

## Differences in Japanese College Students' Academic- and L2-Motivation

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Japan continues to expand its federally funded English initiatives, with English now a compulsory subject starting from the 4<sup>th</sup> grade and continuing through to senior high school. While motivation for learning English has been heavily researched, little has been done to understand the underlying academic motivation among the population. As understanding the general landscape would allow for new insights into English-specific research, this study investigated first-year undergraduate students by applying the Academic Motivation Scale to an entire incoming freshman class ( $N=606$ ). It was found that intrinsic motivation matrices were slightly positive overall ( $M=5.07$  on a 7-point Likert scale), which contrasts with precursor research suggesting that students at this university were predominantly extrinsically motivated towards the study of English (Lee, 2017)<sup>(1)</sup>. Slight but significant differences were detected, depending on the participants' academic major, gender, and residential status (i.e., international or domestic).

**Key Words** : academic motivation, L2 motivation, Japanese tertiary education, self-determination theory

### 1. Introduction

Among the multifarious challenges faced by foreign language (L2) instructors (e.g., classes with students of varying proficiency, foreign language aptitude, learning style, etc.), the issue of motivation (of both students and teachers) has drawn the most attention due to its permeability to external influences. Motivation is the one area where teachers can make an instantaneous impact on their students. This is particularly salient in the case of EFL (English as a foreign language), where students are learning the language and culture of a foreign country with extremely limited exposure outside the classroom. As students lack a sense of urgency to improve in the language, EFL teachers must design lessons which are not only effective but also enjoyable and engaging. In fact, many teachers consider this to be their main objective; their priority is to make language classes fun. This goal is not without academic merit, as it has been shown that in L2 learning, improved motivation tends to lead to increases in proficiency, which then creates the foundation for further motivation (Ushioda, 1993)<sup>(2)</sup>.

However, while L2 motivation has been heavily studied over the past few decades, most L2 studies do not consider the global factor of *academic motivation* among participants. This factor should not be overlooked, especially in studies conducted at educational institutions, i.e., where L2 learning does not exist in isolation but where students are simultaneously studying other subjects. Particularly in cases where EFL is merely a compulsory component of a program (as opposed to a conscious choice of the individual), there exists a large possibility of students having very different academic and L2 motivational profiles. This study, which follows precursor research on L2 motivation at the same university (Lee, 2017)<sup>(1)</sup>, addresses the following research questions (RQ):

RQ 1: What is the academic motivation profile of Japanese university freshmen?

RQ 2: How does the academic motivation of participants compare with the L2 motivation of students of the same university?

RQ 3: Do the independent variables of academic major, gender, and nationality result in significant differences in academic motivation?

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## 2. Review of the Literature

### 2.1 Academic Motivation

It could be said that the work of Atkinson (1957<sup>(3)</sup>, 1964<sup>(4)</sup>; Atkinson & Feather, 1966<sup>(5)</sup>) represents the initial theoretical effort to describe motivation from a specific educational standpoint. While Atkinson only considered the matter of achievement-oriented activities (i.e., some sort of competition), he proposed that the impetus for a student to act was basically the sum of the sub-values of: desire for success, avoidance of failure, and desire for the approval of others. This idea was never developed to the point of being a formal model, but it did inspire several follow-up studies which investigated student competitiveness (e.g., McClelland, 1958<sup>(6)</sup>; Litwin, 1966<sup>(7)</sup>), persistence (i.e., Feather, 1961<sup>(8)</sup>, 1962<sup>(9)</sup>, 1963<sup>(10)</sup>), and performance (Atkinson, 1967<sup>(11)</sup>; Klinger, 1966<sup>(12)</sup>).

In recent decades, several more robust models have been proposed which seek to explain motivation from various perspectives (see Wigfield & Eccles, 2000<sup>(13)</sup> for the expectancy-value theory, or Viau, 2009<sup>(14)</sup> for the motivational dynamics model). Major among these is the self-determination theory (SDT) (Ryan & Deci, 2000<sup>(15)</sup>) which, similar to Atkinson, sees motivation as coming from either intrinsic (an internal locus of causality) or extrinsic (an external perceived locus of causality) sources, while adding amotivation (a lack of motive to act) as a third category. Extrinsic motivation is further divided into four subcategories: external regulation, introjected regulation, identified motivation, and integrated regulation. External regulation refers to behavior that is motivated solely by either the desire to receive rewards or to avoid punishment (e.g., doing unpleasant chores to avoid getting in trouble). Introjected regulation is external regulation that has been partially internalized by the individual but is still identified as originating from without (e.g., bending to peer pressure to begin a diet after conceding there might be some advantage in doing so). Identified motivation (technically extrinsic but with a somewhat internal locus of causality) refers to the drive behind making conscious choices arising from one's set of values (e.g., occasionally taking slower public transportation to reduce one's carbon emissions "for the planet"). Finally, integrated regulation results when extrinsic factors completely line up with the person's own internal set of values, goals, and needs. The distinction between this category and so-called intrinsic motivation is that with the former, the regulating factors are more cognitive (e.g., self-awareness, synthesis with self), and the factors for the latter are more visceral (e.g., interest, enjoyment, satisfaction).

### 2.2 L2 Motivation

L2 motivation, while sharing many of the same tenets of academic motivation, has additional predictive measures from social psychology added in due to the cross-cultural nature of language learning. It has been suggested that L2 learning is fundamentally different from other types of learning due to the strong link between language and personal identity. Essentially, achieving mastery of a foreign language requires a willingness "to identify with members of another ethnolinguistic group and to take on very subtle aspects of their behavior, including their distinctive style of speech and their language" (Gardner & Lambert, 1972<sup>(16)</sup>, p. 135). Beginning with the seminal works of social psychologist Gardner (1985<sup>(17)</sup>), L2 learning was thought to have an emotive aspect called *integrativeness*, defined as an "interest in learning the second language in order to come closer to the other language community" (Gardner, 2001<sup>(18)</sup>, p. 5). Gardner's model also contrasted this integrativeness with *instrumental* motivation (essentially extrinsic factors) in a duality which is comparable with the intrinsic / extrinsic framework previously discussed.

Gardner's model, being the first to suggest a cultural / personal identity factor involved in L2 motivation, was highly influential though not without its detractors. First, the dichotomy was criticized as being over-simplistic and over-reliant on the individual (despite having its origins in social psychology). For instance, issues such as power relationships between the ethnolinguistic groups are not considered in this model. A second, more pointed criticism is that, as Gardner was researching immigrant communities in Canada, the existence of the "other language community" (2001<sup>(18)</sup>, p. 5) was well defined. This model does not seem applicable to other L2 learning environments, particularly EFL situations where students and teachers are often from the same culture and interaction with the target L2 community is rare or nonexistent. In this case, there would

be a complete lack of an integrative component to motivation, yet many students are still able to successfully learn the language.

In the decades since Gardner, L2 motivation continued to borrow heavily from general motivational constructs such as the SDT (see Section 2.1), expectancy-value theory, or possible selves theory. Expectancy-value theories basically envision that an individual's level of motivation is based on 1) the expectancy of success and 2) the value assigned to the act (Wigfield, 1994<sup>(19)</sup>). However, this theory carries several assumptions that are impractical or inapplicable in some L2 contexts. For example, it is unreasonable to assume that children studying a foreign language in school will be able to extrapolate their eventual level of attained fluency or be cognizant of its value. Such frameworks essentially require that the individual be aware, in advance, of all requisite components and final outcomes of the task. In contrast, possible selves frameworks do not place value on tasks but on the individuals themselves. Markus and Nurius (1986<sup>(20)</sup>) proposed that each person has visions of who they would *like* to become, who they *might* become, and who they are *afraid of* becoming (i.e., self-images reflective of their hopes, aspirations, and fears). Following this line of thinking, Dörnyei developed his L2 Motivational Self System (2009<sup>(21)</sup>). This system conceptualizes L2 motivation as a balance between learners' ideal L2 self (i.e., who they would like to become), their ought-to self (who they think they should become), and the L2 learning experience (i.e., teachers, classmates, class activities, and other environmental factors of L2 learning). Precursor research conducted at the university in question (Lee, 2017<sup>(1)</sup>) found that students ( $N = 85$ ) were largely motivated by their ought-to selves, i.e., they studied English to "meet expectations or to avoid possible negative outcomes" (Dörnyei, 2010<sup>(22)</sup>, p. 80).

### 3. Study Design

#### 3.1 Participants

This study took place at a small, private university in rural Japan, predominantly focusing on industrial sciences and technology. The participants ( $N = 606$ ) comprised virtually the entire incoming freshman class, with students representing every academic department participating: electrical engineering ( $n = 95$ ), mechanical engineering ( $n = 100$ ), architecture/civil engineering ( $n = 87$ ), nuclear engineering ( $n = 29$ ), environmental/food sciences ( $n = 40$ ), management & information sciences ( $n = 107$ ), graphic & interior design ( $n = 69$ ), and sports & health sciences ( $n = 79$ ). The participants included both male ( $n = 552$ ) and female ( $n = 54$ ) students as well as foreign (i.e., non-Japanese) nationals ( $n = 29$ ) in addition to the native Japanese population ( $n = 577$ ).

One other independent variable that was examined was that of English proficiency, as a large portion of motivation research has been conducted in this area to date. While this university did not have an English major program, there was a compulsory 4-year English curriculum for all students which uses TOEIC Bridge test scores for class placement upon matriculation. The number of class divisions varies between departments due to the different number of students enrolled; however, in order of descending proficiency the ranking system follows the pattern: A1, A2, B1, B2. (It should be noted that the TOEIC Bridge measures English listening and reading abilities only; speaking and writing skills are not assessed.)

#### 3.2 Materials

This study used the Academic Motivation Scale (AMS) (Vallerand et al., 1992<sup>(23)</sup>) as the data collection instrument. Since its original debut in French (Vallerand, Blais, Brière, & Pelletier, 1989<sup>(24)</sup>), the AMS has been widely validated in several countries and languages (e.g., see Alivernini & Lucidi, 2008<sup>(25)</sup> for Italian; Bacanlı & Sahinkaya, 2011<sup>(26)</sup> for Turkish; Burgueño, Sicilia, Medina-Casabón, Alcaraz-Ibáñez, & Lirola, 2017<sup>(27)</sup> for Spanish). More importantly, confirmatory factor analysis has previously confirmed the AMS's validity when applied to the Japanese tertiary education context (Manalo, Koyasu, Hashimoto, & Miyauchi, 2006<sup>(28)</sup>; Bui, Tsutsui, & Uehara, 2015<sup>(29)</sup>). The exact Japanese translation of the AMS used and validated in Manalo et al.'s (2006<sup>(28)</sup>) experiment was obtained to maintain external validity and generalizability of results (E. Manalo, personal communication, Jan 25, 2019). (See Appendix A for the English version of the AMS; see Appendix B for the Japanese translation).

The AMS is based on the SDT construct of motivation and thus measures seven factors of intrinsic motivation, extrinsic motivation, and amotivation. The three intrinsic motives are: intrinsic motivation to experience stimulation, intrinsic motivation towards accomplishments, and intrinsic motivation to acquire knowledge. The three extrinsic motives are: external regulation, introjected regulation, and identified regulation (see Section 2.1). Amotivation refers to the state where individuals do not perceive causality between their actions and potential outcomes; they see events as being out of their control and therefore experience feelings of disconnect or helpless.

### 3.3 Methods

As this study sought to examine the motivation students had for entering university, data collection was conducted during Orientation Week for first-year students to ascertain their initial states of mind, prior to the beginning of their first class. Only newly incoming freshmen were invited to take part in filling out the AMS, resulting in the aforementioned  $N = 606$  responses. Collected surveys were visually inspected for obvious validity abnormalities, resulting in  $n = 14$  (2.31%) respondents being filtered out after being deemed invalid (partial nonresponse,  $n = 2$ ; straight-line response,  $n = 12$ ). The remaining  $n = 592$  responses were entered into a dataset using IBM's Statistical Package for the Social Sciences (SPSS) software (version 24), and recoded with variables for academic department, English proficiency, gender, and nationality.

The dataset was found to include  $n = 44$  (7.43%) instances of a single item of nonresponse (3.57% incomplete), and  $n = 1$  (0.17%) instance of two items of nonresponse (7.14% incomplete). A distribution analysis of the missingness ( $R$ ) suggested no correlations, hence a case of items *missing at random* (MAR) was assumed. However, the data with two nonresponse items were rejected from the study, both for surpassing the traditional 5% threshold for missing items, and more importantly because both missing items were part of the same matrix (each matrix only contains four items; two missing items would represent 50% incompleteness). Multiple imputation was used for the remainder of the missing data, as recent statistics literature suggests that this is more theoretically sound and introduces less bias than single imputation or averaging of available items (Schafer & Graham, 2002<sup>(30)</sup>).

## 4. Results

### 4.1 Overall Results

The data was first analyzed globally for means ( $M$ ) and standard deviations ( $SD$ ) for each matrix of motivation, the results of which are outlined below in Table 1.

Table 1

*Descriptive Statistics of Reported Motivation Types*

	IMse	IMa	IMk	EMidr	EMintr	EMer	A
<i>M (SD)</i>	5.09 (1.11)	5.00 (1.13)	5.11 (1.01)	3.78 (1.15)	2.29 (1.15)	4.00 (1.19)	3.85 (1.29)
<i>n</i>	591	591	591	591	591	591	591
<i>Note.</i> IMse = intrinsic motivation (for stimulating experiences)							
IMa = intrinsic motivation (for achievement)							
IMk = intrinsic motivation (for knowledge)							
EMidr = extrinsic motivation (from identified regulation)							
EMintr = extrinsic motivation (from introjected regulation)							
EMer = extrinsic motivation (from external regulation)							
A = Amotivation							

As the data collection instrument utilized a 7-point Likert scale from “1 = strongly disagree” to “7 = strongly agree”, a neutral attitude would be a value of 4.00. As all intrinsic motivation matrices in Table 1 are greater than 4.00, it can be concluded that students at this university overall feel slightly intrinsically motivated. On the contrary, the three matrices



measuring extrinsic motivation fall at, or below, 4.00, indicating that these students are not strongly motivated from extrinsic sources. The measure of amotivation ( $A = 3.85$ ), falling slightly below 4.00, again indicates that these students do not feel disconnected or apathetic towards learning. These results allow us to answer RQ1 (*What is the academic motivation profile of Japanese university freshmen?*) by saying that students at this university are generally motivated intrinsically towards having stimulating experiences, making achievements, and acquiring knowledge.

Interestingly, past research into the L2 motivation of students at the same university revealed that a plurality of the participants was motivated to study English to satisfy their ought-to selves (i.e., extrinsic motives), and not of their own desire (Lee, 2017<sup>(1)</sup>). This discrepancy between students' academic and L2 motivations addresses RQ2 (*How does the academic motivation of participants compare with the L2 motivation of students of the same university?*). It seems that the current investigation revealed that different factors may be present between the academic and L2 motivation of students at this university.

In order to address RQ3 (Do the independent variables of academic major, gender, and nationality result in significant differences in academic motivation?), the data was again analyzed to check for significant differences among independent variable groups.

#### 4.2 Variation by Academic Major

As this university had eight separate departments, an analysis of variance (ANOVA) with post hoc analysis was run to determine if there were any significant differences between students of different fields. The results, shown below in Table 2 (ANOVA) and Table 3 (post hoc), revealed that measures of intrinsic motivation (IMse and IMa) were significantly different among students of five academic departments, E (electrical engineering), F (food sciences), S (sports & health sciences), M (mechanical engineering), and I (information management). Descriptive statistics for each department are reported in Table 4.

Table 2

*ANOVA Output (differences in means by academic department)*

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
IMse	Between	32.83	7	4.69	3.91*	.00
	Within	699.08	583	1.20		
IMa	Between	19.98	7	2.85	2.27*	.03
	Within	732.68	583			
IMk	Between	12.40	7	1.77	1.74	.10
	Within	594.86	583			
EMidr	Between	14.01	7	2.00	1.51	.16
	Within	772.67	583			
EMintr	Between	13.24	7	1.89	1.43	.19
	Within	771.52	583			
EMer	Between	11.89	7	1.70	1.20	.30
	Within	822.46	583			
A	Between	22.71	7	3.25	1.98	.06
	Within	957.44	583			

*Note.* \* denotes statistical significance at the <.05 level

Table 3

*Turkey Honestly Significant Difference (HSD) Post Hoc Test Output*

Variable	I	J	MD (I-J)	SE	Sig	CI	
						Lower	Upper
IMse	E	F	.67	.21	.03	.04	1.30
		S	.57	.17	.02	.04	1.09
	M	S	.64	.17	.01	.12	1.16
		F	.74	.21	.01	.12	1.37
IMa	I	M	-.52	.16	.02	-1.00	-.04

Table 4

*Descriptive Statistics of Reported Motivation Types (by department)*

Dept.	Value	IMse	IMa	IMk	EMidr	EMintr	EMer	A
E	<i>M(SD)</i>	5.09* (1.11)	5.00 (1.13)	5.11 (1.01)	3.78 (1.15)	2.29 (1.15)	4.00 (1.19)	3.85 (1.29)
	<i>n</i>	94	-	-	-	-	-	-
M	<i>M(SD)</i>	5.40* (1.06)	5.22* (1.18)	5.36 (1.05)	3.97 (1.20)	2.10 (1.07)	4.21 (1.29)	4.05 (1.43)
	<i>n</i>	99	-	-	-	-	-	-
A	<i>M(SD)</i>	5.05 (1.05)	5.03 (1.07)	5.19 (.94)	3.60 (1.22)	2.12 (1.03)	3.97 (1.22)	3.79 (1.29)
	<i>n</i>	86	-	-	-	-	-	-
N	<i>M(SD)</i>	4.97 (1.48)	5.13 (1.21)	5.01 (1.03)	3.93 (1.28)	2.25 (1.31)	4.22 (1.50)	4.30 (1.54)
	<i>n</i>	29	-	-	-	-	-	-
F	<i>M(SD)</i>	4.66* (1.10)	5.24 (1.12)	5.02 (1.03)	4.13 (1.24)	2.16 (1.02)	4.01 (1.22)	3.68 (1.31)
	<i>n</i>	40	-	-	-	-	-	-
I	<i>M(SD)</i>	5.15 (1.03)	4.70* (1.05)	4.91 (1.01)	3.65 (1.13)	2.37 (1.04)	3.78 (1.16)	3.63 (1.22)
	<i>n</i>	104	-	-	-	-	-	-
D	<i>M(SD)</i>	4.92 (1.16)	5.13 (1.23)	5.11 (.99)	3.71 (1.21)	2.38 (1.32)	3.92 (1.20)	3.74 (1.17)
	<i>n</i>	69	-	-	-	-	-	-
S	<i>M(SD)</i>	4.76* (1.07)	4.88 (.98)	5.00 (.96)	3.72 (1.04)	2.50 (1.23)	3.96 (1.03)	3.74 (1.22)
	<i>n</i>	70	-	-	-	-	-	-

Note. \* denotes significance between groups

E = electrical engineering

M = mechanical engineering

A = architecture & civil engineering

N = nuclear engineering

F = environment & food sciences

I = information management

D = graphic & interior design

S = sports & health sciences

The post hoc analysis in Table 3 indicating differences in IMse among four departments, along with a visual analysis of the individual results of each department in Table 4, allows for the conclusion that IMse is significantly higher in departments M (5.40) and E (5.09) than in departments S (4.76) and F (4.66). Additionally, IMa results in department M (5.22) are significantly higher than department I (4.70). While statistically significant, all motive measures are greater than 4.00, indicating that all groups are positively motivated. However, mechanical and electrical engineering students are interested in having stimulating experiences to a greater degree than sports and food sciences students, and mechanical engineering students are interested in garnering achievements to a greater degree than information management students.

### 4.3. Variation by English Proficiency

As described in Section 3.1 (Participants), this university utilizes TOEIC Bridge scores to separate students into four proficiency levels: A1 (highest), A2, B1, and B2 (lowest). Analysis of variance (ANOVA) with post hoc analysis was run to determine if there were any significant differences between students of different English proficiency. The results, shown below in Table 5 (ANOVA) and Table 6 (post hoc), revealed that measures of intrinsic motivation (IMa and IMk) were significantly different among students of three proficiency levels, A1, A2, and B2. Descriptive statistics for each department are reported in Table 7.

Table 5

*ANOVA Output (differences in means by academic department)*

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
IMse	Between	1.43	3	.48	.38	.77
	Within	730.47	587			
IMa	Between	10.29	3	3.43	2.71*	.04
	Within	742.36	587			
IMk	Between	8.10	3	2.70	2.64*	.05
	Within	599.17	587			
EMidr	Between	1.96	3	.65	.49	.69
	Within	784.72	587			
EMintr	Between	5.21	3	1.74	1.31	.27
	Within	779.56	587			
EMer	Between	1.77	3	.59	.42	.74
	Within	832.58	587			
A	Between	4.02	3	1.34	.81	.49
	Within	976.13	587			

*Note.* \* denotes statistical significance at the <.05 level

Table 6

*Turkey Honestly Significant Difference (HSD) Post Hoc Test Output*

Variable	I	J	<i>MD (I-J)</i>	<i>SE</i>	<i>Sig</i>	<i>CI</i>	
						Lower	Upper
IMa	A1	B2	.42	.16	.04	.01	.82
	A2	B2	.42	.16	.04	.01	.84
IMk	A1	B2	.37	.14	.05	< .01	.73
	A2	B2	.37	.15	.05	< -.01	.75

Table 7

*Descriptive Statistics of Reported Motivation Types (by English proficiency)*

Level	Value	IMse	IMa	IMk	EMidr	EMintr	EMer	A
A1	<i>M (SD)</i>	5.14 (1.09)	5.07* (1.20)	5.16* (1.04)	3.81 (1.15)	2.24 (1.15)	4.04 (1.15)	3.79 (1.31)
	<i>n</i>	188	-	-	-	-	-	-
A2	<i>M (SD)</i>	5.04 (1.19)	5.08* (1.13)	5.17* (1.02)	3.79 (1.19)	2.24 (1.06)	4.03 (1.25)	3.99 (1.24)
	<i>n</i>	157	-	-	-	-	-	-
B1	<i>M (SD)</i>	5.05 (1.11)	4.98 (1.07)	5.13 (.97)	3.81 (1.10)	2.31 (1.22)	4.00 (1.17)	3.81 (1.32)
	<i>n</i>	176	-	-	-	-	-	-
B2	<i>M (SD)</i>	5.15 (1.01)	4.65* (1.01)	4.79* (.99)	3.63 (1.23)	2.53 (1.19)	3.86 (1.21)	3.84 (1.27)
	<i>n</i>	70	-	-	-	-	-	-

Note. \* denotes significance between groups

The post hoc analysis in Table 6, indicating differences in IMa and IMk among three proficiency levels, is revealed to be that the higher proficiency levels A1 (5.07 and 5.16, respectively) and A2 (5.08 and 5.17, respectively) have significantly higher interest in garnering achievements and accumulating knowledge than the lowest proficiency level, B2 (4.65 and 4.79, respectively). Again, all motive measures are greater than 4.00, indicating that while all three groups are positively motivated, the degree to which this type of motivation factors into their experience is statistically different.

#### 4.4. Variation by Gender

Motivation studies have previously reported the possibility of a gender gap when it comes to academic or L2 motivation (Eccles, Wigfield, Harold, & Blumenfeld, 1993<sup>(31)</sup>; Hakan & Münire, 2014<sup>(32)</sup>). Unfortunately, the sample sizes were not evenly distributed as this university's student body is predominantly male (over 90%). However, it has been argued that SPSS can properly calculate ANOVA in the case of unequal samples sizes, and that ANOVA is sufficiently robust even in cases of moderate departures from the homogeneity of variance assumption (Keppel, 1993<sup>(33)</sup>). In fact, Levene's test showed that none of the dependent variables had significant differences in variance. Therefore, it was determined that ANOVA was appropriate to test for any significant differences between students of different gender. The results shown below in Table 8 revealed that the measure of intrinsic motivation (IMse) was significantly different between males and females. This result suggests that male students were slightly more intrinsically motivated by a desire to have stimulating experiences than female students were. Descriptive statistics for each department are reported in Table 9.

Table 8

*ANOVA Output (differences in means by gender)*

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
IMse	Between	6.44	1	6.44	5.23*	.02
IMa	Between	4.26	1	4.26	3.35	.07
IMk	Between	.43	1	.43	.42	.52
EMidr	Between	4.89	1	4.89	3.68	.06
EMintr	Between	.31	1	.31	.23	.63
EMer	Between	.22	1	.22	.16	.69
A	Between	3.02	1	3.02	1.82	.18

Note. \* denotes statistical significance at the <.05 level



Table 9

*Descriptive Statistics of Reported Motivation Types (by gender)*

Level	Value	IMse	IMa	IMk	EMidr	EMintr	EMer	A
Male	<i>M (SD)</i>	5.12* (1.11)	4.97 (1.13)	5.10 (1.02)	3.75 (1.17)	2.30 (1.15)	4.00 (1.19)	3.88 (1.31)
	<i>n</i>	537	-	-	-	-	-	-
Female	<i>M (SD)</i>	4.76* (1.13)	5.26 (1.12)	5.19 (.93)	4.07 (.95)	2.22 (1.22)	4.06 (1.17)	3.63 (1.08)
	<i>n</i>	54	-	-	-	-	-	-

Note. \* denotes significance between groups

**4.5. Variation by Residential Status**

Finally, this study sought to investigate if international students had different academic motivation profiles than the domestic Japanese students. Again, ANOVA was determined to be appropriate for this test despite the incongruence of sample sizes as Levene's test showed none of the dependent variables has significant differences in variance. The results of ANOVA (see Table 10 below) and descriptive statistics (Table 11) revealed that international students had significantly higher levels of intrinsic motivation towards achievements (IMa) than the Japanese participants, along with all extrinsic motives and amotivation (EMidr, EMintr, EMer, & A). This suggests that while international students appear to be under more external pressures to garner achievements than Japanese students (e.g., high grades, degrees, certifications, etc.), they also tend to feel more disconnected and helpless in their college/campus lives.

Table 10

*ANOVA Output (differences in means by residential status)*

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
IMse	Between	.17	1	.17	.14	.71
IMa	Between	12.11	1	12.11	9.64**	<.01
IMk	Between	.06	1	.06	.06	.81
EMidr	Between	23.21	1	23.21	17.91**	<.01
EMintr	Between	6.81	1	6.81	5.16*	.02
EMer	Between	21.41	1	21.41	15.51**	<.01
A	Between	17.88	1	17.88	10.95**	<.01

Note. \* denotes statistical significance at the <.05 level

\*\* denotes statistical significance at the <.01 level

Table 11

*Descriptive Statistics of Reported Motivation Types (by residency status)*

Res.	Value	IMse	IMa	IMk	EMidr	EMintr	EMer	A
Japan	<i>M (SD)</i>	5.10 (1.11)	4.96* (1.12)	5.11 (1.01)	3.74* (1.14)	2.27* (1.14)	3.96* (1.18)	3.82* (1.28)
	<i>n</i>	562	-	-	-	-	-	-
Other	<i>M (SD)</i>	5.02 (1.15)	5.63* (1.22)	5.07 (1.13)	4.66* (1.01)	2.77* (1.40)	4.84* (1.13)	4.62* (1.14)
	<i>n</i>	29	-	-	-	-	-	-

Note. \* denotes significance between groups

## 5. Discussion

This study elucidated several interesting features that are worthy of note. First, regarding the matter of academic motivation, the finding that the general student body was more intrinsically motivated than extrinsically was surprising. Precursor research had indicated a strong tendency towards “ought-to self” motives (i.e., extrinsic factors). This led instructors to believe that students would respond most favorably to lessons that appealed to their logical/cognitive sensibilities, i.e., demonstrating how English would benefit them in terms of employability, career advancement, etc. In fact, several course options were introduced, such as TOEIC prep courses and Business English, for exactly this purpose. However, the results of these two studies taken together suggest that the students are generally interested in having fun and want to learn and garner achievements; they just do not seem to feel like English is inherently appealing. This new insight can help instructors alter their approach, possibly putting more emphasis on making lessons and content more interesting or emotively engaging.

The comparison of motive factors between the individual academic departments was also informative. As a compulsory curriculum component, instructors at this university teach the same contents several times a week to different sets of students. This situation is quite common, especially for teachers of primary and secondary level students. While this study does not suggest that its findings are generalizable to other Japanese universities, it does serve to illustrate that a “one size fits all” strategy of instruction is not effective. Ideally, the AMS should be applied to each class and assessed individually prior to the start of the course to estimate how students will respond to particular teaching strategies.

This study detected a gender gap in academic motivation, finding that male students had significantly higher levels of intrinsic motivation for stimulating experiences (IMse). This has not been reported by other studies to date, as the AMS has only been used a few times prior in Japan, and those analyses did not include gender as an independent variable. This study therefore serves as a starting point for further research into gender differences using this construct.

By contrast, the finding that international students tend to have both a higher sense of accomplishment and are more driven by external factors strongly matches findings by other researchers (Bui et al., 2015<sup>(29)</sup>). This is understandable, considering the large sacrifices international students must make in order to attend university in not only another country, but also another language. Arguably, only those with a strong will to persevere and obtain a degree will make the effort to begin with, meaning that the international students in Japan are not necessarily representative of students in their home countries. The current research does not seek to suggest that any such generalizations can or should be made beyond the narrow breadth of this study.

## 6. Limitations and Future Directions

Academic motivation is fluid, with the totality of a student's daily experiences coming together to influence it daily. However, insights may be drawn from taking snapshots of the students' motivation over time and looking for general trends. As the participants in this study were surveyed even before their first class began, it will be interesting to track them during their progression through the next four years. Follow-up studies will collect AMS data from the participants at the same time each year, i.e., before the classes of the academic year begin. One conceivable outcome is that there will be individuals who show drastic changes in their motivation/amotivation, either positively or negatively. If these individuals are identified, it would be possible to interview them individually to ascertain the source(s) of the change. This would help both instructors and institutional stakeholders better understand the psyche and feelings of the students and provide better service in the future.

In terms of limitations, the honesty of responses is always a concern in questionnaire-based studies. Even though participants were made aware that the survey was for research purposes and were asked to respond honestly, several respondents returned straight-line answers and were discarded (as detailed in Section 3.3. Methods). It is also possible that some students became aware that the AMS was a survey of academic motivation and were embarrassed to respond overtly negatively, i.e., they wished to show themselves in a good light.

Finally, the timing of the data collection was during Orientation Week. This was done purposefully in order to assess the participants' academic motivation before influences such as their teachers or classmates was introduced. However, as it was

the first time the participants had stepped onto campus as official university students, a certain degree of emotion (e.g., excitement or apprehension) was surely present. It is unknown how these emotive states of mind could have affected the participants' responses, either positively or negatively.

## 7. Conclusion

Academic motivation was demonstrated to be separate and distinct from L2-specific motivation for a population of Japanese university students. The implication for L2 researchers is that both factors should be assessed and reported when profiling language students. Participants of this study showed cognitive dissonance in their intrinsic motivation towards learning in general, but extrinsic motivation towards the study of English. L2 instructors must find a way of resolving this difference and bring English education towards the intrinsic motivation side of the spectrum, as intrinsic motivation has been suggested to be correlated to the greater L2 gains than extrinsic motivation (Segalowitz, Gatbonton, & Trofimovich, 2009<sup>(34)</sup>; Ryan & Deci, 2000<sup>(15)</sup>).

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## 9. Appendices

### Appendix A – English version of the Academic Motivation Scale

Why do you go to college?

- 1) Because with only a high-school degree I would not find a high-paying job later on.
- 2) Because I experience pleasure and satisfaction while learning new things.
- 3) Because I think that a college education will help me better prepare for the career I have chosen.
- 4) For the intense feelings I experience when I am communicating my own ideas to others.
- 5) Honestly, I don't know; I really feel that I am wasting my time in school.
- 6) For the pleasure I experience while surpassing myself in my studies.
- 7) To prove to myself that I am capable of completing my college degree.
- 8) In order to obtain a more prestigious job later on.
- 9) For the pleasure I experience when I discover new things never seen before.
- 10) Because eventually it will enable me to enter the job market in a field that I like.
- 11) For the pleasure that I experience when I read interesting authors.
- 12) I once had good reasons for going to college; however, now I wonder whether I should continue.
- 13) For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.
- 14) Because of the fact that when I succeed in college, I feel important.
- 15) Because I want to have "the good life" later on.
- 16) For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.
- 17) Because this will help me make a better choice regarding my career orientation.
- 18) For the pleasure that I experience when I feel completely absorbed by what certain authors have written.
- 19) I can't see why I go to college and frankly, I couldn't care less.
- 20) For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.
- 21) To show myself that I am an intelligent person.
- 22) In order to have a better salary later on.
- 23) Because my studies allow me to continue to learn about many things that interest me.
- 24) Because I believe that a few additional years of education will improve my competence as a worker.
- 25) For the "high" feeling that I experience while reading about various interesting subjects.
- 26) I don't know; I can't understand what I am doing in school.
- 27) Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.
- 28) Because I want to show myself that I can succeed in my studies.

## Appendix B – Japanese translation of the Academic Motivation Scale

どうしてあなたは大学に行くのですか？

- 1) 高校卒業の資格だけでは、そのあと高給の職業をみつけないから。
- 2) 新しいことを学ぶ時、喜びと満足感を得ることができるから。
- 3) 大学教育は、私が選んだキャリアに備える助けとなるだろうと考えているから。
- 4) 自分の考えを他の人と意思疎通する時に感じる強い満足感のため。
- 5) 正直に言ってわからない。私は実際大学で自分の時間を無駄にしている感じがする。
- 6) 学業面で自分の限界に挑戦することに喜びを感じるから。
- 7) 大学の学位を得るだけの能力があることを自分自身に証明するため。
- 8) 卒業後、より 社会的認識の高い職業につくため。
- 9) 以前は知らなかった新しい事柄を発見することに楽しさを感じるから。
- 10) 最終的に自分の好きな職業分野につくことを可能にしてくれるから。
- 11) 面白い著作を読むのに喜びを感じるから。
- 12) 以前は私には大学に行くきちんとした理由があったが、今では続けるべきかどうか迷っている。
- 13) 自分の能力の限界を超えられるような経験することに喜びを感じるから。
- 14) もし良い成績で卒業できれば、自分は価値のある人間だと思えるから。
- 15) 卒業後「いい生活」がしたいから。
- 16) 興味のある科目の知識が広がることに喜びを感じるから。
- 17) 職業の方向づけに関してよりよい選択をする助けになるだろうから。
- 18) ある著者の書いたもの（作品、論文）に完全にのめりこむことに喜びを感じるから。
- 19) どうして大学に行くのかわからない。率直に言ってあまり気にしていない。
- 20) 困難な事を成し遂げる過程で満足感が得られるため。
- 21) 自分が知的であることを自分自身に示すため。
- 22) 卒業後高給をもらうため。
- 23) 自分が興味のあることを学び続けることができるから。
- 24) 余分に数年教育を受けることが社会人としての能力を向上させると信じているから。
- 25) 様々な面白い分野について読んでいる時に感じる気持ちの高揚のため。
- 26) わからない。自分が大学でなにをやっているか理解できない。
- 27) 大学で優秀な成績を修めるということによって個人的満足感が得られるから。
- 28) 勉学で成功することが可能であることを自分自身に示したいから。

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