Willingness to Communicate and Communication Quality in ESL Classrooms

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Introduction

The premise of modern language teaching and learning is to provide learners with exposure to authentic language, as well as encouraging them to use the language for meaningful and effective communication. Given the importance of participation in authentic communication, some researchers (for example, Dornyei 2005; MacIntyre, Baker, Clément, & Donovan, 2003; MacIntyre, Clément, Dörnyei & Noels 1998) have argued that a fundamental goal of second language (L2) education should be the encouragement of learners' willingness to communicate (WTC) in the language learning process. WTC is expected to facilitate language learning because higher WTC among students translates into increased opportunity for authentic L2 use (MacIntyre, Baker, Clément, & Conrod 2001), which is a necessary condition for their language acquisition or development (MacIntyre & Legatoo 2011).

The WTC construct was originally introduced with reference to L1 communication, and was considered to be a personality-based, trait-like predisposition that remained stable across different communication situations (McCroskey & Richmond, 1991). That is to say, WTC has been looked at as a trait disposition that is independent of what happens in contexts and seen as static. However, due to a greater range of uncertainty inherent in L2 use and inter-group issues carried by L2 use, WTC in L2 was proposed as a situational variable, open to change across situations (MacIntyre et al., 1998). From this perspective, WTC in L2 was defined as "a readiness to enter into discourse at a particular time with a specific person or persons, using a L2" (MacIntyre et al., 1998, p. 547).

WTC within a classroom context has been defined as "a student's intention to interact with others in the target language, given the chance to do so" (Oxford, 1997, p. 449). WTC in an L2 classroom concerns a student's intention to communicate with interlocutors when free to do so. This is contrasted to a situation when a student is called upon by the teacher; he or she is obliged to respond without having much choice.

Some classroom-based WTC research has explored contextual factors affecting WTC in class, in particular in relation to task attitude, task type, and pre-task planning. The first study was conducted by Dörnyei and Kormos (2000), who investigated the effects of a number of affective and social variables such as motivation, L2 proficiency, WTC, group cohesiveness, and relationship with the interlocutor on L2 learners' engagement in oral tasks. This study involved 46 participants at secondary schools in Hungary. Data were collected from oral tasks, questionnaires, and oral proficiency tests. The results indicated that the students' WTC in the L2 classroom was influenced by their attitudes towards the task. Strong and positive correlations were found between learners' WTC and the amount of L2 they produced when performing the task when learners held a positive attitude toward the task. However, there was no correlation between WTC and the amount of L2 produced in the case of learners with more negative attitudes toward the task.

Weaver's studies examined situational variables underlying WTC in L2 classrooms in relation to task types. His 2004 study investigated Japanese learners' WTC (n = 1104) within an L2 classroom at tertiary level. Unlike previous studies that exclusively adopted the WTC scale developed by McCroskey and Richmond (1991), this study used a questionnaire developed by the researcher himself to investigate whether or not learner's L2 WTC would vary across 17 speaking situations and tasks potentially arising in this social context of a L2 classroom. The findings revealed that students' WTC varied significantly across different speaking situations and tasks and suggest that task is a variable likely to contribute to changes in WTC in L2 classrooms.

In a subsequent study, Weaver (2005) followed an experimental design to investigate the effect of English instruction and pre-task planning on students' level of WTC to do different speaking tasks within an oral communication class. The participants were asked to complete a survey in the first and last classes.

Weaver's study employed a WTC survey (n = 490) specifically designed for an L2 classroom. This survey was previously tested by using the Rasch model to confirm its usefulness in defining a range of indicators of L2 WTC among second language learners. Differing from the widely accepted WTC survey developed by McCroskey and Richmond (1991,) which was not restricted to instructional settings, this survey appears to be more relevant to an L2 classroom. The results showed post-instruction gains in terms of WTC, suggesting that pre-task planning has a positive effect on WTC.

A gap in the classroom WTC research lies in that no attempts have been made to investigate the relationship between WTC and actual communication quality. This research aims to explore the relationship between WTC and language quality in students' oral production. It also aims to explore the relationship between learners' WTC and actual classroom interaction. This study seeks to answer the following research questions:

1. What is the relationship between learners' WTC and oral communication quality?

2. What is the relationship between learners' WTC and their actual classroom interaction?

Method

Participants

Six students from an intact English for Academic Purposes (EAP) class at a university language center in New Zealand voluntarily participated in this study. At the time of data collection, the class was in the last three weeks of a one-month EAP module. The participants, whose ages ranged from 20 to 30, came from six different countries, including France, the Philippines, Japan, China, United Arab Emirates, and Saudi Arabia. All but one had been in New Zealand for less than half a year at the time of the study. Most of them had been learning English in the home country for over 7 years. They were identified by the program as being at an advanced proficiency level (see Table 1).

Table 1. Participant Information

Code name	Mother tongue	Gender	Age	Length of time in NZ	Time studying L2
Joselito	Tagalog	Female	27	1-3 months	18 years
Takuya	Japanese	Male	20	4- 6 months	8 years
Shu-Wei	Mandarin	Male	26	4- 6 months	8 years
Fatima	Arabic	Female	30	4- 6 months	18 years
Umar	Arabic	Male	27	7-12 months	8 years
Ines	French	Female	22	1-3 months	7 years

Operationalizing WTC Behavior

In the present study, WTC is viewed as a dynamic rather than a trait phenomenon. It is seen as an interdependent concept in relation to learner-internal and learner-external factors. It is not defined as an intention; instead, it is operationalized for this study as occasions when learners initiate or engage in communication when they have a choice to engage or not. These occasions are observable behaviors during a class. Following Cao and Philp (2006), students' WTC in class (or WTC behavior) was further operationalized by an observation scheme, which included categories such as volunteering an answer/a comment, giving an answer to the teacher's question, asking the teacher a question/for clarification, guessing the meaning of an unknown word, trying out a difficult form in the target language, presenting one's own opinions in class/responding to an opinion, volunteering to participate in class activities, and talking to a neighbor/group member (see the appendix). These WTC categories represent a range of classroom behaviors demonstrated by L2 learners who show high WTC in class.

Data Collection

The study lasted 3 weeks and involved classroom observations and oral tests. Two hours of classroom observation were conducted each week for 3 weeks. During the observations, the participants recorded themselves by wearing

clip-on microphones attached to individual tape recorders. The researcher kept field notes relating to students' utterances and their nonverbal cues.

In Week 1 and Week 3 respectively, the participants performed three oral tasks individually with the researcher. (See description of oral tests in next section.) As far as possible, the conditions under which the tasks were introduced to the participants were kept identical and uniform across the two testing occasions. The wording of the instructions also remained the same. The participants did not know what they would be asked to do prior to any task, and they had no practice or preparation for the tasks. The participants performed the three tasks at each testing occasion, and the transition between the three tasks was made as smooth as possible. On no occasion did any of the participants receive any feedback on the task performance.

Oral Test Description

The oral test was comprised of oral production tasks that elicited three different task types: narrative, description, and personal story-telling. When performing the narrative pictorial task, the individual participants were shown a set of pictures that suggested a story and then given one minute of planning time in order to prepare the content of the narrative (Robinson, 1995). Then, they were invited to tell a coherent story illustrated by the pictures. For the picture description task, the students were asked to describe a picture and make a story about the scene. At some point in the description, they were expected to draw inferences from the limited information available in the picture.

The oral narrative task used in the present study has been widely used in research projects and is known as "The Supermarket" task (Yule, 1997). It is based on a series of cartoon strips originally designed to elicit referential communication. The story starts with a woman shopping at a supermarket where she meets a friend who has a small child riding in her shopping trolley. While they are chatting, the child takes a bottle of wine off the shelf and puts it in his mother's friend's handbag, which is on top of her own trolley. Nobody notices him trying to "help" with the shopping. However, his intention is to help get his mother's friend into trouble. At the checkout, the woman is stopped by the shop detective for shoplifting and then questioned by a policeman. The story has a clear beginning, development, and conclusion. A major referential problem designed into this task concerns where the bottle is placed by the child (Yule, 1997).

A similar version of the oral narrative task was produced for a second version of the test. Built into a slightly different narrative plot, this second version depicted a story set in a CD store. This time it was a little girl who went shopping with her mother. She put a CD in her mother's friend's bag. Her mother's friend discovered it and put it back. A twist in this story was that this girl made a second attempt by putting a CD in another customer's bag. When they were leaving the store, the customer was stopped by the shop detective.

The second task was a description task that used a picture which depicted a beach scene (Coughlan & Duff, 1994). The picture contained a number of elements, including three children playing a ball, a fat man reading a newspaper, a boy playing with sand, and a film crew shooting a movie with an audience watching. The participants were expected to be familiar with this beach scene and interested in the topic. The task posed a single demand on the participants—to describe what the people were doing in the picture. The task was a closed task with a convergent goal and a clear inherent structure. A similar version of the story used for the task described a campsite scene. Both versions contained roughly the same number of activities and the participants were expected to be familiar with typical holiday activities such as relaxing on the beach or camping.

The purpose of creating similar versions for both the narrative pictorial task and the picture description task was to allow a counterbalancing design to minimize any practice effect. The participants were randomly assigned to complete the two alternative versions of the oral narrative task with an interval of three weeks between each task.

The third task elicited a narrative account with no picture prompts. The participants were asked to talk about a past episode which they wanted to share, an event that had happened either in the distant or recent past and that stood out in their memory (Larsen-Freeman, 2006). This task had no contextual support and the number of elements varied according to the event being recalled by the participants. The information of the task was shared and the outcome of the task was open, allowing for divergent solutions.

All of the tasks were piloted on a number of native and non-native speakers with the aim of establishing baseline data from native speakers and ensuring that the tasks generated adequate quantities of talk (Bygate, 2001). Feedback from pilot participants was used to revise the task. The trial also aimed to establish a time limit for task completion.

Data Analysis

Data Segmentation

WTC ratio refers to the token of WTC behavior, which was calculated as a ratio of turns for each individual student. In order to calculate the ratio, sums for number of turns for each observed lesson were calculated respectively for teacher-fronted activities, group work, and pair work. Then, the teacher's turns were excluded from the three contexts. The remaining turns for each context were considered the total number of opportunities for the students to demonstrate their WTC behavior. The WTC ratio was then created for each participant by counting within each observed session the number of turns taken and comparing that against the total number of opportunities.

Learners' communication quality in interaction was operationalized as accuracy, fluency, and complexity in learners' speech production in the oral tests. As Ellis and Barkhuizen (2005) point out, investigation of learner language in terms of accuracy, fluency, and complexity is "a particular view of L2 proficiency" (p. 140).

The first step in the analysis of learners' oral production involved segmenting the production into units. Instead of t-unit or c-unit, AS unit (described below) was used in the study because a measure of subordination based on AS units serves as an effective indicator of complexity for advanced level learners (Ellis & Barkhuizen, 2005) and the participants were all at advanced levels of proficiency. An AS unit is defined as "a single speaker's utterance consisting of an independent clause, or sub-clausal unit, together with a subordinate clause(s) associated with either" (Foster, Tonkyn, & Wigglesworth, 2000, p.365).

Independent clause, sub-clausal unit, and subordinate clause are all exemplified below. In the following examples, an AS-unit boundary is marked with a slash (/) and a clause boundary is marked with a double colon (::).

1. An independent clause is minimally a clause including a finite verb:

/You should say that/

/Today she went to ACG/

2. An independent sub-clausal unit consists of either one or more phrases which can be elaborated to a full clause by means of recovery of ellipted elements from the context of the discourse or situation, or a minor utterance, for example:

/bread and with some milk/

/bacterial infection/

3. A sub-ordinate clause consists minimally of a finite or non-finite verb element plus at least one other clause element (subject, object, complement or adverbial).

/the person has felt :: to expose himself :: to do such an experiment/ (3 clauses, 1 AS unit)

/I think :: I'll just stop it/ (2 clauses, 1 AS unit)

When segmenting the participants' production, false starts, functionless repetitions, and self-corrections were included within the AS-unit boundary while acknowledgements such as *yeah*, *yes*, *OK*, and *uhuh* were excluded.

Measuring Accuracy, Fluency, and Complexity

This study adopted widely used measures of accuracy by looking at the percentage of error-free clauses as a general measure and examining target-like use of vocabulary as a more specific measure of grammatical accuracy. An error-free clause means a clause in which there is no error in syntax, morphology, or word order. Errors in lexis were counted when the word used was incontrovertibly wrong. The percentage of error-free clauses was calculated as the number of error-free clauses divided by the total number of independent clauses, sub-clausal units, and subordinate clauses multiplied by 100 (Foster & Skehan, 1996). The percentage of target-like use of vocabulary was calculated as the percentage of clauses without lexical errors and the number of lexical errors divided by the total number of words in the text (Skehan & Foster, 1997).

Fluency was examined in terms of hesitation phenomena or dysfluency. The categories of dysfluency used in this study followed Foster and Skehan (Foster & Skehan, 1996; Skehan & Foster, 1999), which include reformulation, repetition,

replacement, and false starts. Reformulation refers to either phrase or clauses that are repeated with some modification to syntax, morphology, or word order. Repetition includes words, phrases, or clauses that are repeated with no modification whatsoever to syntax, morphology, or word order. Replacement involves lexical items that are immediately substituted for another. False starts are utterances that are abandoned before completion and that may or may not be followed by a reformulation. Fluency was coded as percentage of fluent clauses (clauses without reformulation, repetition, or false start) and the number of fluent clauses divided by the total number of AS units multiplied by 100.

Complexity measures used in this study included both grammatical and lexical complexity. Grammatically, complexity was coded as the amount of subordination/coordination and the total number of separate clauses divided by the total number of AS units (Foster & Skehan, 1996). Lexical richness is also a measure of complexity as some learners may employ simple grammatical structures but a wide range of words in their production (Ellis & Barkhuizen, 2005). Lexical complexity was measured as a segmental type-token ratio, which is the number of different lexical types as a proportion of total number of words used (token). This required dividing a learner's text into segments (eg. 50 words each) and calculating the type-token ratio of each segment. The mean score of all the segments was then calculated (Bygate, 1996; Ellis & Barkhuizen 2005).

To characterize the participants' classroom interaction, microgenetic analysis was adopted because it is a method widely employed in sociocultural research. Firstly, instances of language-related episodes (LRE) in classroom interaction were identified. An LRE is a unit of analysis which entails discussion of meaning or form. It is an instance of collaborative dialogues where students talk about the language they produce, question the language use, and either self-correct or other-correct their language production (Swain & Lapkin, 1998). An LRE entails both discussion of meaning and form (Swain, 2000, 2001). In Swain and associates' studies, there is a distinction between lexis-based and form-based LREs. Lexis-based LREs involve searching for vocabulary or choosing from competing vocabulary. Form-based LREs involve focusing on spelling or any aspect of morphology, syntax, or discourse. In the present study, form-based LREs also included discussing an aspect of phonology. Identification of LREs was then combined with an analysis of the way the students helped each other in peer interaction through assisted performance, using a subset of Ohta's (2001) scale.

Results

WTC and Communication Quality

The Wilcoxon signed ranks test, a non-parametric equivalent of paired sample t-test, was employed to assess differences in the accuracy, fluency, and complexity measures between the two oral tests. The results from the Wilcoxon signed ranks test indicated no significant differences between the two test results in terms of accuracy, fluency, and complexity ($Z = -0.524$, $p = 0.6$). The Spearman rank-order correlation coefficient was then employed to identify relationships between WTC ratios and communication quality as measured in terms of accuracy, fluency, and complexity. Table 3 presents the coefficients as well as the mean and standard deviation for each variable. Spearman rank-order correlation shows strong positive correlations between the WTC ratio in Week 3 and complexity in the second test ($r= 1.000$, $p< 0.01$). The significantly strong positive correlation between WTC ratio and the complexity measure in the second test appears to indicate that the students with high WTC might tend to produce more complex utterances than those with low WTC. Since the study only lasted three weeks and there was not sufficient data, these findings only offer a very limited perspective of WTC behavior.

Table 3. Correlations between WTC Ratio and Task Performance in Oral Tests

Variables	Mean	SD	Week 1 Rank of WTC Ratio	Week 3 Rank of WTC Ratio
Pre-test accuracy	68.65	10.9	-.600	
Pre-test fluency	53.4	16.6	-.086	
Pre-test complexity	1.45	0.2	-.429	
Post-test accuracy	72.15	9.7		.257
Post-test fluency	46.78	20.3		.143
Post-test complexity	1.51	0.28		1.000**

**p<0.01

Table 4. Correlations between WTC Ratio and Length of Turn

Variables	Mean	SD	Turn Length Week 1	Turn Length Week 2	Turn Length Week 3
Week 1 Rank of WTC ratio	12.03	3.82	*-.600*	.143	-.543
Week 2 Rank of WTC ratio	12.87	2.87	-.600	*-.486*	.200
Week 3 Rank of WTC ratio	12.02	4.97	-.371	.429	*-.600*

**p<0.01

To explore a possible relationship between WTC and actual engagement in communication, length of turn for each learner in class interactions was considered as another variable to measure engagement in communication. The results from the Friedman test showed the difference in length of turn from Week 1 to Week 3 as significant (χ (2, n=6) =8.333, p <0.05). This could be due to the different tasks used in class for each week, which involved group/pair work and teacher-fronted activities to different degrees. The Spearman rank-order correlation coefficient was employed to identify relationships between WTC ratio and length of turn in classroom interaction in each week. These results, as well as the mean and standard deviation for each variable, are reported in Table 4. The Spearman rank-order correlation indicates no clear correlations between WTC ratio and length of turn in class interactions in any of the three weeks. In other words, there seems to be no clear relationship between initiation of communication (WTC) and actual engagement in communication.

WTC and Classroom Interaction

This section seeks to demonstrate how a learner's WTC relates to the way he or she interacts in class and the kinds of opportunities for communication he or she chooses. An analysis of the language-related episodes (LREs) in transcripts of classroom interaction from the 3 weeks generated some interesting results concerning learners' WTC and participation in classroom interaction with the

teacher and peers. Below are two examples showing the way the students sought and received assistance in communication with peers and the teacher.

Example 1 contains two examples of peer assistance. In line 1, Shu-wei had difficulty with vocabulary and Student Y provided the appropriate word in line 4. Another example is co-construction. Student A provided the first part of the sentence in line 9, which Shu-wei picked up and completed in line 10. This co-construction resulted in "vertical construction" (Ohta, 2001), in which peers collaboratively produce an utterance by alternately providing words or phrases to the growing utterance.

Example 1

1 S: And what (..) what country (…) we can ask XX next questions, how to say what's fact of after you no no no, how do you think the fact when people after

2 Y: When people are drunk

3 S: Yeah no after drunk maybe

4 Y: Hangover

5 S: Hang hangover

6 Y: After you drink XX

7 S: Yeah yeah effect your health or

8 Y: XX

9 A: What you do you know any effect?

10 S: On yourself on yourself after your drink

11 A: After your drinking

12 Y: On your health XX

Example 2 shows how the students handle a communication problem by consulting the teacher. Joselito and Fatima failed to resolve a discrepancy in their answers in lines 2 to 6. They turned to the teacher for help. The teacher provided the correct answer in line 10 together with an explicit explanation in line 14. Seeking assistance from the teacher helped them notice the problem and receive further information regarding the item in question. By asking the teacher, Fatima assisted her partner Joselito and also benefited herself. The difficulty with the choice of correct verb can be regarded as an affordance for both Fatima and Joselito. The triadic interaction with the teacher provided Fatima an opportunity to see the information in a new light. Fatima's clarification about the choice of the verb with the teacher also reshaped and refined Joselito's knowledge.

Example 2

1 J: At which age have you gone the surgery?

2 F: Have you done have you done?

3 J: Have you gone I think

4 F: Gone?

5 J: It's not it's not done because done is the one who the doctor done the surgery but you gone

6 F: Gone gone?

7 J: You can ask T

8 F: T, a question, it's here and here, it will be like how many how many times did you do or have you gone

9 J: how many times have you gone

10 T: How many times have you had

11 F: Have you OK

12 T: Have you had plastic surgery

13 F: At which age have you had also

14 T: Yes, have you had present perfect ‘cos we’re talking about in their life time

15 F: Your or a plastic surgery

16 T: How many times have you had a plastic surgery

Table 5 presents the number of assisted performance episodes in peer interaction for each student during the 3 weeks and Table 6 shows a comparison between the participants’ instances of assisted performance and their WTC ratios in each lesson. According to Ohta’s (2001) scale, co-construction represents a more implicit form of assistance, but asking the teacher for help is the most explicit type. As Table 5 shows, among all the instances of assisted performance over 3 weeks, Shu-wei, the student with the lowest WTC had the highest number of instances of receiving peer assistance. He co-constructed answers twice, asked for the teacher’s help twice, and asked for his peer’s assistance five times. Most of the time, the assistance was more on the explicit side. Fatima, the one with the highest WTC only had three instances of assisted performance.

Comparing these two students, Shu-wei, the student with the lowest WTC in pair/group work seemed to be more dependent on peers to do tasks and to offer minimum suggestions. On the other hand, Fatima, the student with the highest WTC in both whole-class situation and pair/group work, appeared to be a more independent learner who would initiate conversations and share opinions more frequently. The time for this 3-week study was too short to make any reliable statements as to whether students with low WTC, in pair/group interaction in particular, would tend to rely more on peer scaffolding and whether students with high WTC would be more likely to initiate conversations, give explanations, and express opinions. There seems to be a relationship between learners’ situational WTC and type of contributions they make in class participation as well as the assistance they seek and receive from the teacher and their peers in classroom interaction. Further inquiry is needed to explore these possible relationships.

Table 5. Assisted Performance

Student	Seek help	Seek teacher's help	Receive assistance	Co-construct	Explain	Total
Fatima	1		1	1		3
Joselito				2		2
Umar	1			2	1	4
Ines		1	1	2		4
Takuya			1	3		4
Shu-wei		2	5	2		9
Total	2	3	8	12	1	26

Table 6. Comparison between WTC and Assisted Performance

Student	Number of assisted performance	WTC		
		Week 1 Ratio	Week 2 Ratio	Week 3 Ratio
Fatima	3	18.6	17.9	20.3
Joselito	2	9.3	13.2	9.3
Umar	4	10.6	10.2	14.4
Ines	4	10.4	10.9	10.6
Takuya	4	14.6	11	11.8
Shu-wei	9	8.7	14	5.7
Mean	4	12	12.9	12

Conclusions

The present study is part of a larger study and it was framed only as a small-scale exploratory study that reported on preliminary findings. Overall the findings of this study, notwithstanding its limitations, would shed light on possible relationships between learners' WTC and actual classroom interaction.

The significant positive correlation between the WTC ratio and complexity in the second oral test seemed to suggest that learners with higher WTC would be inclined to produce more complex language than the students with lower WTC. However, there appeared to be no clear correlations between WTC and length of turn in class interactions. Since the study only lasted three weeks and there was not sufficient data, these findings only offered a very limited perspective on WTC and language use.

The qualitative analysis of students' classroom interaction indicates a relationship between learners' situational WTC and the type of contributions they make in class participation and the assistance they seek and receive from the teacher and their peers in classroom interaction. Further inquiry is needed to explore this possible correlation. Further research is also required to investigate the relationship between the factors underlying their intention to participate and the quality of their participation that might have potential for language development.

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Appendix: Classroom Observation Scheme

WTC behavior categories (basis of tally chart for observation of individual students)

In the presence of the teacher

1. Volunteer an answer (including raising a hand).

2. Give an answer to the teacher's question:

(a). Provide information – general solicit.

(b). Non-public response.

3. Ask the teacher a question.

4. Guess the meaning of an unknown word.

5. Try out a difficult form in the target language (lexical/morposyntactic).

6. Present own opinions in class.

7. Volunteer to participate in class activities.

Student to student OR student to class (part of a lesson or informal socializing)

1. Talk to the neighbor (explain something, ask a question or initiate a conversation).

2. Talk to a group member

3. Talk to a student from another group

Additional categories for pair and group work

1. Guess the meaning of an unknown word.

2. Ask group member/partner a question.

3. Give an answer to the teacher's question.

4. Talk to the neighbor/group member/a student from another group.

5. Try out a difficult form in the target language (lexical/morphosyntactic)

6. Present own opinions in pair/group.