

Relationships among motivation, psychological needs, FL WTC, and Can-Do statements of English language learning based on Self-Determination Theory: Preliminary study of non-English-major junior college students in Japan

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Abstract

本研究は、英語を専攻としていない日本人短期大学生 163 名を対象として、動機づけ、心理的欲求、外国語での自発的にコミュニケーションを図る意思 (八島, 2009) (FL WTC)、英語力の認識 (Can-Do statements [STEP]) の関係を明らかにすることを目的としている。具体的には、自己決定理論を動機づけの枠組みとして用い、1) 内発的動機づけの保持に最も影響を与えている心理的欲求を明らかにし、2) 高い FLWTC を持つことと内発的動機づけとの関わりを探る。更に、3) 英語力の認識 (Can-Do statements) と高い内発的動機づけの保持との関わりについても示していく。調査の結果、1) 心理的欲求の中でも特に有能性の欲求が満たされることが、最も内発的動機づけに影響する要因であることが明らかとなり、更に 2) 高い FL WTC を持つ学習者は特に自己決定度の高い外発動機づけと関係を持つことが分かった。最後に、3) 自己の英語力に対して肯定的な認識を持つ学習者は、高い内発動機づけを保持することが示された。このことから、授業内で「出来る」と感じる事が内発動機づけの高まりを助け、更に自発的に英語でコミュニケーションを図る意思を保持することは、自己決定度の高い外発的な動機づけとなることが示唆された。一方、肯定的な英語力の認識は内発的動機づけと最も強い関係を持つことから、教育の場においてコミュニケーションの意思を高める働きかけのみではなく、実際に英語を使用する場面を増やすなどし、学習者が自身の英語力に肯定的な認識を保持する機会を設けることが重要であると考えられた。

Key words: self-determination theory, willingness to communicate, motivation

I. INTRODUCTION

Motivation has been given much attention as one of the most influential variables in the process of Second Language Acquisition (SLA) (e.g., Dörnyei, 2005). Since motivation is changeable and not fixed, educators and researchers in Japan hope to intervene and help to enhance learners'

motivation for English learning. Self-Determination Theory (SDT) (Deci & Ryan, 1985) is a theoretical framework that explains motivation. It focuses on “inherent growth tendencies and innate psychological needs that are the basis for [people’s] self-motivation and personality integration” (Ryan & Deci, 2000, 68). Since teachers want students to have higher intrinsic motivation, SDT has been fairly well used in SLA research.

Another variable that influences SLA is Willingness to Communicate (WTC). WTC is a factor that determines whether or not a learner is willing to take advantage of an opportunity to speak when it arises. It is also important for foreign language (FL) learners who do not have much opportunity to practice their FL in daily life. Learners who have a higher WTC take greater advantage of opportunities to communicate. Consequently, they acquire the FL more efficiently. An increasing number of researchers (e.g., Yashima, 2002; Yashima, Zenuk-Nishide, & Shimizu, 2004) have tried to identify a factor that affects whether or not people have high FL WTC. Moreover, recent research has focused more specifically on FL WTC in classroom situations. The results help us understand more about FL WTC in classroom situations in which learners actually learn and use the target language.

Some research has been conducted on FL WTC and SDT separately; however, research that uses both concepts has not been conducted. Because SDT takes into account the psychological needs of learners, the results of such research can provide insight into how teachers in the field can help elevate students’ motivational levels. It is therefore a worthwhile motivational framework for FL WTC research --to understand how and when learners are willing to communicate in English. The present research is focused on the relationships between motivation and psychological needs. It also looks into the relationship of FL WTC and the perceived competence of English with the variables used in the SDT framework.

1. Motivational research using SDT

SDT is a grand theory of motivation, used not only in SLA but also in other fields. The theory assumes three psychological needs: autonomy, competence, and relatedness. The more the people are fulfilled with regard to these psychological needs, the more self-determined the motivation they possess. After the 1990s, many SLA researchers of motivation adopted theories used in educational psychology. They tried to formulate a deeper understanding of second language (L2) learners’ motivation (e.g., Dörnyei, 2005) in classroom contexts.

SDT was first applied by Noels, Clément, and Pelletier (1999) to foreign language teaching. They studied the effects of teaching style on learners’ motivation. They found that students who perceived teaching style to be more informative and less controlled tended to have higher intrinsic motivation. Many educators and researchers welcomed this line of research as it has pedagogical implications that are readily applicable to classroom practice. With Noels leading the way, several studies have been conducted using SDT in L2 settings (e.g., Noels, Clément, & Pelletier, 2001; Noels, Pelletier, Clément, & Vallerand, 2000).

In FL settings, on the other hand, the research foci have had more to do with the effects of

classmates rather than those of educators. It is also true that relationships with classmates play a big role in classroom management. Hiromori (2003) first performed research using SDT with 256 first-year Japanese high school students. He set the variables of motivation and psychological needs for competence, autonomy, and relatedness with classmates. The SDT model was also fit for Japanese learners, and he found that the fulfillment of competence was the most influential variable for intrinsic motivation. Hiromori (2004) tested a hypothesis using 177 junior high school students. He hypothesized that the sense of competence and relatedness affected autonomy and resulted in high self-regulated motivation. As a result, only competence, not relatedness, had a significant correlation with autonomy, which in turn had a significant correlation with intrinsic motivation.

2. FL WTC research

MacIntyre and Charos (1996) first started WTC research in the field of SLA, which was originally part of the fields of communication and pathology in one's first language (L1). After 2000, FL WTC research began to be conducted with Japanese English learners (e.g., Yashima, 2002; Yashima, et al., 2004). Yashima (2002) investigated predictive variables of FL WTC with 377 Japanese university students who chose English as their foreign language. The study shows that L2 learning motivation leads to confidence in L2 communication which is a combination of anxiety and competence. The confidence in L2 communication, in turn, strongly affects FL WTC. Yashima et al. (2004), who conducted research with 160 participants, showed similar results. However, since WTC was originally applied to L1 communication, situations set up in the questionnaire items did not suit the requirements of FL learners' WTC in classroom situations. Therefore, some researchers started to create new items for classroom situations (e.g., Weaver, 2005).

II. PURPOSES OF THE PRESENT STUDY

For students who do not major in English, intrinsic motivation does not come naturally in foreign language classrooms. They are usually forced to do what they are not particularly interested in because English is a requisite subject for graduation. As a result, they may face difficulty finding pleasure in learning. One of the purposes of the present study is to investigate the factors that contribute to the creation of a learning environment that can enhance self-determination while learning English and foster intrinsic motivation among Japanese learners who have not majored in English.

Another purpose of the present study is to investigate the relationship between intrinsic motivation and WTC. WTC is defined as the tendency to initiate communication when given a choice, while intrinsic motivation refers to the "motivation that deals with behavior performed for its own sake in order to experience a pleasure and satisfaction" (Dörnyei, 2001, p. 27). Students are trying to communicate in English in the classroom for many reasons. Some students might be willing to communicate as they have instrumental reasons such as gaining good grades, but others may be willing to communicate because they enjoy speaking or writing in English. Therefore, it is worthwhile to consider the relationships between motivational tendency and WTC, to see the

motivation types that are most closely related to the tendency to communicate in English.

Research Objectives

Three objectives were investigated as the goals of the present research, which was conducted with non-English-major Japanese female junior college students. The objectives were as follows:

- (1) What are the most essential psychological needs (competence, autonomy, and relationship with classmates and teachers) for preserving higher intrinsic motivation?
- (2) Does having a high FL WTC relate to maintaining high intrinsic motivation?
- (3) Does having a positive perception of English competence relate to maintaining high intrinsic motivation and FL?

III. METHOD

1. Participants

One hundred and sixty three participants were enrolled in the study. They were all Japanese female first-year junior college students majoring in Preschool Education. Demographic questions showed that 87 students (53%) answered either “I am not very good at English” or “I am not good at English,” 38 students (23%) answered “neither,” and 39 students (24%) answered either “I am very good at English” or “I am good at English.” This implied that the students’ confidence did not incline very much toward learning English. In addition, 89 students (55%) did not have any experience in overseas travel, and 64 students (39%) had less than a week’s experience overseas, which had been provided, in part, on school trips during high school.

2. Procedure

The study was conducted in December 2008; the questionnaire was administered by classroom teachers. Four compulsory English classes were subjects of the research. The classes were taught by different teachers, but the content and the purpose were the same.

3. Materials

FL WTC (speaking: $\alpha = .831$, writing: $\alpha = .889$)

Twenty items (11 items for speaking and 9 items for writing) were adapted from Weaver (2005) and translated into Japanese. These items measured learners’ FL WTC in classroom situations. The situations were divided into two kinds of activities necessitating the use of different skills: speaking or writing. Examples of the items are “Do a role-play in English at your desk” and “Write a self-introduction in English.”

SDT scales

➤ *Motivation*

Twenty items related to motivation were taken from Hiromori (2006). Some of the items were

rephrased to better suit the participants of this study. These items were prepared based on SDT. Five subscales were estimated: *intrinsic motivation*, *identified regulation*, *introjected regulation*, *external regulation*, and *amotivation*. There were four items in each subscale.

➤ *How much psychological needs were fulfilled*

In accordance with SDT, the three psychological needs were set as *autonomy*, *competence*, and *relatedness*. In the present study, a new subscale, *relatedness with teachers*, has been added using Noels et al.'s (1999) concept, since teachers also play an influential role in the classroom. Five items each were assigned to *autonomy* and *competence*, and four items were assigned to *relatedness with classmates*, adapted from Hiromori (2006). Some of the items were rephrased to suit the participants of this study. Five items were also added for *relatedness with teachers*. Examples are: "The English teacher creates an atmosphere that makes it easy to ask questions" and "I think my English teacher conducts class in a way that conveys understanding to the students."

Perceived competence (speaking: $\alpha = .919$, writing: $\alpha = .945$)

Six items for speaking and five items for writing were adapted from STEP's Can-Do lists. All of the items were taken from Grade 2. Examples of the items are: "I can explain a familiar situation (e.g., reasons for being late or for absence)" for speaking, and "I can write a composition that introduces my school," for writing.

IV. RESULTS

This report shows the statistical analyses and the results in three separate sections in order to address the three research objectives. First, before addressing the objectives, the results of exploratory factor analyses for motivation and psychological needs are shown (Sections IV.1 and IV.2). Second, the result of a multiple regression analysis is shown in order to address research objective 1 (Section IV.3). Finally, descriptive analyses and correlations are reported to address research objectives 2 and 3 (Section IV.4). The *SPSS Statistics Package 17.0* was used for all analyses.

1. Exploratory factor analysis for motivation

Before an exploratory factor analysis of intrinsic and extrinsic motivation items was carried out, using a principal axis factor analysis with promax rotation, the item-level data from the L2 motivation scale was analyzed. The means of the item scores ranged from 1.72 to 3.50 and the standard deviations ranged from 0.84 to 1.24. The floor and ceiling effects were checked in order to verify normality. The result demonstrated that the floor effect was shown in only three items (15, 19, and 20); however, since the information was considered useful, it was included in the results, and these were used as items in the factor analysis.

The results of the exploratory factor analysis showed four factors (see Table 1). The items were theoretically driven; therefore, five categories were initially set. Nevertheless, according to the present results, a four-category solution seemed to maximize parsimony and interpretability. Factor

loadings less than 0.5 did not load with their respective subscales. Consequently, four items (9, 10, 13, and 15) were excluded.

Table 1 provides the results of the factor analysis of the 16 items after the four items were deleted. The first factor was labeled “intrinsic motivation;” the second, “high self-regulated extrinsic motivation;” the third, “amotivation;” and the fourth, “low self-regulated extrinsic motivation.” In the original theory, there were five categories: amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation. Even though the number of categories was not as in the theoretical framework, the labels were based on the original theory, SDT. For example, the factor “high self-regulated extrinsic motivation” contained four items from identified regulation and one item from external regulation. This simply implies that stronger self-regulated items in extrinsic motivation were included in this factor.

The present study, therefore, used four factors: intrinsic motivation (Factor 1), high self-regulated extrinsic motivation (Factor 2), amotivation (Factor 3), and low self-regulated extrinsic motivation (Factor 4).

Table 1
Result of factor analysis for motivation items (Varimax rotation, Principal factor method, N = 161)

Items	Factor 1	Factor 2	Factor 3	Factor 4	Mean	SD	Communality	Cronbach's α
Factor 1: Intrinsic motivation								
1 (Int) Because English is fun.	0.94	-0.16	0.00	0.05	3.14	1.10	0.85	$\alpha = .923$
4 (Int) Because studying English is fun.	0.89	0.09	-0.04	-0.05	2.91	1.21	0.83	
2 (Int) Because it is rewarding when I make new discoveries by studying English.	0.85	0.03	-0.01	-0.13	2.89	1.16	0.81	
3 (Int) Because it is enjoyable to increase my knowledge of English.	0.80	0.20	-0.05	-0.01	3.41	1.11	0.76	
Factor 2: High self-regulated extrinsic motivation								
7 (Ide) Because it is important to have English skills.	0.08	0.92	-0.06	-0.11	3.34	1.10	0.75	$\alpha = .889$
6 (Ide) To become able to use English is important for me.	0.08	0.86	-0.01	-0.02	3.09	1.03	0.81	
5 (Ide) Because I want to be able to use English in the future.	0.17	0.76	0.01	-0.01	3.39	1.15	0.87	
16 (Ext) Because one has to be able to use English in our society.	0.36	0.74	-0.07	0.26	2.45	1.07	0.79	
8 (Ide) Because I think it is good for my personal development.	0.21	0.75	-0.10	-0.05	3.50	1.13	0.74	
Factor 3: Amotivation								
19 (Amo) I don't understand why I have to study English.	0.07	-0.11	0.92	-0.13	2.03	1.06	0.81	$\alpha = .883$
20 (Amo) I believe that studying English is a waste of time.	0.10	-0.05	0.89	-0.07	1.72	0.85	0.74	
17 (Amo) I don't know what value there is in learning English.	0.04	-0.08	0.87	-0.01	2.08	1.08	0.55	
18 (Amo) I feel I cannot get good results even if I study English during classes.	-0.18	0.23	0.78	0.06	2.18	0.99	0.76	
Factor 4: Low self-regulated extrinsic motivation								
12 (Int-r) I feel I should study English when I imagine what others in this class must think of me.	0.15	-0.08	-0.14	0.90	2.21	0.87	0.67	$\alpha = .829$
14 (Ext) Because it is expected that one studies English.	-0.03	-0.02	-0.03	0.88	2.32	0.96	0.85	
11 (Int-r) I would feel guilty if I did not study English in English class.	0.04	-0.10	-0.20	0.77	2.03	-0.90	0.79	
Correlation Factor:1								
2	0.54							
3	-0.37	-0.27						
4	0.19	0.36	0.14					

Note, Acronyms are based on previous studies using self-determination theory. "Int" stands for intrinsic motivation, and "Ide" stands for identified regulation. "Ext" stands for external regulation, "Amo" stands for amotivation, and "Int-r" stands for introjected regulation

The scores for reliability were relatively high, since the range of Cronbach's Alpha was from 0.829 to 0.923. The reliability of these scales seems relatively acceptable (Nunnally, 1978). The inter-factor correlation is also shown in Table 1. Previous studies (e.g., Hiromori, 2003; Ryan & Connell, 1989) predicted the inter-correlations along the self-determination continuum, and the

present results confirm them. For instance, Factors 1 and 2 were the most positively and strongly correlated, at 0.54, while Factors 1 and 3 were most negatively correlated, at -0.37 .

2. Exploratory factor analysis for psychological needs

Before exploratory factor analysis for the psychological variables was carried out, using a principal axis factor analysis with promax rotation, the item-level data from the psychological needs scale was analyzed. The means of the items ranged from 2.61 to 4.61 and the standard deviations ranged from 0.63 to 1.13. The floor and ceiling effects were checked in order to verify normality. The result demonstrated that the ceiling effect was shown in only seven items (1, 2, 3, 4, 5, 8, and 16); however, since this information was seen as useful, it was included in the results, and these were used in the factor analysis.

The dimensionality of the 22 items on psychological needs was analyzed using exploratory factor analysis, and the results showed four categories with 14 items. Factor loadings of less than 0.5 were deleted. Consequently, items 4, 5, 8, 11, 12, 16, 19, and 22 were scattered.

Table 2

Results of factor analysis of psychological needs items (Varimax rotation, Principal factor method, $N = 161$)

Items	Factor 1	Factor 2	Factor 3	Factor 4	Mean	SD	Communality	Cronbach's α
Factor 1: Relatedness with teachers								
7 I think my English teacher conducts classes in a way that conveys on understanding of students.	0.99	-0.15	0.02	0.02	3.72	0.91	0.87	$\alpha = .882$
9 I think my English teacher understands students' feelings.	0.90	0.08	-0.07	-0.02	3.71	0.93	0.83	
6 My teacher creates an atmosphere that makes it easy to ask questions.	0.81	-0.01	0.02	-0.01	4.03	0.92	0.65	
10 I can tell that my English teacher thinks seriously about improving students' progress in English.	0.70	0.17	0.13	-0.13	3.86	0.89	0.66	
Factor 2: Competence								
18 I am satisfied with my performance in this English class.	0.00	0.84	-0.03	-0.02	3.37	0.98	0.67	$\alpha = .785$
20 I think I will succeed in this English class if I try in this English class.	0.01	0.78	-0.04	-0.02	3.80	0.92	0.59	
21 I feel a sense of accomplishment in this English class.	0.07	0.73	0.02	0.17	3.63	0.99	0.74	
17 I am sometimes encouraged by my friends and teacher during this English class.	-0.06	0.71	0.10	-0.09	3.44	1.04	0.48	
Factor 3: Relatedness with classmates								
1 I get along with my classmates in this English class.	-0.07	-0.03	0.92	-0.06	4.61	0.63	0.81	$\alpha = .868$
2 I think I can study English collaboratively with my classmates.	-0.02	0.11	0.89	0.02	4.52	0.65	0.86	
3 There is an atmosphere of collaborative learning with classmates in this English class.	0.22	-0.12	0.79	0.13	4.36	0.77	0.77	
Factor 4: Autonomy								
14 My teacher asks students' opinions about the content and/or procedure of the class.	0.12	-0.07	-0.06	0.88	3.55	0.92	0.82	$\alpha = .758$
13 I can choose among several homework opportunities in this English class.	-0.26	-0.04	0.20	0.81	3.62	1.08	0.57	
15 Students' opinions are taken into consideration in this English class.	0.15	-0.13	-0.13	0.78	3.48	0.95	0.79	

The number of factors was initially set at three, since the original theory framed the psychological needs as *competence*, *relations*, and *autonomy*. The need for relations is postulated to satisfy the relationships with friends—in this case, with classmates. In the present study, new items that asked about relationships with teachers were added, since teachers could be a strong influence in the classroom environment. Therefore, four categories, that is, the original three for psychological needs and the newly added item for relationships with teachers, were extracted; the

factor solution is presented in Table 2.

The first factor was labeled “relatedness with teachers”; the second was labeled “competence”; the third was labeled “relatedness with classmates”; and the fourth was labeled “autonomy.” All of the factor loadings were over 0.7, and the score range of Cronbach’s Alpha was 0.76 to 0.88. The reliability of these scales seems relatively acceptable (Nunnally, 1978).

3. Multiple regression analysis

A multiple regression analysis was performed in order to examine the relationship between intrinsic motivation and the variables that represent how the four needs are investigated in Section IV.2. The result is given in Table 3.

The coefficient determination was 0.112. Intrinsic motivation was set as a dependent variable; independent variables were autonomy, competence, relatedness with classmates, and in relatedness with teachers. This was based on the original SDT (Deci & Ryan, 1985). The variable of competence was the strongest predictor for intrinsic motivation: $\beta = .226$ ($p < .05$).

Table 3: Results of multiple regression analysis

Dependent Variables	Independent Variables	Beta	F	R ²	Adjusted R ²
Intrinsic motivation	Relatedness with classmates	0.06	4.88 **	0.112	0.089
	Relatedness with teachers	0.128			
	Autonomy	-0.035			
	Competence	0.226 *			

* $p > .05$

** $p > .01$

4. Descriptive statistics and correlation coefficients

Table 4 presents the means (Mean), standard deviations (SD), and scale correlations for the four subscales of motivation, the four psychological variables, and the FL WTC and Can-Do statements in speaking and writing. The mean scores of the variables ranged from 2.00 to 4.50, and the SD scores ranged from 0.613 to 1.03.

When we examined the correlations of the FL WTC and Can-Do statements with motivational variables, the higher self-regulated subscales—*intrinsic motivation* and *high self-regulated extrinsic motivation*—showed significant correlations. However, the distinctiveness of correlations was slightly different between the FL WTC/Can-Do statements and the motivational variables. FL WTC was most strongly correlated with *high self-regulated extrinsic motivation*, while Can-Do statements were strongly correlated with *intrinsic motivation*.

Table 4

Means, standard deviations, and correlations between motivation, psychological variables, FL WTC, and Can-Do statements.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Intrinsic motivation	3.09	1.03	—	.610**	.276**	-.352**	.204*	.268**	.315**	.136	.408**	.327**	.552**	.477**
2. High self-regulated extrinsic motivation	3.15	.912		—	.385**	-.300**	.164*	.150	.217**	.093	.437**	.441**	.413**	.415**
3. Low self-regulated extrinsic motivation	2.19	.784			—	.120	.101	.013	-.003	.099	.352**	.426**	.161*	.215**
4. Amotivation	2.00	.860				—	-.170*	-.220**	-.250**	-.139	-.158*	-.068	-.244**	-.169*
5. Relatedness with classmates	4.50	.613					—	.419**	.438**	.288**	.213**	-.024	.106	.013
6. Relatedness with teachers	3.83	.783						—	.578**	.496**	.107	-.023	.044	-.053
7. Competence	3.56	.767							—	.408**	.198*	-.005	.141	.050
8. Autonomy	3.55	.810								—	.090	.060	.041	-.064
9. WTC (speaking)	2.70	.739									—	.622**	.327**	.275**
10. WTC (writing)	2.03	.820										—	.387**	.462**
11. Can-Do (speaking)	2.16	.871											—	.817**
12. Can-Do (writing)	2.10	.955												—

Note, N = 161; the scale's range, theoretically, is from 1 to 5.

* $p < .05$, ** $p < .01$

V. DISCUSSION

As shown in the above results, non-English-major junior college students such as the participants in the present study are more likely to have high intrinsic motivation when their needs for competence are fulfilled or when they are satisfied with their performance in their English classes. It is noteworthy that the participants in this study were junior college students; the result also significantly showed this peculiar trait.

Hiromori (2004, 2006) showed different results, pointing out that the feeling of high autonomy strongly affects the possession of high intrinsic motivation. This distinction may arise because of the situational differences in which participants find themselves. Hiromori's participants were junior high school students, while this study's participants are junior college students. Those learners who are enrolled in higher education such as junior colleges and/or universities are less controlled in their general learning than those who are enrolled in compulsory education. When learners are in autonomous learning situations, it seems more effective to create circumstances that allow learners to perceive competence positively in their classes than to perceive doing their learning by their own will for the purpose of high intrinsic motivation.

Furthermore, as shown in Table 4, FL WTC had the strongest relationship with higher self-regulated extrinsic motivation. Can-Do statements, which indicated the students' perception of English skills, had the strongest relationships with intrinsic motivation. The result shows that, in other words, learners who want to use English are more likely to have reasons or goals that make them think of the importance of learning the language. On the other hand, learners who think they generally can speak and write well in English are more likely to experience enjoyment in learning English. This seems a reasonable result since the present participants learn the target language in the FL context. If they do not have the opportunity to actually use the language, a strong WTC can be the reason why they study. It implies the importance of providing students a chance to seize an opportunity in which they think "I want to talk in English." Moreover, if learners have a chance to actually use the language, it raises the possibility of them receiving positive perceptions of their English skills.

Finally, I would like to point out the relationship between learners' perception of English competence, (that is, Can-Do statements), and learners' perception of fulfillment of performance in class, (that is, need for competence), is the most influential variable for intrinsic motivation. Can-Do statements reflect learners' perceptions of their English proficiency, and the questionnaire responses regarding the need for competence reflect learners' perceptions of their performance in the classroom. Although these concepts appear similar, these two variables did not show a significant correlation in the results. In other words, the results imply that those learners who perceived their English competence to be low in general were still able to perceive their English performance as positive in their classes. It may be useful to create an environment that allows learners to feel a sense of progress in their own language performance as exhibited in the classroom environment. This result has great value, since it is the issue of whether or not learners being able to perceive their achievement or to fulfill their needs for competence in the classroom lead them to have higher intrinsic motivation.

VI. CONCLUSIONS

This study sought to establish which psychological needs need to be fulfilled to affect students' abilities to maintain high intrinsic motivation. The research was based on SDT and was conducted with non-English-major Japanese junior college students. This study also investigated the relationship between the variables of intrinsic motivation and FL WTC/Can-Do statements.

The results showed that when learners' needs for competence are fulfilled, they are more likely to have high intrinsic motivation. Moreover, those learners who had high FL WTC also had high intrinsic motivation, and that those who had positive perception of their English proficiency (Can-Do statements) also had high intrinsic motivation.

However, due to the limitations of the questionnaires, we have not investigated why, how, and in what situations students' positive perception of their English competence increases. As Turner and Patrick (2008) mentioned, in further research, we need to look at "how students develop those competence and value beliefs, why they may fluctuate from time to time or place to place, and what

outcomes evolve from such experiences” (p. 121). Furthermore, since research using SDT and WTC has not been conducted often enough, larger and more numerous studies will hopefully be carried out. In addition, can-do statements were used in the present study as a reflection of the learner’s perception of his/her English competence; however, to ensure the learner’s proficiency level in a more objective way, proficiency tests such as SLEP should be carried out in the future. Nevertheless, since there are many Japanese students who are learning English but not majoring in English, the present research may give educators a hint of how to motivate their students toward English learning.

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