Willingness to communicate as an assessment?

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This paper examines to what extent 'Willingness to Communicate (WTC)' can be used as an alternative assessment rather than the current methods used to measure students' communicative competence. Responses to a "Willingness to Communicate Questionnaire" (Sick, 2001) were collected from 83 first-year university students taking the same English course. The questionnaire looks at three dimensions: willingness, confidence, and anxiety. The students were given the same questionnaires both at the beginning and at the end of the course and the differences were compared. In addition, the relationship between WTC and the students' final grades was analysed. In the results, some confidence increase was found, while willingness and anxiety did not change much; moreover, confidence change seemed to relate to academic major. Furthermore, it is shown that the students' grades for the semester did not reflect change in willingness but rather reflected willingness at the end of the course only.

　この論文は、「他者と対話する意思」（Willingness　To　Communicate,（WTC））を用いたモデルが、コミュニケーション能力（communicative competence）を測定する評価法に代わるものとして、利用可能かを検証するものである。Sick　(2001)の評価法のWTCアンケート回答を同じ英語コースを取る83名の大学1年生から収集した．アンケートはコミュニケーションに関する意思・自信・緊張の三つの面について調べるものである．同じアンケートをコースの前後に行いその違いを比べ，更に学生の最終成績との関係についても調べた．結果は，自信の増加傾向は見られたが，意思と緊張については変化は見られなかった．またこの自信の変化は学部による違いが見られた．更に今回の学生の最終成績は，意思の増加よりも，コース終了時の意思の強さを反映していることが分かった．

In recent research on motivation, a new concept has been emerging which is Willingness to Communicate (WTC). MacIntyre, Baker, Clement, and Conrod (2001) defined WTC as the intention to initiate communication, given a choice. Yashima (2002) defined WTC as a concept useful in accounting for individuals' L1 and L2 communication. However, WTC does not deal with communication processes. It simply explains one's desire to communicate.

WTC was originally created for L1 communication use by McCroskey and Richmond (1987) and was further applied to L2 communication (MacIntyre, 1994; MacIntyre et al, 2001; Yashima, 2002; Yashima, Zenuk-Nishide, & Shimizu, 2004). Research investigating correlations between WTC in L1 and L2 turned out to show a negative correlation. The findings suggested, due to issues with social and psychological distinctions between L1 and L2, the need for constructing a unique WTC model for L2. Macintyre, Clement, Dörnyei, & Noels (1998) presented a pyramid-shaped heuristic model to explain how WTC in L2 conceptually takes place. The model has six layers and twelve variables. The first layer (at the top of the pyramid) is communication behaviour which represents the final phase to actually communicate in L2. Therefore, the remaining layers of the model, which include elements such as behavioural intention, situated antecedents, motivational propensities, affective-cognitive context, and social and individual context, support this top layer. The model is well represented in order to reveal the complexity of L2 communication. L2 communication is far more complicated than L1 communication in terms of confidence, social factors, and other factors. Past research emphasized largely the acquisition of communicative competence; however, MacIntyre et al., (1998) stated,

Current emphasis on communicative competence may pose a similar problem, producing students who are technically capable of communicating, particularly inside the classroom, but who may not be amenable to doing so outside the classroom. We suggest that a suitable goal of L2 learning is to increase WTC. (p. 558)

In this article, we will describe how first-year university students strengthened their confidence and willingness and reduced their anxiety about communicating at the end of the semester. We will discuss whether the WTC Questionnaire can be used as an alternative assessment. This research also examines the differences among four faculties at our university. The result of the analysis may help teachers in planning effective lessons for students in different faculties.

Research methods and participants

The participants in the study were 83 first-year university students with four different majors: Engineering, Science, Agriculture and Humanities. All the English classes in this university were streamlined and the participants were all in level 4 class out of 5 levels, level 1 being the lowest. Ninety-minute English classes met twice a week, and overall the class met 30 times in one semester. At the university, English courses have been designed to teach four skills and enable students to "actually" communicate in English. Therefore, a WTC Questionnaire might be a more appropriate means to assess the students than the current methods used to test students' communicative competence, as proposed by MacIntyre, Clement, Dörnyei, & Noels (1998).

Procedure

We compared the results of a WTC Questionnaire (Appendix 1) that was given before and after the English course. The questionnaire was developed by James Sick and Paul Nakasaka (2000). Sick and Nakasaka mentioned that the questionnaire attempts to query a willingness to perform realistic communicative tasks our learners might encounter in their high school English classroom or daily life in the Tokyo area. Forty-one communicative tasks were included in the questionnaire, divided into four conceptual types: in-class speaking (both pair and public speaking), in-class writing, out-of-class speaking (both pair and public speaking), and out-of-class writing. The tasks were randomly ordered and asked in Japanese. On a scale from 1 to 10, students were asked to rate three variables: confidence, anxiety, and willingness. For instance, students gave a high score to "confidence" and "willingness" and gave a low score to "anxiety" if they were confident they could do it. Finally, the scores for the pre- and post-questionnaire were compared.

This research was done in the fall semester of the 2004-2005 school year. The pre-questionnaire was done at the beginning of October 2004 and the post-questionnaire in February 2005 using regular class time.

Results and discussion

The data was analysed to examine the following research questions:

1. Is there any improvement in WTC after the four-skills English course?

2. Is there any WTC variation according to students' majors?

3. How is willingness related to confidence and anxiety?

4. Were the students' grades reflected in WTC?

Overall results

A summary of overall results of the pre- and post-test ratings is shown in Table 1. The ratings were individually calculated by adding up all the ratings given to 41 questions on a 1 to 10 scale. Thus, the maximum total rating of a participant was 410. The mean ratings indicate the means of each total rating by the 83 participants. Among the three dimensions measured in the current study, i.e. willingness, anxiety, and confidence, only the confidence rating showed a significant difference between pre- and post-tests ($t(82)=4.68$, $p < .001$, paired sample t-test): As seen in Table 1, the mean confidence rating of 83 participants rose by 21 points in the post-test, while the other two mean ratings did not improve significantly.

Table 1. Overall results

N= 83	Mean Pre-test rating	Mean Post-test rating	Standard Deviation	t-score	Correlation r
Willingness	200	205	44.0	1.12	.70
Anxiety	237	228	43.6	1.86	.58
Confidence	205	226	40.5	4.68	.71

Note: maximum rating is 410 for 41 graded questions; for willingness and confidence a score of 10 means most willing and confident, but for anxiety 10 means most anxious

In addition, strong correlations between pre- and post-test ratings were found for all three dimensions (all p < .001, paired sample correlation). This suggests that the ratings between pre- and post-tests were consistent with each other, thus supporting the reliability of rating responses by each participant.

Therefore, the overall result suggests that there was improvement in students' confidence to communicate but not in their willingness to communicate after the current course.

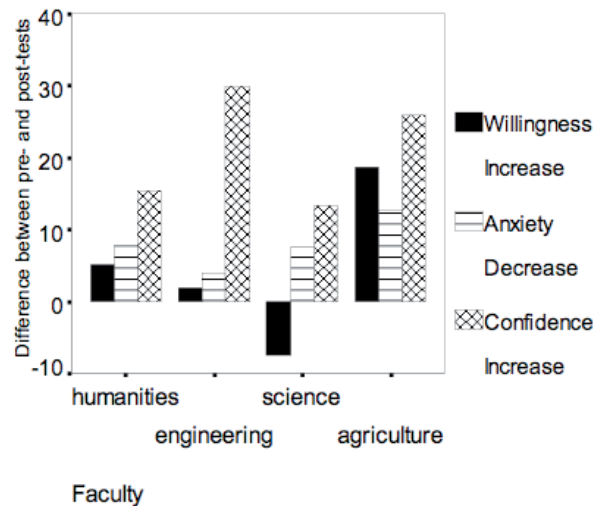### Improvement differences by students' academic majors

The collected responses were also analysed according to the students' academic majors, i.e. their faculties: Humanities, Engineering, Science, and Agriculture. Table 2 shows the mean ratings of pre- and post-tests calculated by each academic major group.

In order to examine possible improvement on each of the three dimensions clearly, the differences between pre-test

Figure 1. Comparison of improvements by students' majors

Table 2. Mean ratings by students' academic major

	Willingness		Anxiety		Confidence	
	pre	post	pre	post	pre	post
Humanities	197	201	256	247	212	227
n=22	(58)	(54)	(48)	(44)	(64)	(55)
Engineering	180	182	222	218	186	216
n=16	(35)	(39)	(32)	(36)	(29)	(31)
Science	213	206	229	222	212	226
n=20	(69)	(57)	(56)	(66)	(58)	(63)
Agriculture	204	223	236	224	206	232
n=25	(53)	(68)	(35)	(44)	(52)	(56)

Note: max = 410; standard deviations are in brackets

ratings and post-test ratings of each student were observed; the willingness increase (the post-rating minus the pre-rating), anxiety decrease (the pre-rating minus the post-rating), and confidence increase (the post-rating minus the pre-rating) were calculated. The results revealed that there are tendencies particular to majors (see Figure 1): the engineering students showed a great confidence increase, their only improvement, while agriculture students showed good improvement on all dimensions. Moreover, the humanities students moderately improved on each dimension and the science student ratings seemed similar to those by humanities students except for their unexpected mean willingness decrease.

Therefore, although a significant difference between pre- and post-ratings was found on confidence rating in the overall result (see Table 1), it seems that the difference could be largely attributed to the engineering and agriculture students' confidence increase. In addition, the dramatic confidence increase (30 points) by the engineering students may have been caused by the fact that their confidence rating before the course was comparatively lower than the other student groups. As seen in Table 2, in the post-rating, their mean confidence rating after all approached those of the other groups, although it is still lower. In comparison, no student group showed anxiety decrease, which is the same as examined in the overall result. In summary, willingness itself increased only in the agriculture students; and the agriculture and engineering students increased in their confidence; however no students decreased their anxiety to communicate in English after one semester in the current four-skills English course.

### Relationships among the three dimensions

A previous study by Sick (2001) examined correlations of willingness ratings with confidence and anxiety ratings as well as other factors such as study habits, integrativeness, etc. It showed strong correlations between willingness and confidence and also between willingness and anxiety, as well as other factors. Thus, he suggested that willingness could be influenced by confidence and anxiety as well as the other factors. In the current study, a correlation between willingness increase and confidence increase was supported as a whole group (r= .58, p < .001), however there was no correlation between willingness increase and anxiety decrease (r= . 05) (Figures 2 & 3).
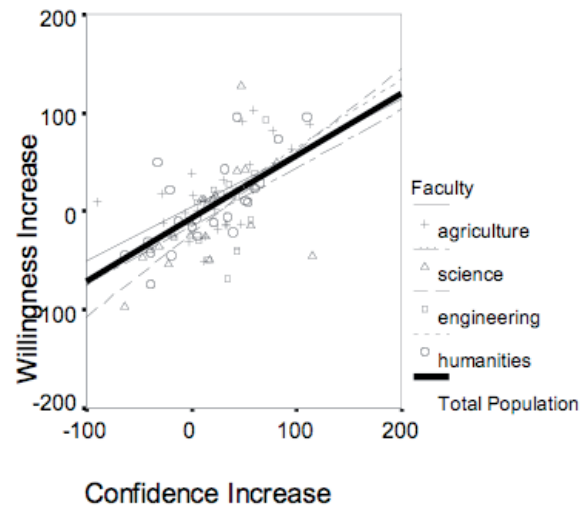
Figure 2. Relationship between willingness and confidence

Furthermore, an analysis according students' faculties found that the strongest correlation between willingness increase and confidence increase was in the humanities student group (r= .71, p < .001) and the weakest correlation in the engineering student group (r=. 49, p = .057, two-tailed) (see Figure 2). This indicates that although the engineering students increased in their confidence greatly, their willingness did not increase as much.

Unlike Sick's result, no correlation was found between willingness increase and anxiety decrease in any student group. Rather, the result suggested very different tendencies among the student groups. As can be seen in Figure 3, although the
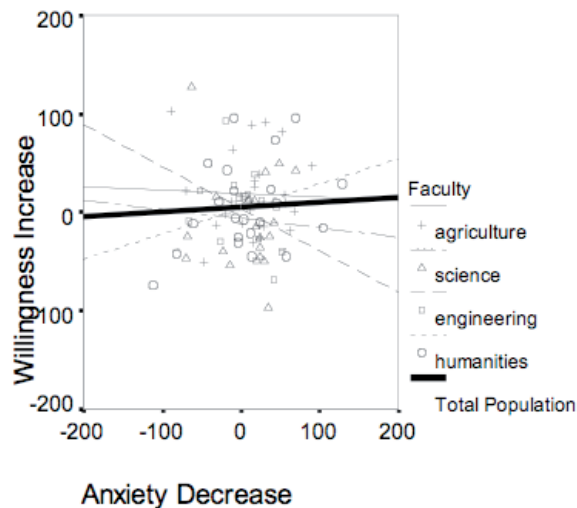
Figure 3. Relationship between willingness and anxiety

humanities students seemed to indicate a normal correlation in which the less anxious they are, the more willing they may be, the engineering students tended to show a negative correlation (r= -.36, p > .05), suggesting that the more anxious they are, the more willing they can be. In our experience, they seem to prefer to do more challenging activities or tests compared to the other faculty students; however, this tendency requires further investigation to be interpreted.

Thus, the relationship between willingness and confidence appears fairly simple where the more confident they will become, then the more willing they will be, but not between willingness and anxiety as it seems that the relationship can vary by their individual or academic backgrounds.

WTC and grades

Finally, the relationship between WTC ratings and the grades given to students was examined in order to see WTC as an object of assessment. At first, the post-test willingness ratings were analysed with the raw grading points that students received after the course. Some correlations were found; for example, the agriculture students showed a statistically significant correlation. However, when the relationship between willingness increase and grades was looked at, no correlation was found, in any student group. This implies that those who had greatly increased willingness after the course did not necessarily get higher grades; rather the students who showed more willingness at the end of the course received higher grades. Thus, the involvement of WTC in grading should be useful to assess student improvement and effort during the course.

Summary

According to the research questions proposed above, the current results can be summarised as follows:

1. Some improvement was found in confidence to communicate in English but not in willingness.

2. There are great variations according to students' academic majors. The variations were seen in confidence increase.

3. Willingness increase correlated with confidence

increase so that willingness can be affected by confidence as Sick (2001) claimed; however, the relationship between willingness and anxiety was complicated and showed no clear association. Interestingly, a possible involvement of academic major was seen, especially for the difference between the humanities and engineering students.

4. Grades only reflected willingness at the end of the course, not willingness increase throughout the course.

Conclusion

This study provided detailed analysis of the WTC questionnaire data and presented useful findings. Firstly, it claimed that academic major could be one variable which affects the tendency of WTC improvement, although it needs further investigation to confirm the claim by examining diverse students. Secondly, responding to Sick's (2001) results, the relationship between willingness and confidence was confirmed as expected but not that of willingness and anxiety. Further, from the assessment point of view, it showed that current grades did not correlate with student improvement in WTC, and it was proposed that grading should involve WTC to assess students' improvement.

Some suggestions for further study should be mentioned. The current analysis focused on replicating Sick's study in university students, and analysis on question items should be followed up in further study. Moreover, four instructors were involved in teaching the students so the influence of different instructors in the current data cannot be ignored.

Furthermore, the questionnaire provided by Sick (2001) was targeted for high school students, so some adjustment would be advantageous for use with university students in the future.

In conclusion, the WTC questionnaire is very useful to examine how students are feeling about communicating in English and how they change before and after the course. However, in order to use it as an object of assessment, it needs further research on question items, relationships with other factors, and exactly how to apply it to grading.

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Appendix 1

Willingness to communicate questionnaire

Name_____ Class_____ Number_____

自信	緊張	やる気
10 簡単にできると思う	10 すごく緊張する	10 機会さえあればいつでもする
9	9	9
8	8	8
7	7	7
6	6	6
5 たぶんできると思う	5 すこしは緊張する	5 場合によりけり
4	4	4
3	3	3
2	2	2
1 絶対できないと思う	1 ぜんぜん緊張しない	1 できれば避けたい

つぎのような英語を使う機会があったとして、それぞれの行動についての「自信」「緊張度」「やる気」を10段階であらわして下さい。「自信」とはその時、英語を的確に使う自信があるかないかを、「緊張度」はそうする時とても緊張するかあるいはしないか、「やる気」はそういう機会があったらすすんでするか、あってもしない、避けるかを答えてください。

1 　日本人の先生にテープのダビングを頼む。

2 　リスニングテストのテープが速すぎて聞き取れなかったという文句を書く。

3 　宿題として「死刑制度について」のエッセイを書く。

4 　日本の学校生活に関するアメリカのテレビの取材に応える。

5 　英語圏の国のホテルを予約するために電話をかける。

6 　学校新聞の記事のためネイティヴスピーカーの先生にインタヴューする。

7 　ペアワークの相手に向かって今何時かを言う。

8   宿題として夏休みの10大イベントを書く。

9   電車で隣に座った外国人に声をかける。

10   ネイティヴスピーカーの先生に単語の意味をきく。

11   英語しかできない友達をパーティーに招待するために電話をかける。

12   ネイティヴスピーカーの先生に休んでいた間のプリントが欲しいというメモを書く。

13   夏休み中、宿題として英語日記をつける。

14   ペアワークの相手に向かって自分が見たテレビ番組のことを話す。

15   立ってクラス全員に対して自分が見たテレビ番組のことを話す。

16   レストランでメニューが読めず困っている様子の外国人を助けてあげる。

17   時計を持っていないとき外国人に時間を尋ねる。

18   スーパーで店員の言うことがわからず困っている様子の外国人を助けてあげる。

19   英語圏の国のホテルを予約するためにファックスを書いて送る。

20   アメリカから本校を訪問しに来たスポーツチームに学校を代表して歓迎の挨拶をする。

21   宿題として自分の見た映画の感想文を書く。

22   英語しかできない友達が初めて来るので自分の家までの道順を書く。

自信　緊張　やる気

23   前に出て休み中の旅行についてネイティヴスピーカーの先生の質問に答える。

24   立ってクラス全員に対して2分間、自分の夏休みの思い出を話す。

25   向こうでしか売っていないレアもののCDを通販で買うためにアメリカのCD店に電話で注文する。

26   英語圏の国から来た少人数の団体を東京一日観光に連れて行く。

27   ホストファミリーに電話をかけて滞在させてくれることに礼を言う。

28   ペアワークの相手に向かってある場所への行き方を地図を使って教える。

29   ペアワークの相手に向かってSで始まる英単語を5つ言う。

30   ネイティヴスピーカーの先生にテープのダビングをたのむ。

31   日本人の先生にクラスルーム・イングリッシュを使って単語の意味をきく。

32   立ってクラス全員に対してTで始まる英単語を5つ言う。

33   ペアワークの相手に向かって2分間、自分の夏休みの思い出を話す。

34   駅で困っている様子の外国人を助けてあげる。

35   宿題として自分の家族のことについてエッセイを書く。

36   宿題として自宅から学校までの道順を書く。

37   英語圏の国のペンパルに英語で日本のことや自分について手紙を書く。

38   ホームステイのホストファミリーに行く前に自己紹介の手紙を書く。

39   向こうでしか売っていないレアもののCDを通販で買うためにアメリカのCD店に注文書を書く。

40   英語しかできない友達に英語で年賀状を書く。

41　日本人学生の英語スピーチコンテストに出場する。ジャッジ
　　はネイティヴスピーカー。

42　本校に入学してから学校以外で英語を勉強した方法(場
　　所)は次のうちどれですか?(なければ空欄のまま)

　　○ESS club　　　○課外授業　　　○英会話学校

　　○テレビ／ラジオの英会話

　　○その他(　　　　　　　　　　　　　　　　　　)