The L2 motivational self system, five-factor model, and proficiency in Japanese university students

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ABSTRACT

Research has shown that motivation is intimately connected to language proficiency (Dörnyei, 1994), yet little has been done to show how personality might be connected to both personality and proficiency in Japanese undergraduate students. This study examined the connection between the five-factor model of personality traits and the second language (L2) motivational self system, and how both constructs relate to self-perceived proficiency. Participants completed the Ten Item Personality Inventory in Japanese (TIPI-J) along with a measure of the L2 motivational self system. Students from two Japanese universities took part in this study ($N = 228$). The results showed that extroversion and openness correlated with the L2 motivational self system, while conscientiousness and openness correlated with perceived proficiency.

INTRODUCTION

Research in motivation has revealed that learning a foreign language is more than just learning a means to communicate, and is in fact closely linked to the learner's core self. Dörnyei (2009), drawing on the concept of *intergrativeness/instrumental motivation* (Gardner, 1985), created the L2 motivational self system. This concept has been extensively studied, indeed Dörnyei (2005) found more than 335 empirical studies making use of the L2 motivational self system. Through extensive testing and continued use, it has been shown to be an effective tool for measuring student motivation. This study makes use of the L2 motivational self system, along with the five-factor model of personality traits (Goldberg, 1999). The connections between motivation, personality, and perceived proficiency are interwoven; it is important to understand how these factors are connected as this will serve as a guide to classroom development.

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REVIEW OF THE LITERATURE

Motivation

Motivational research was dominated for years by the work of Gardner (1985), who developed a theoretical framework suggesting that attitude towards culture played a major role in motivation. This lead to the development of the concepts of *integrativeness*, which relates to the learners' desire to integrate with a target culture through language acquisition, and *instrumentality*, which relates to the learners' desire to learn language for a specific purpose (i.e., work or academics). As advances in cognitive sciences were made, some problems with this theory arose. Gardner's theory failed to take the current age of globalization into consideration (Dörnyei & Csízér, 2002; Lamb, 2004; and McClelland, 2000). Dörnyei's L2 motivational self system draws on the works of Markus and Nurius (1986), who proposed the idea of *selves*.

Dörnyei's L2 motivational self system model is comprised of three dimensions. First, the *ideal L2 self*, according to Dörnyei (2009), is the best possible image one has of one's self in the target language. This might be the image of one being fluent in the language. Second, *the ought-to self* is concerned with the abilities that one believes they should possess. This may be influenced by external duties or obligations. *Ought-to self* is composed of the attributes that one believes one should possess (Dörnyei, 2009). Third, the *L2 learning experience* is a language learners' attitudes toward learning language. This is the result of past experiences in learning a language. Simply put, good experiences increase motivation, while bad experiences do not.

Personality

Although there has been much research into the connection between personality and language acquisition, the connection between personality and language learning is controversial. Personality is often assessed using various tools, such as the Myers Briggs Type Indicator (MBTI) (Myers & Briggs, 1976), Eysenck Personality Questionnaire (EPQ) (Eysenck, 1975), and the five-factor model (Costa & McCrae, 1992). The five-factor model items, along with other personality measures, have been collected and are known as the international personality item pool (IPIP) (Goldberg, 1999). The five-factor model has been further developed by Gosling, Rentfrow, and Swann (2003) into a ten-item personality inventory, which in turn has been translated into Japanese and extensively test by Oshio, Abe, and Cutrone (2012). This is an effective and efficient way to assess the personality of research subjects. It is important to understand that while the tools for assessment of personality exist, the research which has investigated L2 learning and personality are unsatisfactory (Ellis, 2008). Dörnyei (2005) further stated that other variables, such as anxiety, perceived competence, and motivation, must be considered. Therefore this study considers the relationship between personality, the L2 motivational self system, and perceived proficiency.

Research questions

1. Does personality dictate motivation, and are other personality factors indicative of different types of motivation?
2. Are extroverts more likely to have a stronger L2 Ideal self?
3. Does personality correlate to perceived proficiency?

METHOD

Participants

In total 241 students from two universities in northern Japan took part in this study. From the total of 241 students, 228 surveys were fully completed. There were 119 (52.20%) male and 95 (41.65%) female students, with 14 (6.15%) who did not indicate gender. Students were enrolled in law, medicine, education, agriculture and life sciences, humanities, humanities and social sciences, and science and technology majors. The students range from 18-21 years ($M = 20.00$, $SD = 0.70$). Students were selected by their willingness to take part in the survey.

Materials

Measure of the L2 motivational self system

The L2 motivational self system was measured using 15 items provided by Aubrey (2014). These items have previously been piloted by the researcher (MacWhinnie & Mitchell, in press). The items were selected to avoid repetitive questions.

Personality

Personality was assessed through the Ten Item Personality Inventory in Japanese (TIPI-J). This scale has been validated by Oshio et al. (2012). The inventory is based the items on the five-factor model (Goldberg 1999).

English language profiency

A self-rating 7-point scale was utilized to assess students' English ability. Students rated themselves in listening, speaking, reading, and writing. The scale was anchored with very unskilled (1) and very skilled (7). Self-rating scales have been extensively used by many researchers (Duan, 2006; Papi, 2010; Smith & Baldauf Jr, 1982; Ying & Liese, 1994).

Procedure

The researcher asked for assistance from other university professors who agreed to allow the survey to be administered either during class time or as homework. The questionnaires were completed in roughly ten minutes. All data was collected within one month towards the middle of the school year.

Analysis

Verification of scales

The scales used for the L2 motivational self system were verified using Cronbach's Alpha coefficient (see Table 1). Kline (2000) states that the criteria for internal consistency is 0.9 for an excellent fit, between 0.7 and 0.9 for a good fit, and between 0.6 and 0.7 for an acceptable fit.

TABLE 1
Reliability of instruments using Cronbach's *α*

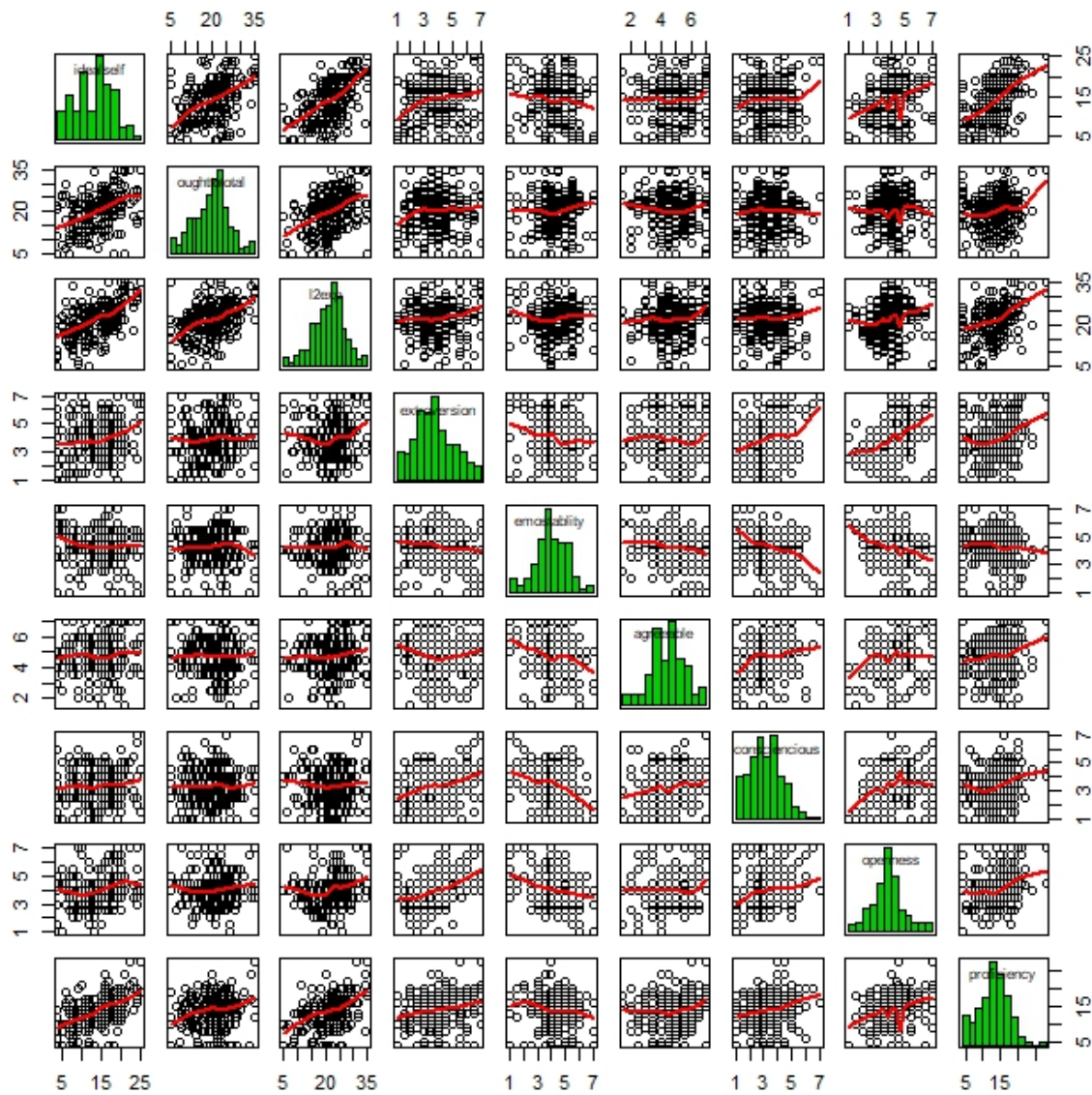| Variables	*M*	*SD*	*α*	Number of items
Ideal L2 Self	14.04	4.96	0.92	4
Ought-to Self	19.97	6.61	0.83	5
L2 Learning experiences	21.79	6.12	0.88	5

FIGURE 1
Correlation Matrix

TABLE 2
Spearman's rank-order correlation results with Bonferroni-Holm adjustments

s		1	2	3	4	5	6	7	8
1. Ideal self	r_s	1							
	p								
2. Ought-to self	r_s	0.41*	1						
	p	.00							
3. L2 Exp	r_s	0.51*	0.43*	1					
	p	.00	.00						
4. Extroversion	r_s	0.17	0.08	0.13	1				
	p	.17	.99	.90					
5. Neuroticism	r_s	-0.09	0.07	0.08	-0.15	1			
	p	.99	.99	.99	.37				
6. Agreeable	r_s	0.02	-0.01	0.10	-0.08	-0.18	1		
	p	.99	.99	.99	.99	.13			
7. Conscientious	r_s	0.06	0.00	0.02	0.24*	-0.31*	0.14	1	
	p	.99	.99	.99	.01	.00	.65		
8. Openness	r_s	0.26*	0.05	0.25*	0.43*	-0.25*	0.06	0.22*	1
	p	.00	.99	.00	.00	.00	.99	.02	
9. Proficiency	r_s	0.53*	0.19	0.40*	0.19	-0.13	0.12	0.23*	0.25*
	p	.00	.09	.00	.10	.90	.99	.01	.00

* Significant result ($\alpha = .05$)

Cronbach's alpha for ideal L2 self ($\alpha = 0.92$) showed an excellent fit, while ought to self, and L2 learning experience ($\alpha = 0.83$, and $\alpha = 0.88$) showed a good fit. All values reported exceed the threshold for good fit. The TIPI-J was extensively verified by Oshio et al (2012), as such no further verification was done for this study.

RESULTS

To understand the connection between the variables, statistical analysis was applied. Spearman's rank-order correlation was used as it is appropriate for analysing ordinal scales. Spearman's r_s indicates the relationship between two variables without making the assumption that the data is on an interval scale (Hauke & Kossowski, 2011). A Spearman's r_s value of 1 would indicate a perfect linear correlation, while 0 indicates no correlation. Negative values are possible and indicate a negative relationship between variables. However, a correlation matrix of the data with Loess lines (see Figure 1) revealed that some of the relationships might not be monotonic, so the results should be treated with caution. The relationship between the variables in this study are displayed in Table 2.

As has been shown in other studies (i.e. Dörnyei, 2009; Papi, 2010), the L2 motivational self system is highly correlated within itself. In this study, ideal L2 self correlated positively with ought-to L2 self , $r_s = .41$, $p < .01$, and L2 learning experiences , $r_s = .51$, $p < .01$, with ought-to self and L2 learning experience also showing correlation, $r_s = .43$, $p < .01$. Ideal L2 self also was

strongly correlated with openness, r_s = .26, p < .01, and proficiency, r_s = .53, p < .01. There was no significant correlation between ideal L2 self and extroversion, neuroticism, agreeableness, nor conscientiousness.

Ought-to self correlated positively with the rest of the L2 motivational self system as well as with proficiency, however none of the correlations were significant. There were also no significant correlations reported between ought-to self and the big five personality traits.

L2 learning experience was positively and significantly correlated with the rest of the L2 motivational self system. It was also significantly correlated with openness, r_s = .25, p < .01, and proficiency, r_s = .40, p < .01. There was no statistically significant relationship with extroversion, neuroticism, agreeableness, nor conscientiousness.

Within the big five personality traits construct there was little correlation displayed in the results. Openness correlated with the most number of the other personality traits, displaying significant relationships with extroversion, r_s = .43, p < .01, neuroticism, r_s = -.25, p < .01, and conscientiousness, r_s = .22, p = .02, suggesting that participants who displayed the trait of openness also displayed extroversion and conscientiousness, and were less likely to display neuroticism. Conscientiousness also significantly correlated with extroversion, r_s = .24, p = .01, and neuroticism, r_s = -.31, p < .01. Perceived proficiency also correlated with conscientiousness, r_s = .23, p = .01, and openness, r_s = .25, p < .01, suggesting that the participants that believed themselves to be the proficient were likely to display the traits of openness and conscientiousness.

DISCUSSION

The first research question asked what role personality plays in motivation. While it is clear that extroversion and openness are correlated to ideal L2 self and L2 learning experiences, it is not clear which is causative. Students who are extroverted and open may be able to better experience the language learning process and therefore develop a more positive L2 learning experience, conversely a good learning experience may serve to draw students out and make then behave in a more extroverted manner.

The second research question asked whether extroverts were more likely to have a stronger sense of ideal L2 self. The results suggested that this was not true for this group of participants because the results of the correlation, r_s = .17, p = .17, suggested a negligible relationship (Plonsky & Oswald, 2014) that was not statistical.

The final research question asked if perceived proficiency was related to personality traits. It was expected that students who were extroverted would tend to rate their proficiency higher than those who were less extroverted. However, the correlation data, r_s = .19, p = .10, suggested that this is not true. Indeed conscientiousness, r_s = .23, p = .01, and openness, r_s = .25, p < .01, were more indicative of a favorable proficiency rating.

While it is clear that personality and the L2 Motivational self system are related, indeed the L2 motivational self system itself was developed in the wake of extensively psychological research (Dörnyei 2009; Gardner, 1985), this study was unable to show unequivocally that personality is indicative of motivation. This study does however give a more thorough understanding of the role of personality in perceived proficiency.

Ghapanchi, Khajavy, and Asadpour (2011) studied the connection between extroversion and proficiency and found a positive correlation between the extroversion and proficiency.

Studies by Eysenck and Cookson (1969), and Furnham, Chamorro-Premuzic, and McDougall (2003) conversely found that among this group of Japanese university students, introverts had higher proficiency. The current study also found that extroverts in this group were not more likely to rate their proficiency higher, while the lack of a negative correlation suggested that there was no relationship between introversion and perceived proficiency. The L2 motivational self system was much more successful at explaining differences in student proficiency than personality. This study then concludes that certain personality traits, specifically conscientiousness and openness, were most indicative of proficiency for this group of students, a result which was to some extent consistent with research involving Hispanic students (Kaufman, Agars, & Lopez-Wagner, 2008).

Ultimately this study found that the L2 motivational self system is a better predictor of student's perceived proficiency than personality traits. It is important that teachers develop tasks and activities for language learners which match the needs of different students to support the development of students' L2 motivational self system as well as supporting personality differences in a way which will help students develop their English ability.

CONCLUSION

In this study the role of personality in language acquisition was investigated. The findings indicated that students who displayed the traits of openness and conscientiousness reported higher proficiency levels. While this study showed some connection between personality and perceived proficiency, the link between personality and the L2 motivational self system was not so clear. This suggests that while personality is indicative of students' perceived learning results and as such can be a powerful tool for predicting achievement, the connection between personality and self systems is more complex than previously thought. This study would suggest that further research on the connection between personality and motivation is needed. The results also suggest that teachers who encourage students to be open and extroverted in the classroom may support student achievement.

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