

A Passion for English Learning? Comparing the English Learning Motivations and Self-Perceived English Proficiency between Two Types of College Students in Taipei, Taiwan*

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This study investigated the English learning motivations and self-perceived English proficiency between two types of college students in Taipei. Students from public, private, comprehensive, and vocational colleges were selected and 720 effective samples were obtained. Factor analysis, *t*-test, MANOVA, and multiple regression were used to conduct the data analysis. A scale with 15 items of English learning motivations was designed and 12 items were retained after an item analysis and exploratory factor analysis. Using exploratory and confirmatory factor analysis, three factors-intrinsic motivation, instrumental motivation, and passivity towards requirements motivation-were extracted. This scale had high internal consistency reliability ($\alpha = .850 - .913$), test-retest reliability ($r = .88 - .93$), and good construct validity. The research findings are as follows: First, intrinsic motivation had the highest intensity, whereas passivity towards requirements motivation had the lowest intensity. This result differed from those of many studies that found that East Asian students had low intrinsic motivation. Second, among the three motivations, intrinsic motivation differed significantly based on sex (female students > male students) and between the type of college (comprehensive college students > vocational college students). For instrumental motivation, comprehensive college students had significantly higher motivation than vocational college students did. Third, students' self-perceived English proficiency was not high (1.64 on a 3-point scale). The female students' mean score was significantly higher than that of male students. Moreover, college students' comprehensive mean score was significantly higher than that of vocational college students. Furthermore, the results also revealed the strong predictive power (31.9%) of background variables (gender and college type) and three types of motivations on students' self-perceived English proficiency. Finally, this study offered suggestions for increasing students' English learning motivation.

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Introduction

In Taiwan, learning English has become very popular and there is a passion for English in which the importance of learning English is highly emphasized (Lin, 2012). Recently, the government strived for internationalization through raising the English ability of the Taiwanese. In the government sector, for “all government employees seeking promotion,” they “will be awarded extra credit if they can demonstrate English proficiency at a specified level” (Chang, 2006, p. 2). This trend of focusing on internationalization also influenced the education scene, especially concerning English education. Mandatory English lessons in public schools were required to start from 1st grade now, which is even earlier than the previous starting year at 7th grade (Ministry of Education, 2015). Not only does the age for learning English in schools starts earlier, there are also various criteria for collegiate students at their graduation to pass English proficiency exams (Su, 2005). Hence, currently in Taiwan, many students will receive information concerning English learning and will continuously be required to pass English exams.

Although there is a passion for English learning, the overall English proficiency of Taiwanese students has not improved a lot and there is a “bipolar distribution” in English exam outcomes, indicating that there is an alarming achievement gap (Chang, 2006, p. 2; Lu, 2012). This means that students’ exam outcomes are no longer a normal distribution: an increasing number of students score zero or very low, a few handful score extremely high, and the number of students who score in the middle range are disappearing (Wang, 2014). Collegiate-level students in Taiwan on average lack high English learning motivation; specifically, students in vocational schools had been reported to have low English proficiency and low motivation (Chang, 2006). Thus, the researcher is interested in further exploring how students at different types of schools have diverse English learning motivations and processes.

This interest was initiated by the researcher’s teaching experience in a collegiate level school. Since the researcher taught at a vocational college, the English courses at this school mainly focused on professional technical training. Finding a job is often a crucial goal for these students. The students shared how they had been instilled with the concept that English is very important; yet students think English courses have not assisted in their future job preparation. There were also students who expressed how English is irrelevant (they feel that they are not motivated to use it in Taiwan) while feeling that they have low English proficiency. As seen, students may have diverse views concerning their English learning motivation and English proficiency level.

Literature Review

Theories of Language Learning Motivation

There are many theories on English learning motivation and students’ self-perceived English proficiency. For this study, the motivation scale was based on several theories on language learning motivation. In the English teaching field, one frequently cited learning motivation theory was established by Robert Gardner’s study on language learning (Gardner & Lambert, 1959). This theory includes key concepts of “integrated motivation,” which involves learners’ invested interest in the culture of the language, and “instrumental motivation,” which are the “practical” advantages that the learner gains from learning the language (Gardner & MacIntyre, 1991, pp. 58-59). The instrumental motivation often refers to focusing on short-term or “practical goals” when learning a second or foreign language. Integrative motivation is different in that it pinpoints “a holistic learning approach towards the speech and culture of the target language group” (Tsai & Chang, 2013, p. 26).

Another motivation theory includes extrinsic and intrinsic motivation (Dörnyei, 1998). Intrinsic motivation comes from “innate psychological needs” for self-satisfaction and self-determination such as autonomy and enjoying “the pleasure of” learning the target language (Noels, Clément, & Pelletier, 2001; Oletić & Ilić, 2014, p. 25; Tsai & Chang, 2013, p. 26). Meanwhile, extrinsic motivation is related to learning motivation for the sake of “an external reward that may be obtained”; this is different from intrinsic motivation in which the motivation stems from the enjoyment of language learning itself (Schmidt, Boraie, & Kassabgy, 1996, p. 14).

The above theories of motivation types are often cited in studies on students’ English learning motivation. Many researchers in Taiwan also utilize these theories for designing surveys on learning motivations. However, the method of classifying learning motivation into only two dichotomous types has generated much critique (Yashima, 2000, p. 121). Some scholars are now stating that motivation includes many different factors and dimensions, not just merely one or two factors in the motivation construct (Dörnyei, 1998; Schmidt et al., 1996). In addition, some studies also find that motivation may differ in diverse contexts; hence, the cultural and social context of the society that the students are learning in may have influence on the different dimensions of students’ motivation (Dörnyei, 1994). For example, in a study on Muslim students by Bakar, Sulaiman, and Razaai (2010), another type of motivation surfaced, which is the religious motivation, for the Muslim learners.

There is also a revision to the theory of instrumental and integrative motivation. Taiwanese researchers added another “requirement motivation,” which concerns students’ coping with mandatory requirements without involvement of interest or advantages, to the motivation construct theory (Peng, 2002, p. 3; Warden & Lin, 2000).

In the context of Taiwan, a Han-Chinese majority Confucian society, perhaps other dimensions of learning motivation should be explored within this Confucianism cultural context that stresses one’s responsibility to and fulfillment of familial and social expectations (Chen, Warden, & Chang, 2005; Hofstede & Bond, 1988; Lu, Cooper, Kao, & Zhou, 2003). Wen (1997) has conducted research in the Chinese learning context and identified the “passivity towards requirements motivation” (p. 21). This is seen as a different motivation dimension from integrative and instrumental motivation types (Bräuer, 2001). This motivation dimension is defined as students’ focus on meeting requirements and having a passive attitude towards learning (Wen, 1997), which is suitable for the Taiwanese context and is integrated into this study (Peng, 2002; Warden & Lin, 2000).

The above theories were used to construct the questionnaire scale. In this study, the English learning motivation constructs used in the scale were: intrinsic motivation, instrumental motivation, and passivity towards requirements motivation. The intrinsic and instrumental motivation were used to measure the internal and external dimensions of the learning motivation constructs, while the passivity towards requirements motivation aimed to measure the socio-cultural dimension of Taiwanese students’ motivation to meet social requirements.

Studies on English Learning Motivation

Although there are many Taiwanese research on English learning motivation, most investigate secondary and elementary school students, and there is less attention on vocational college students (Wu & Lin, 2009).

The existing research on vocational school students’ motivations focused on specific majors such as applied English, hotel management, medical care, yet the students in business, management, sciences, and engineering were less studied (Lin, 2008; Tsai, Jheng, & Hong, 2010; Wu, Chang, & Luo, 2009). Hence, in this study, vocational school students from a variety of different majors including business and engineering majors were investigated to broaden the research scope.

The result of previous studies on vocational school students’ learning motivation was that it was mostly instrumental motivation (Chen et al., 2010). A study further showed that students in vocational colleges with “stronger motivation intensity” had “attained better English proficiency” (Tsao & Lin, 1998, pp. 355-356). Huang (2006) found that for Taiwanese students, English reading proficiency was generally not highly correlated to English learning motivation, though the vocational college students’ English

reading ability had slightly more relation to motivation than that of comprehensive school students. However, Huang only focused on English reading ability and did not study English proficiency as a whole. There was less research on collegiate level vocational school students.

This study includes these vocational college participants along with comprehensive college students to further the knowledge about diverse students and English learning motivation in Taiwan. The study aims to find results that contribute to explain the discrepancies in the above research.

In addition to studying motivation and its correlation to English proficiency, Liu (2008) also investigated the relationship between students' "academic self-concept" (which includes "students' perception of their academic ability") and English language motivation (p. 167). Some other studies researched the relationship between students' English learning motivation and self-conception of English proficiency and found that "[s]tudents with a higher degree of motivation showed that they perceived their English proficiency higher than others" (Takahashi & Takahashi, 2013, p. 8).

However, these studies mentioned above did not focus on comparing vocational and comprehensive college students' motivation and self-perceived English proficiency. This particular comparison part that was not discussed in the previous research will also be further explored in this study.

Research Questions

According to the above, the questions of this research are as follows:

1. What are the reliability and validity of the English Learning Motivation Scale and the Self-Perceived English Proficiency Scale in this research?
2. What are the intensity levels of the three different types of English learning motivations?
3. What are the differences in English learning motivation between college types, between genders? Are there college type * gender interaction effects on English learning motivation?
4. What is the self-perceived English proficiency level of the total sample? What is the difference of self-perceived English proficiency between different genders and between different college types?
5. What are the predictive powers of students' college type, gender, and English learning motivation on students' self-perceived English proficiency?

Method

Participants

The research participants are collegiate level students from Taipei, Taiwan, with a selection of different departments and different grade levels. The participants come from six colleges in total, including two vocational colleges (1 public, 1 private) and four comprehensive colleges (2 public, 2 private). The participants are twenty years old or older. They willingly filled out the anonymous questionnaire and could freely choose whether to participate or not. The participants filled out the questionnaire after class time and they were fully informed that participation or not in the research did not affect their grades at all. The scope of the samples were limited to these six colleges and the results of this study cannot be generalized to other colleges.

Table 1 shows the sample distribution by college type * gender. There are a total of 738 participants selected to fill out the questionnaires, and the number of effective questionnaires is 720.

Table 1
The sample distribution of college type by gender (N = 720)

Variable		Gender		Total
		Male	Female	
Colltype*	Vocational	184	74	258
	Comprehensive	158	304	462
	Total	342	378	720

Note. *Colltype: college type

Instrument

The questionnaire method was applied in this study and a self-designed scale was utilized. The content of the questionnaire included two parts: (1) personal information; (2) an English Learning Motivation Scale of 12 items with a 5-point scale: highly agree (5 points), agree (4 points), neutral (3 points), disagree (2 points), and highly disagree (1 point).

The design of the English Learning Motivation Scale was informed by theories of language learning motivation discussed below and previously mentioned above in the “Literature Review” section of this study. These theories were used to construct the scale. This study proposed three types of English learning motivations: intrinsic motivation, instrumental motivation, and passivity towards requirements motivation.

In this scale, the intrinsic motivation was used to measure the internal dimensions of the learning motivation constructs such as the enjoyment of learning language in itself (Dörnyei, 1998; Schmidt et al., 1996); “I like English songs, films, dramas, so I learn English” would be the item example. The instrumental motivation measured students’ learning motivation for short-term gains or practical goals (Gardner & MacIntyre, 1991); for instance, “I want to work in foreign companies, so I learn English” is an item example. Meanwhile, the passivity towards requirements motivation aimed to measure students’ motivation to meet requirements placed on them by society (Wen, 1997), so some items were constructed according to Taiwan’s language learning context (Peng, 2002; Warden & Lin, 2000). For example, “My parents ask me to learn English, so I learn English” would be an item in this construct.

This questionnaire included an item of “students’ self-perceived English proficiency” in the personal information section. This item was defined as the students’ self-perception or self-understanding of their English proficiency, rather than students’ actual English achievement or score in the language class (Takahashi & Takahashi, 2013; Takahashi, 2009; Xu, 1991). Students were asked to rate their overall English language proficiency using a 3-point scale: advanced level (3 points), intermediate level (2 points), and primary level (1 point) (Makewa, Role, & Tuguta, 2013; Martirosyan, Hwang, & Wanjohi, 2015; Takahashi, 2009).

There was also another item in the personal information section of the questionnaire, “passing an English Proficiency Exam for college graduation requirement” by responding yes or no. The dummy values 1 (yes) and 0 (no) were used in this item when determining the relationship (concurrent validity) with the measures of the Self-Perceived English Proficiency Scale.

The draft of the questionnaire in this research was first corrected by three professors who are experts in the fields of English teaching, educational psychology, and research methodology. These corrections by the professors indicated expert validity.

Data Analysis

SPSS 20 and AMOS 19 software tools were used to conduct exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) for validating and cross-validating the English Learning Motivation Scale.

To examine the differences among the three different types of English learning motivations, the One-way MANOVA with repeated measures was used. Next, the *t*-test was used to examine the differences between college types and between genders on self-perceived English proficiency. Then, the two-way MANOVA was used to find the effects of college type, gender, and college type * gender interaction on English learning motivation. Finally, the hierarchical multiple regression analysis was applied to predict the effects of students' college type, gender, and English learning motivation on the self-perceived English proficiency. For the present study, the alpha level (α -level) was set at .01 in all statistical tests.

Results

I. Reliability and Validation of the English Learning Motivation Scale and the Self-Perceived English Proficiency Scale

1. Item Analysis and Exploratory Factor Analysis

The critical ratio for each item of the original 15-item scale between the high-scoring and the low-scoring group was analyzed via *t*-test ($t = 8.91 \sim 29.75, p < .01$). The results supported the discriminatory power of the items in this scale. Additionally, all item-total correlations (r_{bis}) were from .19 to .72. Among them, item 5 ($r_{bis} = .19 < .3$) and item 15 ($r_{bis} = .25 < .3$) were excluded, because these two items were not measuring the same construct measured by the other items included (Field, 2009).

EFA was performed on the 13 remaining items to find the factor structure. Three factors were extracted, but item 10 was found locating on two factors, thus it was excluded. Then the EFA with the 12 remaining items was conducted again. Three factors were extracted, which contributed to 67.39% of the variance. The three factors were named as: factor 1, Intrinsic motivation (5 items, item 1-5); factor 2, Instrumental motivation (4 items, item 6-9); and factor 3, Passivity towards requirements motivation (3 items, item 10-12) (see Table 2).

2. Confirmatory Factor Analysis and Cross-validation of the English Learning Motivation Scale

(1) Goodness of fit test of the 3-factor model for Calibration sample and Validation sample separately

CFA was conducted to validate the factorial model proposed based on the results of EFA. In order to cross-validate the validity of the model, the total sample of 720 were randomly divided into two independent samples, one was Calibration sample ($N_1 = 360$), and the other was Validation sample ($N_2 = 360$).

Prior to performing CFA, the data of these two independent samples was examined to fit normality. The absolute values of skewness and the kurtosis were smaller than 2 and 7 for the Calibration sample and Validation samples respectively, suggesting univariate normality (Curran, West, & Finch, 1996). In addition, the multivariate normality was examined using Mardia measure of multivariate kurtosis. The Mardia's coefficients were 19.42 (Calibration sample) and 23.6 (Validation sample), which were lower than the value of 168 computed based on the formula $p(p+2)$, where p equals the number of observed variables (12 in this scale) in the model (Raykov & Marcoulides, 2008). Hence, the multivariate normality of the data was assumed.

Table 2

The values of the Mean, SD, and factor loading of three factors: Exploratory factor analysis of the English Learning Motivation Scale

No.	Item description	Factor 1	Factor 2	Factor 3	<i>M</i>	<i>SD</i>
1.	like English songs, films, dramas, so I learn English.	.810	.114	-.109	3.67	1.13
2.	I want to communicate with foreign friends, so I learn English.	.788	.284	-.242	3.68	1.11
3.	I like to know new things, so I learn English.	.777	.310	-.223	3.59	1.07
4.	I am interested in English, so I learn English.	.772	.231	-.314	3.52	1.07
5.	I want to integrate into foreign culture, so I learn English.	.639	.382	-.161	3.28	1.10
6.	I want to work in foreign companies, so I learn English.	.082	.837	-.016	3.17	1.08
7.	I want to work in English related fields, so I learn English.	.253	.747	-.080	3.25	1.15
8.	I want to work abroad, so I learn English.	.312	.713	-.025	3.40	1.05
9.	In the future, I will need English to communicate with colleagues and customers, so I learn English.	.246	.709	-.021	3.54	1.11
10.	The school has a graduation requirement of passing an English Proficiency Exam, so I learn English.	-.223	-.021	.866	2.69	1.11
11.	The school mandates English as a required course, so I learn English.	-.197	-.078	.831	2.65	1.05
12.	My parents ask me to learn English, so I learn English.	-.190	-.009	.694	2.76	1.14

Note. Principal Axis Factoring and the Varimax rotation methods were used.

The maximum likelihood estimation method was selected to perform CFA. Table 3 shows the goodness of fit test of the three-factor model for Calibration sample ($N_1 = 360$) and Validation sample ($N_2 = 360$) separately.

Table 3

Goodness of fit test of the three-factor model for the Calibration sample and Validation sample respectively

	χ^2	<i>df</i>	χ^2/df^*	GFI	RMSEA	NFI	CFI	TLI	PNFI
Calibration Sample	175.63**	51	3.44	.92	.075	.94	.95	.94	.72
Validation Sample	174.93**	51	3.43	.93	.074	.93	.95	.94	.73
Criteria	$p > .05$		1 ~ 5	> .90	< .08	> .90	> .90	> .90	> .50
Goodness of fit	no		yes	yes	yes	yes	yes	yes	yes

* $\chi^2/df < 5$ indicating a reasonable fit (Marsh & Hocevar, 1985).

** $p < .01$.

Seven indexes were calculated to assess the goodness of fit of the model (Hopper, Coughlan & Mullen, 2008). These include: 1. Absolute fit indexes: (1) the ratio between χ^2 and the degrees of freedom (χ^2/df), (2) the goodness-of-fit index (GFI), and (3) the root mean square error of approximation (RMSEA); 2. Incremental fit indexes: (1) the normed-fit index (NFI), (2) the comparative fit index (CFI), and (3) the Tucker-Lewis Index (TLI); 3. Parsimonious normed fit index (PNFI).

Table 3 indicates all the above 7 indexes fit the criteria for Calibration sample and Validation sample respectively, and support a good fit of the 3-factor model of the English Learning Motivation Scale for the both samples.

(2) Reliability and validity of the English Learning Motivation Scale

To examine the internal consistency reliability of the English Learning Motivation Scale, the Cronbach's alpha was computed for the total sample ($N = 720$), and the value was .91 for factor 1 "Intrinsic motivation," .86 for factor 2 "Instrumental motivation," and .85 for factor 3 "Passivity towards requirements motivation." In addition, 79 participants were used to determine the test-retest reliability. The test-retest reliability over two weeks was .90 for factor 1, .93 for factor 2, and .88 for factor 3. The results supported that this scale had higher internal consistency reliability and test-retest reliability.

As for the reliability and validity of the construct, the Average Variance Extracted (AVE) and Composite Reliability (CR) were used to assess the convergent validity of the scale (Bagozzi & Yi, 1988; Fornell & Larcker, 1981).

For Calibration sample, the values of CR were .87, .80, and .76, and the values of AVE were .58, .50, and .51 for the three motivation constructs. For Validation sample, the values of CR were .87, .79, and .71, and the values of AVE were .57, .50, and .50 for the three motivation constructs. Both results supported the convergent validity of the three constructs of this scale.

(3) Cross-validation test of the three-factor model across Calibration sample and Validation sample

After the proposed 3-factor model of the scale was separately validated on the Calibration sample and Validation sample, the next step was to cross-validate the measurement invariance of the 3-factor model across these two samples. This study tested the measurement model for the invariance of configural, metric, scalar, factor covariance, and error variance by systematically constraining factor loadings, item intercepts, factor covariance, and error variance to equality across these two samples (Vander Elst, De Witte, & De Cuyper, 2014).

In the multigroup CFA approach, fit of a baseline model is compared to the fit of increasingly constrained models. In the competitive nested model comparison, when the $\Delta\chi^2$ is $> .05$, and the indexes of ΔCFI and ΔTLI are $\leq .01$ (Cheung & Rensvold, 2002; Chen, 2007), it supports the invariance model with more restrictions on parameters across the two samples.

Table 4 summarizes the fit indexes across all tests for invariance models across the Calibration sample and Validation sample. First, Model 1 tested the configural invariance model across two samples. The findings supported configural invariance: $\chi^2/df = 3.44 < 5$; RMSEA = .058 $< .08$; TLI = .94 $> .90$; CFI = .95 $> .90$. Next, the model fit of the configural and metric invariance models (Model 2 vs. Model 1) was compared. The findings supported metric invariance (i.e., the same unstandardized factor loading values across samples): $\Delta\chi^2 = 2.20$, $p > .05$; $\Delta TLI \leq .01$; $\Delta CFI < .01$. Third, the results of scalar invariance test (Model 3 vs. Model 2) supported scalar invariance (i.e., the same scale's item intercepts across groups): $\Delta\chi^2 = 1.30$, $p > .05$; $\Delta TLI < .01$; $\Delta CFI \leq .01$. Fourth, the results of the factor covariance invariance test (Model 4 vs. Model 3) supported factor covariance invariance: $\Delta\chi^2 = 1.69$, $p > .05$; $\Delta TLI \leq .01$; $\Delta CFI < .01$. Finally, the results of error variance invariance test (Model 5 vs. Model 4) supported error variance invariance: $\Delta\chi^2 = 3.08$, $p > .05$; $\Delta TLI < .01$; $\Delta CFI < .01$.

In sum, the five analyses above support the cross-validation of the measurement invariance of the 3-factor model across Calibration sample and Validation sample.

Table 4

Test of invariance of the three-factor model of the ELMS across two independent samples-Calibration sample vs. Validation sample

Model	χ^2	df	χ^2/df	$\Delta\chi^2$	RMSEA	TLI	Δ TLI	CFI	Δ CFI
Model 1. Configural	350.57	102	3.44		.058	.94		.95	
Model 2. Metric	352.77	111	3.18	2.20 ^{ns}	.055	.95	.01	.95	.00
Model 3. Scalar	354.07	123	2.88	1.30 ^{ns}	.051	.95	.00	.96	.01
Model 4. factor covariance	355.76	129	2.76	1.69 ^{ns}	.049	.96	.01	.96	.00
Model 5. Error variance	358.84	141	2.54	3.08 ^{ns}	.046	.96	.00	.96	.00

Note. ^{ns} = non-significant; ELMS: English Learning Motivation Scale

(4) Reliability and validity of the Self-Perceived English Proficiency Scale

As to the Self-Perceived English Proficiency Scale, the test-retest reliability over two weeks was .915 ($p < .01$) ($N = 79$). The concurrent validity of the Self-Perceived English Proficiency Scale with the item “Passing an English Proficiency Exam for college graduation requirement” was .481 ($p < .01$). It revealed that this scale had a high test-retest reliability and concurrent validity.

II. The intensity level analysis among the three types of English learning motivations

To examine the intensity among the three types of English learning motivation scores, which were converted into 5-point scale, the one-way ANOVA with repeated measures was used. The values of Mean, Standard Deviation and Pearson correlation of three types of motivations are shown in Table 5.

Table 5

The values of the Mean, SD, and Pearson correlation of three types of motivations

Motivation type	Intrinsic motivation	Instrumental motivation	Passivity towards requirements motivation	<i>M</i>	<i>SD</i>
Intrinsic	1.00			3.66	.86
Instrumental	.49**	1.00		3.34	.93
Passivity towards requirements	-.39**	-.12**	1.00	2.70	.96

** $p < .01$.

The Pearson correlations among the three type of motivations indicate that when the students' intrinsic motivation is higher, their instrumental motivations is also higher ($r = .49$, $p < .01$), but their passivity towards requirements motivations is lower ($r = -.39$, $p < .01$) (see Tale 5).

Next, before conducting the one-way ANOVA with repeated measures, the test of Sphericity is often calculated to determine whether the variances of the differences between all possible pairs of within-subject conditions are equal (Field, 2009). In this study, the Mauchly's Test of Sphericity showed that the assumption of Sphericity was violated: The Mauchly's $W = .715$; $\chi^2(2) = 240.77$, $p < .001$; then the Greenhouse-Geisser estimates of Sphericity (Epsilon = .788) was utilized to correct the degrees of freedom (Field, 2009).

The results of one-way ANOVA with repeated measures, $F(1.56, 1119.15) = 204.79$, $p < .001$, $MSE = 224.25$, $\eta^2 = .222$, demonstrated significant differences among the means of three types of motivations. The *post hoc* test of the Scheffé method suggested that intrinsic motivation ($M = 3.66$, $SD = .86$) > instrumental motivation ($M = 3.34$, $SD = .93$) > passivity towards requirement motivation ($M = 2.70$, $SD = .96$).

III. The difference analysis between college types, between genders, and the effect of college type by gender interaction on English learning motivation

A two-way MANOVA was computed to examine the differences between college types, between genders, and to examine the effect of college type * gender interaction on English learning motivation. The descriptive statistics of English learning motivation by college type * gender is presented in Table 6.

Table 6

*Descriptive statistics of English learning motivation by College type * gender*

Motivation type	College type	Gender	<i>M</i>	<i>SD</i>	<i>N</i>
Intrinsic (5 items)	Vocational	Male	16.22	4.16	184
		Female	18.05	4.43	74
		Total	16.74	4.31	258
	Comprehensive	Male	18.78	3.00	158
		Female	19.42	3.99	304
		Total	19.20	4.00	462
	Total	Male	17.40	4.28	342
		Female	19.15	4.12	378
		Total	18.32	4.28	720
Instrumental (4 items)	Vocational	Male	12.68	4.04	184
		Female	13.04	3.25	74
		total	12.79	3.83	258
	Comprehensive	Male	14.81	3.60	158
		Female	15.50	3.58	304
		Total	13.68	3.59	462
	Total	Male	13.27	3.78	342
		Female	13.44	3.63	378
		Total	13.36	3.70	720
Passivity towards requirements (3 items)	Vocational	Male	8.20	2.80	184
		Female	7.59	2.43	74
		Total	8.02	2.71	258
	Comprehensive	Male	8.36	3.01	158
		Female	8.01	2.98	304
		Total	8.13	2.99	462
	Total	Male	8.27	2.90	342
		Female	7.92	2.88	378
		Total	8.09	2.89	720

First, the Box's test of Equality of Covariance Matrices was calculated and was found to be significant, Box's $M = 68.08$, $F(18, 398503.76) = 3.74$, and $p < .001$. It violates the assumption of equality. When the sample size is larger and even the Box's M is significant, Tabachnik & Fidel (2013) recommends that we could resort to using Pillai's trace instead of Wilk's lambda as the test statistic. Hence, the Pillai's trace as the test statistic was used in the following MANOVA test.

The results of the two-way MANOVA showed that statistically significant main effects were obtained on College type, with a Pillai's Trace = .059, $F(3, 714) = 15.64$, $p < .001$, $\eta^2 = .059$; and on Gender, with a Pillai's Trace = .024, $F(3, 714) = 5.79$, $p < .001$, $\eta^2 = .033$. However, no interaction effect was found for their interaction on the combined dependent variables, with a Pillai's Trace = .005, $F(3, 714) = 1.08$, $p = .355$, $\eta^2 = .003$.

Since the significant multivariate F value for College type and Gender were obtained, the univariate F tests were conducted to see if the two independent variables have a significant impact on three English learning motivations. Before conducting the univariate F tests, the Levene's statistics for the three dependent variables were found to be non-significant, $F(3, 716) = .835$; $F(3, 716) = 2.62$; $F(3, 716) = 1.31$ respectively ($p > .01$), meaning that the group variances were equal. Then the univariate ANOVA test was conducted, and the Scheffé test was used for *post hoc* comparisons.

There was significant mean difference between college types on intrinsic motivation, $F(1, 716) = 30.15, p < .001, MSE = 410.51, \eta^2 = .04$, indicating that comprehensive college ($M = 19.42, SD = 4.00$) > vocational college ($M = 16.74, SD = 4.31$). Further, between college types on instrumental motivation, the mean difference was significant, $F(1, 716) = 8.16, p < .01, MSE = 110.44, \eta^2 = .011$, indicating that comprehensive college ($M = 13.68, SD = 3.59$) > vocational college ($M = 12.79, SD = 3.83$). In addition, there were significant mean differences between genders on intrinsic motivation, $F(1, 716) = 18.32, p < .01, MSE = 249.4, \eta^2 = .025$, indicating that female ($M = 19.15, SD = 4.12$) > male ($M = 17.4, SD = 4.28$).

IV. The difference analysis between college types and between genders on self-perceived English proficiency

An independent-sample t -test was conducted to examine the differences of self-perceived English proficiency between college types and between genders.

Scores on the self-perceived English proficiency were higher for comprehensive college ($M = 1.82, SD = .52, N = 462$) than for vocational college ($M = 1.33, SD = .53, N = 258$), $t(520) = 12.14, p < .001, SE = .041, \eta^2 = .171$. The Levene's test indicated unequal variances ($F = 7.69, p < .01$), so degrees of freedom were adjusted from 718 to 520.

In addition, scores on the self-perceived English proficiency were higher for female students ($M = 1.8, SD = .53, N = 378$) than for male students ($M = 1.47, SD = .57, N = 342$), $t(700) = 8.18, p < .001, SE = .041, \eta^2 = .084$. The Levene's test indicated unequal variances ($F = 30.56, p < .001$), so degrees of freedom were adjusted from 718 to 700.

V. Regression analysis of background variables and three types of English learning motivations on the self-perceived English proficiency

A hierarchical multiple regression analysis was conducted to determine the predictive power of background variables (college type, gender) and three types of English learning motivations on self-perceived English proficiency. Descriptive statistics of one dependent and five independent variables are shown in Table 7, and Pearson Correlations of self-perceived English proficiency and five predictive variables are calculated as Table 8.

Table 7

Descriptive statistics of dependent and independent variables of the multiple regression analysis

Variables	<i>M</i>	<i>SD</i>	<i>N</i>
Self-perceived English proficiency	1.64	0.57	720
College Type	0.36	0.48	720
Gender	0.48	0.50	720
Intrinsic motivation	18.32	4.28	720
Instrumental motivation	13.36	3.70	720
Passivity toward requirements motivation	8.09	2.89	720

Note. College Type and Gender were converted into dummy variables separately, (College type: 1. Vocational College, 0. Comprehensive College; Gender: 1. Male, 0. Female)

Table 9 shows that the results of ANOVA tests of the two models of hierarchical regression analysis predicting self-perceived English proficiency were significant. Model 1 of background variables (college type and gender) in predicting self-perceived English proficiency was significant, $F(2, 717) = 88.21, p < .01$, with an $R^2 = .197$, and Model 2 of three types of motivations in predicting self-perceived English proficiency was significant, $F(5, 714) = 66.90, p < .01$, with an $R^2 = .319$. The regression weights and predictive powers of the two models are shown in Table 9.

Table 8

Pearson Correlations of Self-perceived English Proficiency and 5 predictive variables

	SPEngPro	CollType	Gender	IntrinM	InstruM	PassiveM
SPEngPro	1.00	-.42**	-.29**	.42**	.24**	-.27**
CollType		1.00	.35**	-.28**	-.12**	-.02
Gender			1.00	-.20**	.02	.06
IntrinM				1.00	.49**	-.39**
InstruM					1.00	-.12**
PassiveM						1.00

Note. SPEngPro: Self-perceived English proficiency; CollType: College types; IntrinM: Intrinsic motivation; InstruM: Instrumental motivation; PassiveM: Passivity towards requirements motivation; dummy variable: (CollType: 1. Vocational college, 0. Comprehensive college); dummy variable: (Gender: 1. Male, 0. Female)

** $p < .01$.

Table 9

Hierarchical regression analysis predicting self-perceived English proficiency

Predictors	Step 1			Step 2		
	β	SEB	t	β	SEB	t
Background						
College Type	-.36	.04	-9.96**	-.31	.04	-8.96**
Gender	-.17	.04	-4.72**	-.13	.06	-3.99**
Motivation						
Intrinsic				.20	.01	5.00**
Instrumental				.08	.01	2.26
Passivity towards requirements				-.18	.01	-5.22**
R^2		.197			.319	
F for Change in R^2		88.21**			42.49**	

** $p < .01$.

In Table 9, Model 1 (Step 1) indicated that the predictive power of College type and Gender on self-perceived English proficiency was 19.7%. The β value (-.36) of College Type ($t = -9.96$, $p < .01$), and β value (-.17) of Gender ($t = -4.72$, $p < .01$) showed that both variables were significant predictors. Model 2 (Step 2) showed that the predictive power of background variables (college type and gender) and three types of motivation variables was 31.9%. The predictive power of Model 2 minus that of Model 1 (.319- .197 = .122) indicated that the predictive power of three types of motivation on self-perceived English proficiency was 12.2%. The β value (.20) of intrinsic motivation ($t = 5.00$, $p < .01$), and β value (-.18) of passivity toward requirements motivation ($t = -5.22$, $p < .01$) showed that both motivations were significant predictors. Yet the β value (.08) of instrumental motivation ($t = 2.26$, $p > .05$) was not a significant predictor.

In total, the predictive power of background variables plus three types of motivations on students' self-perceived English proficiency was 31.9%; hence, both the background variables and the three types of motivations had similar strong predictive power on students' self-perceived English proficiency.

Discussion

Based on the above results of this study, six points are discussed as follows:

The Intrinsic Motivation had the Highest Intensity

One finding of this study, that intrinsic motivation had the highest intensity, was different from many previous studies on Asian and Taiwanese students' English learning. For example, Tachibana, Matsukawa, and Zhong (1996) found that Japanese students had lower intrinsic motivation. Geddes (2016) found that for Korean university students, "getting a job is by far the most important reason for studying English and understanding another culture is the least important reason" (p. 713); hence the strongest reason for those Korean students to learn English is related to instrumental motivation and not intrinsic motivation.

The studies of Lin (2008) and Wu & Lin (2009) found that Taiwanese college students' instrumental motivation has higher intensity. In Taiwan, there is a major focus on testing and English requirements for entering higher levels of education institutions in society. College students in Taiwan face the stress of passing English proficiency exams, which is a required graduation criterion (Ministry of Education, 2004; Su, 2005). There is a lot of pressure to meet these goals for obtaining a good job and perhaps students feel preoccupied about instrumental goals in learning English. However, this study has different results from the previous studies. College students' intrinsic motivation is the highest and instrumental motivation is the second highest.

The Passivity towards Requirements Motivation had the Lowest Intensity

Taiwanese researchers investigated students' motivation to meet requirements under Taiwan's language learning context, which is the "passivity towards requirements motivation." This dimension is a unique influence on students' learning motivation in the Chinese culture manifested in Taiwan (Chen et al., 2005). The society and education in Taiwan is highly influenced by Confucianism and the East Asian collectivism cultural traits (Chen et al., 2005; Hofstede & Bond, 1988; Lu et al., 2003). The demands that the collective society and families impose upon students are obvious through "advocacy of filial piety" (Hwang, 1999, p. 169). In this cultural atmosphere of focusing on following rules and on being filial, perhaps students will place importance on these external rules and requirements factors. Previous studies have results that fit this cultural trend: students were reported to be motivated specifically to prepare for the requirements and meet societal expectations under this kind of Confucian collectivism environment (Chen et al., 2005; Peng, 2002).

This study found results that are different from the previous research. Taiwanese students had *lowest* "passivity towards requirements motivation" to meet requirements in society and schools. The results show that students in this study are perhaps less inclined to meet English requirements. The results of passivity towards requirements motivation with lowest intensity is perhaps echoed by very recent college students' calls to abolish the English graduation requirement (Xu, 2017). The students' calls were followed by the actual abolition of the English graduation requirement by some universities (Xu, 2017).

Students' Self-Perceived English Proficiency

Concerning students' self-perceived English proficiency, the average of all sampled students' self-perceived English proficiency was not high. This result is similar to previous studies: in Liu's (2008) research, it is indicated that collegiate level students in Taiwan on average lack high self-perceived English proficiency.

Gender Differences on Learning Motivation and Self-Perceived English Proficiency

When comparing between genders, it should be noted that female students had higher intensity of intrinsic motivation and self-perceived English proficiency than those of male students. The result is possibly due to the influence of Confucian patriarchy values and gender roles in Taiwan's society. Female students are discouraged out of science majors and encouraged to study English and humanities subjects in schools (Geddes, 2016). Female students also do not have the gender role pressure of finding a good job to support the family so they are more likely to learn English for enjoyment of the language itself and thus have higher intrinsic motivation (Geddes, 2016; Kobayashi, 2002; Shams, 2008). This result aligns with the study by Geddes who found that female students "place more importance into meeting people from different countries and studying abroad" when learning English (p. 713). These corresponding results suggest that for the specific intrinsic motivation dimension, the gender variable does play a role to some extent.

College Type Differences on Learning Motivation and Self-Perceived English Proficiency

Furthermore, when comparing between college types, comprehensive college students had higher intensity of intrinsic and instrumental English learning motivations and self-perceived English proficiency than those of vocational college students. The result was that comprehensive college students have higher intrinsic and instrumental motivation, which is similar to previous studies (MacIntyre, Baker, Clément, & Donovan, 2003; Takahashi, 2009).

The results showed that there were differences in social prestige between different types of colleges. A comprehensive college degree is often thought to be more desirable than a vocational college degree (Chen et al., 2005). The reason for this may be the specific cultural and social context of Taiwan; in this Confucian society, education and higher degree diplomas are deemed important (Chen et al., 2005). Comprehensive college degrees are hence more focused on and more desirable to some extent than vocational diplomas; comprehensive colleges could then accept students with higher academic levels such as those with higher English grades (Peng, 2002). After graduating from senior high general or vocational school, students who have lower grades do not attend comprehensive colleges but often attend vocational colleges. Therefore, on average, vocational college students had lower English learning motivation and self-perceived English proficiency than the comprehensive college students, as previous research confirms this result (Peng, 2002).

Predictive Power of Self-Perceived English Proficiency

This study pointed out that the background variables, gender and college type, had a 19.7% predictive power on students' self-perceived English proficiency. This finding of regression analysis corresponded with the previous difference analysis between genders and between college types. The result implied that the background variables were also influential factors on the students' self-perceived English proficiency.

The three kinds of learning motivation variables had a total of 12.2% predictive power on students' self-perceived English proficiency. That means the higher the intensity of English learning motivation, the better the self-perceived English proficiency. It also showed that English learning motivation was an important factor influencing the self-perceived English proficiency of students. This is similar to studies of Chien, Kao and Ching (2011). The relation can also be verified from the study on students in China by Wang (2008), who found that Chinese students' English learning motivation had a 26% predictive power to their English achievement.

In addition, the background variables plus three types of motivation had a high predictive power of 31.9% on students' self-perceived English proficiency.

To sum up, in English teaching, in order to improve students' English proficiency, we need to raise students' English learning motivation. For raising English learning motivation, we should take into account the background variables such as differences between genders and college types, and use different English teaching strategies.

Conclusion

Based on all the previous analysis, the findings summary are as follows:

1. An "English Learning Motivation Scale" was constructed in this study. Through exploratory and confirmatory factor analysis, 3 factors, intrinsic motivation, instrumental motivation, and passivity towards requirements motivation, were extracted from the scale. This scale had good reliability and validity. It may be an effective tool for future research to measure students' motivations. This scale is significant in that it can measure the dimension of passivity towards requirements motivation that is less explored in previous studies. Instead of using the popular intrinsic/extrinsic or instrumental/integrative dichotomous motivation scale, the addition of this third motivation in this study is different from previous studies and measures the unique trait of Taiwanese students' motivation.
2. The intrinsic motivation had higher intensity than instrumental motivation, which also had higher intensity than passivity towards requirements motivation. The correlation between passivity towards requirements motivation and intrinsic motivation was negative, indicating that students dislike to be forced to take English required exams, and inversely like to enjoy learning English intrinsically.
3. Among the three types of motivation, for intrinsic motivation, female students had significantly higher motivation than that of male students and comprehensive college students had significantly higher motivation than that of vocational college students; for instrumental motivation, comprehensive college students had significantly higher motivation than that of vocational college students.
4. Students' self-perceived English proficiency was not high (1.64 on a 3-point scale). When comparing between genders, female students' self-perceived English proficiency was significantly higher than that of male students. When comparing between college types, comprehensive college students' self-perceived English proficiency was higher than that of vocational college students.
5. The predictive power of gender and college type on self-perceived English proficiency was 19.7%; while the three types of English learning motivation predictive power on self-perceived English proficiency was 12.2%. In total, the predictive power of background variables (gender, college type) plus three types of motivations on students' self-perceived English proficiency was 31.9%.

This study was limited to a quantitative survey. Future research could employ a qualitative approach in order to obtain comprehensive information on students' English learning motivation and English proficiency.

This study utilized the self-perceived English proficiency instead of actual English achievement test. In the future, students' actual English levels or grades could probably be included in the data collection to future probe into the relation between students' English learning motivation and actual English exam score level.

The implications of this study include the suggestions for future English teaching. Perhaps future English teaching and testing in Taiwan could be attuned to students' tendency for intrinsic motivation and offer English learning and pedagogical activities that are not merely compulsory English testing requirements (Sung, Chou, & Tseng, 2014). More incorporation in the curriculum of English culture, music, and useful topics in everyday life perhaps would be suitable to match with students' higher intrinsic motivation in learning English. In addition, the curriculum and pedagogy should not be biased towards one gender or one college type. The education and teaching should offer support to meet the different background and needs of students. Through focusing on and raising intrinsic motivation, students' self-perceived English proficiency in learning English may also be improved.

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對英語學習的熱情？比較臺北市兩種 類型大學生的英語學習動機與自我知 覺英語能力*

何彥如

國立陽明大學
人文與社會教育中心

本研究探討綜合與科技兩類大學生的英語學習動機和自我知覺英語能力。從臺北市抽樣公私立之綜合與科技大學，共得 720 份有效問卷。資料分析採 EFA 與 CFA、*t* 檢定、MANOVA 和多元迴歸等。自編「英語學習動機量表」，因素分析抽出內在動機、工具性動機和外在要求的被動性動機等三因素，以及「自我知覺英語能力量表」，均具良好信效度。研究發現：1. 內在動機強度最高，有別於東亞大學生的英語內在動機較低的結果；而外在要求的被動性動機最低，也呼應近期部份大學學生廢除英檢畢業門檻（外在要求動機），轉而重視內在學習動機之訴求。2. 學生的自我知覺英語能力不高，平均為 1.64（3 點量表）。3. 大學生之背景變項加三種學習動機對其自我知覺英語能力的預測力為 31.9%。最後，提出增強學生英語學習動機的建議。

關鍵詞：大學生、自我知覺英語能力、英語學習動機

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