confidence) to perform speech tasks such as standing up in front of the class and talking about their hobby, or doing a self-introduction in front of a small group. The first-year students' WTC does not change significantly, and if anything, actually drops (possibly because, by the end of the academic year, it has become

clear to them that they will not be called upon to perform presentation tasks in that course!) The second-year group, which underwent training and practice of presentation skills, experiences an increase in both desire and confidence at time 2, but it is worth noting that the gap between these sub-traits widens compared to the first survey time. So while these traits increase together, they do not always change at the same rate. This gap is maintained through to time 3. Why does this gap exist? It is possible that, through the training they received, Group 2 students experienced an increase in their confidence in their ability to perform speeches: they learned for example how to conduct themselves, how to use gestures, and how to structure an effective speech. Their desire does increase above its very low initial point, but not as much as their confidence. It may simply be that public speaking is essentially an unpleasant and nerve-racking experience for many people, which they would avoid given the chance, even in fairly low pressure situations (such as speaking to a small group of friends and peers). This difference suggests that the sub-traits making up WTC contribute unequally, and while they may vary in similar ways, they are not interchangeable. Thus it remains important to measure them separately and distinguish between them, monitoring how they change independently.

3b. Results and Discussion: Online Survey

This study was the first time for this author to make use of online surveys. Instead of answering printed questionnaires, students are directed to a URL where they can answer questions online. This has a number of immediate benefits, most important of which is that the results can easily be output to a spreadsheet such as Microsoft Excel for analysis. This eliminates the need for data entry, which is time-consuming and introduces errors. Another advantage is that questions can be presented in a random order. This ameliorates the 'fatigue effect' where respondents' answers change as they get tired (Dörnyei & Taguchi, 2010). A third advantage is that the survey can be set up so that some questions are optional, while others are compulsory and the questionnaire can not be submitted without answering them. This prevents the submission of surveys with missing answers, which must be dealt with statistically or by discarding the entire questionnaire.

A major difference, however, is that when the questionnaire is assigned as homework, the simple lack of a piece of paper may result in students not completing the assigned task. With paper, instructors can follow up the assignment, perhaps giving class time to students who have not completed the survey. With an online survey, instructors can only read a list of names of those students who have not yet submitted a complete questionnaire. Does this difference have a significant impact? Refer to the results from this author's own past studies, shown in Table 2.

Table 2 : Response Rates

Study	1st-year	2nd-year	Overall
2016*	110/113	98/106	208/219
	97.3%	92.4%	**95.0%***
2017	110/115	77/99	187/214
	95.7%	77.8%	**87.4%**
current	94/112	72/105	166/217
	83.9%	68.6%	**76.5%**

(*Note : 2 questionnaires required for completion)

The current study utilized online surveys, and the response rate of 76% is considerably lower than a similar study conducted the year before by this author using paper and resulting in 87% of students completing all three required surveys. For purposes of comparison, the 2016 study is

presented but note that it utilized only two questionnaires, not three. This might be considered 'comparing apples to oranges' but even if we examine only those studies requiring submission of three surveys, it seems clear that the use of online questionnaires results in fewer submissions than when paper is used.

A further disadvantage of online questionnaires is that it makes it more difficult to discern at a glance which respondents may have answered the questions in a haphazard fashion, such as circling '3' ('neither agree nor disagree') for every answer. For best results, researchers using online questionnaires should use statistical methods to find and remove these kinds of responses, but unfortunately this author did not have access to such methods. In the past, these kinds of responses have been found by direct examination of survey papers, and they were a very small percentage of total responses.

As a final note, asking students to access a URL would seem to be a very straightforward task, but the author was surprised that a number of students (especially non-computer science majors) were unclear about how to access the questionnaire. This seems to indicate that some students lack basic computer literacy skills; the use of an online survey may make such students uncomfortable. In extreme cases, they may have failed to submit questionnaires because they were unsure how to reach the URL, regardless of their actual desire to participate.

4. Conclusions, Implications for Teaching, and Future Directions

The results of this study would appear to support the findings of previous studies by this author, that teaching the skills connected to a particular communicative task can influence a learner's psychology, making them have more confidence in their ability to manage the task successfully, and also making them want to attempt the task more. It now seems clear that teachers can directly influence their students' WTC by teaching concrete, applicable skills, then having the students practice these skills first in a controlled situation, then expanding this to an increasingly free and realistic environment. Although the view of second-language WTC has changed considerably over the years, and continues to undergo refinements, the most important point for classroom instructors to remember is that they have a direct and powerful impact on learner WTC through the activities they design for their students. They should teach skills that start at an easy level, then build progressively on those skills. Give learners a chance to experience successes in the early stages, as this gives them confidence and a desire to try the next stage. Providing students with willingness to communicate in the target language is perhaps the most important role for teachers of communication.

What should we make of the drop in motivation throughout first year, and the consistently low motivation of second-year students? This is a worrying observation and it highlights a serious problem. On one hand, none of the study participants took English as their major. But insofar as English is a compulsory subject in first and second year, the university regards it with some importance and therefore needs to make a priority of motivating students to learn English. This author believes that the university could make a greater effort in creating a multi-lingual environment on campus with the use of English signage and bilingual events, for example.

As mentioned, the theoretical concept of WTC continues to evolve. This study supports the idea that WTC is composed of sub-traits which, while they tend to vary together and may play off of each other through various feedback mechanisms, are distinct and separate elements. Among these

are communicative confidence and desire to communicate. In some cases, these were observed to evolve together and at the same rate, but in the case of giving presentations in English, it was observed that confidence increased at a greater rate than did desire. As mentioned, even experienced speakers may undergo feelings of nervousness and a desire to avoid giving a presentation. For second-language learners, this anxiety is likely even more acute. This fact may help to explain why these traits vary at different rates.

A second area of inquiry for this study was an investigation of the advantages and disadvantages of using online surveys with university students. Online surveys have the huge and undeniable benefit of cutting out the tedious and time-consuming intermediate step of data entry from questionnaire papers. They are a clear improvement in efficiency over paper surveys. They are also environmentally friendly and help cut down on paper waste. However, the visual inspection of a paper survey can be a beneficial step in the process, revealing responses that follow an unacceptable pattern. Visual inspection, however, can never identify a respondent who is simply answering at random; statistical methods are required that look for and reject questionnaires with overly self-contradictory answers.

An unforeseen advantage of paper surveys, however, is that they may help the instructor 'chase down' students who have not submitted a questionnaire. Pointing to an incomplete survey paper can be an effective way to push a student to submit it. When a questionnaire exists only as an online task, second and even third reminders can easily be forgotten. This may explain why only 76% of students completed all three online surveys, while 87% submitted three paper surveys.

Finally, it would seem that some students lack computer literacy skills and for them, doing an online questionnaire may be more difficult. Thus paper would be preferable. Giving students the choice of paper or online would seem to be the best compromise, and as long as the majority of students made use of the online option, data entry would be greatly streamlined.

WTC is unquestionably an important aspect of language acquisition, and it is not yet fully understood. Further studies are required that will closely examine how learners' feelings and attitudes evolve over time and in response to their feelings of success and failure in learning and using the language. Technology will undoubtedly play an important role in this research, allowing us to process more data more quickly than was possible in the past, and online surveys are one way that this goal can be accomplished.

References

Broderick. J. (2016). Increasing university students' willingness to communicate via skills training. In P. Clements, A. Krause, & H. Brown (Eds.), *Focus on the Learner.* Tokyo: JALT.

Broderick, J. (2017). Increasing university students' willingness to communicate: Task training for specific communicative situations. *Bulletin of Tokyo Denki University, Arts and Sciences 15,* 71-77.

Dörnyei, Z., Henry, A., & Muir, C. (2016). *Motivational Currents in Language Learning.* Oxford: Routledge.

Dörnyei, Z., MacIntyre, P., & Henry, A. (2015). *Motivational Dynamics in Language Learning.* Bristol: Multilingual Matters.

Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research.* New York: Routledge.

Dörnyei, Z., & Ushioda, E. (2011). *Teaching and Researching Motivation* (2nd Ed.). Harlow: Longman.

Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics 18*(2), 141-165.

MacIntyre, P., & Legatto, J. J. (2011). A dynamic system approach to willingness to communicate: developing an idiodynamic method to capture rapidly changing affect. *Applied Linguistics 32*(2), 149-171.