

ORIGINAL ARTICLE

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English classroom reforms in Japan: a study of Japanese university EFL student anxiety and motivation

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Abstract

The Japanese Ministry of Education, Culture, Sports and Science and Technology (MEXT) are facing a plethora of pressures to become more global. This has led MEXT to draw up the 'English Education Reform Plan Corresponding to Globalization.' This education reform plan calls for a move away from grammar translation in favor of a communication based classroom. These reforms are to be implemented by 2020 to coincide with the Tokyo Olympic games. In the context of these MEXT reforms, the current study investigated anxiety and the L2 motivational self system in Japanese university students. In the study, it was discovered that ideal L2 self and L2 learning experiences are correlated with lower anxiety levels, which in turn led to positive learning results. The study also showed that ought-to self was found to be indicative of increased anxiety, yet was also a strong indicator of motivation overall. Based on these discoveries, classroom approaches for these new MEXT reforms are given in this study.

Keywords: Language learning anxiety, L2 motivational self system, L2 motivation, Motivational behavior

Introduction

Learning a second language can be a deeply personal experience. It can be regarded as a reflection of one's self-identity projected through the L2. The L2 may also be used to construct a personality which is significantly different to that of the L1, using the L2 to create a unique identity that can be used as a type of defensive system (Gardner, 1985). For many L2 students in Japan, English is studied as a classroom subject which represents material that must be learned through memorization, and understood through careful study. By doing this, potentially the student can score well on the exam, please their family and teacher, satisfy their inner curiosity, as well as satisfy many other feelings or desires. However, Mitchell (2017) investigated a shift in how language was being taught in Japanese high schools. A move from a more passive exam based grammar focused L2 classroom study, to one which uses more active communicative language teaching was being implemented. This change is part of a nationwide globalization reform by the Ministry of Education, Culture, Sports, Science and Technology Japan (MEXT) scheduled for completion in 2020. MEXT (2014) state that this new English education

corresponding to globalization is set to nurture the upper secondary school students' 'ability to fluently communicate with English speaking persons' (p. 1).

Now more than ever, EFL education is a highly complex process with an increasing number of variables and goals which the language teacher must consider. Teachers may see highly motivated students, but these students may feel uneasy and anxious about using their L2, especially when they need to interact with native speakers. It can be difficult to understand the causes of these complex feelings toward L2 learning, and therefore the teacher may be at a loss of how to reduce the amount of anxiety in the classroom and increase motivation with the goal of improved learning results.

The purpose of this study is to show the connection between the L2 motivational self system and the anxiety Japanese undergraduate students feel towards English language learning in this education system which is in constant reform, and how the connections mediate their ability to acquire language skills. The investigation will give teachers a better understanding of student L2 anxiety under MEXT's globalization reforms, as well as offer suggestions to reduce anxiety, increase motivation and overall improve the L2 language learning experience.

Literature review

Educational situation in Japan

Mitchell (2017) observed a change in the Japanese education system, which is moving away from a traditional grammar focused language learning experience, to one which fosters more active communication. MEXT (2014) states these classes are to be conducted in English with a focus on 'presentations, debates, negotiations' (p. 1) in order to prepare students for globalization. These Japanese educational reforms come as a response to Japan's fall in ranking on the Programme for International Student Assessment (PISA). Mineshima (2014) reports Japan's recent ranking on PISA has been increasing since the implementation of the reforms, with a ranking of 14 in 2003, 15 in 2006 and rising to 8 in 2009. Despite these improvements, MEXT (2014) still feel there are weaknesses in their education system, particularly regarding language education, which must be addressed. These pressures have resulted in MEXT (2014) drawing up the 'English Education Reform Plan Corresponding to Globalization' and unleashing a plethora of new anxiety and motivation for L2 learners. This plan will start at the elementary level, and work up towards high schools with 2020 as the date set for completion. The results of Mitchell (2017) suggested that Japanese L2 learners in high school are now under pressure to study grammar and test taking strategies as well as being expected to have active communication skills. Therefore, our study considers the L2 motivation, proficiency, and anxiety of the students in this education system during this ongoing MEXT globalization reform.

The L2 motivational self system

Robert Gardner (1985) drew the foundation for intergrativeness/instrumental motive theories, based on his empirical investigation using the Attitude/Motivation Test Battery (AMTB) in bilingual Canada. Despite Gardner's groundbreaking research, Gardner (2005) admits it was not best suited for research in foreign language learning. Dörnyei and Csízér (2002), Lamb (2004) and McClelland (2000) all point out that the work does not fit well in the age of globalization and henceforth lead to Dörnyei (2005, 2009, 2011) developing the L2 motivational self system. The L2 motivational self system was

also influenced by theories from motivational psychology (e.g. Higgins, 1987; Markus and Nurius 1986) as well as L2 motivational research (Noels, 2003; Ushioda, 2001). Our study will thus concentrate on the three attributes of the L2 motivational self system: *The Ideal L2 self*, *The Ought-to Self* and *L2 Learning Experience*.

The Ideal L2 Self is described by Dörnyei (2009), as being the part of one's ideal self that is specific to the L2. That is, the best possible image of one's self in the target language. For example, if the imagined picture of one's self is someone who is fluent in an L2, then this might be a strong motivator.

The Ought to Self corresponds to attributes that the L2 learner believes they should possess. This includes obligations or duties from external sources as well as avoidance of negative outcomes (Dörnyei, 2009).

L2 Learning Experience is concerned with language learners' attitudes toward learning. This can be influenced by the L2 learning environment and experience therein. (Csízér and Kormos, 2009; Taguchi et al. 2009). Dörnyei (2009) explains that the motivation for learning a language may not come from internal or external generated selves, instead originating with successful engagement with the language learning process.

L2 anxiety and motivation

The relationship between anxiety and L2 motivation up to this point has been concerned with, as MacIntyre et al. (2002) states, other variables such as *willingness to communicate*, which have been positively correlated with L2 motivation. This stands in contrast to research, such as that by Young (1991) which showed that anxiety was negatively related to final grades and oral proficiency, and Dewaele (2002) which revealed that anxiety was not a stable personality trait among Flemish students. Furthermore, Dörnyei has asserted that anxiety has a facilitating, debilitating, or no effect at all (Dörnyei, 2005). In light of recent studies linking anxiety to nearly all aspects of language learning, it is more important than ever to look at the connection between anxiety and language learning in specific contexts. Indeed, Papi (2010) drew a direct connection between anxiety and the L2 motivational self system showing that anxiety can be predicted based on that system in a population of Iranian students.

L2 anxiety has been described using various terminology within the second language learning context. *Facilitating vs. debilitating anxiety* (Scovel, 1978) and *state vs. trait anxiety* (Spielberger, 1983) being two. Scovel (1978) defines anxiety as being either helpful or a hindrance to a task. In the field of SLA, Scovel's work is particularly important, as studies have found conflicting results with regard to the overall effect that anxiety plays on language learning. The work of Spielberger (1983) focused on the concept of state versus trait anxiety. Trait anxiety was defined as being the likelihood of a person to become anxious in any situation, while state anxiety is a mixture of trait and situational approaches (see MacIntyre & Gardner, 1991 for discussion). Simply put state anxiety is temporary anxiety whereas trait anxiety does not fluctuate.

Horwitz et al. (1986) proposed that anxiety is in three distinct levels, "1) communication apprehension; 2) test anxiety; and 3) fear of negative evaluation" (p.127), and to measure these levels, developed the Foreign Language Classroom Anxiety Scale (FLCAS). Horwitz and her associates, however, do not see the transfer of these anxieties as being directly transferred to the classroom, rather as being part of a unique and complex part of the language learning process.

The FLCAS scale has been used extensively. Indeed, much research into anxiety and proficiency has made use of the FLCAS or similar scales, and it has found that anxiety is present to varying degrees in the second language classroom. Cheng (2002) found that anxiety was present in students engaged in writing. In Japan, Brown and Rosenkjar (1996) found that student anxiety was indicative of less oral participation in class, and that students in general were anxious. Zhou (2016) found that anxiety was positively linked to vocabulary acquisition. The anxiety scale used by Papi (2010), while based on work by Taguchi et al. (2009), was similar to the FLCAS, however focused more directly on the connection between anxiety and interactions in a foreign language. This scale was used to find that anxiety and the L2 motivational self system were connected and that ideal L2 self and L2 learning experiences were indicative of low anxiety, and ought-to self was not.

Research objectives

In light of Mitchell (2017), who explains the great changes facing the educational system in Japan, it is essential that an understanding of how students are motivated and in what way anxiety affects their classroom performance be gained. To that end, the following research questions were asked.

1. Is English language anxiety mediated by student motivation?
2. How does anxiety and motivation affect English language proficiency?
3. Is intended effort related to outcomes?

Methods

Participants

A total of 241 Japanese students from two universities took part in this study. Of the respondents, 228 surveys were fully and correctly completed. Since they were Japanese university students, they had completed compulsory education influenced by the MEXT reforms. There were 95 female students and 119 male (41.65% and 52.2%), and 14 who did not indicate gender (6.15%). The students ranged in age from 18 to 21 (Mean = 20, SD = 0.697). The students were enrolled in law, medicine, education, agriculture and life sciences, humanities, humanities and social sciences, and science and technology majors. Students were selected by their willingness to take part in the survey. The purpose of the questionnaire was explained to the students who showed interest. The researchers explained that their answers would be kept confidential and they did not record their names. The researchers also explained that the questionnaire was in no way related to their achievement in university and only students who were willing took part.

L2 motivational self system variables

The L2 motivational self system variables were assessed by 14 items which were adapted from MacWhinnie and Mitchell (Motivational behavior and perceived proficiency of Japanese undergraduate L2 learners: a pilot study, unpublished) from items and their translations which were supplied by Aubrey (2014). However the reliability coefficient of several of those items, notably in the ought-to L2 self, was low, so additional items from Papi (2010) were translated, their reliability assessed, and used in this

study. Translations were checked and rechecked by two professors who are native Japanese speakers. Items were selected to avoid similar phrasing and meaning. The questionnaire had four items for ideal L2 self; ought-to self and L2 learning experience had five items each.

Intended effort

Intended effort was measured with 6 items from Aubrey (2014). The translation of these items was checked by native Japanese professors and some modifications were made to the questions for clarity.

Anxiety

Anxiety was measured using 6 items from Papi (2010). These were translated by the researcher and then checked by two different native Japanese professors. 6 items were used to ensure good reliability. All Likert items were scored on a 7-point scale, anchored with strongly disagree (1) and strongly agree (7).

English language proficiency

A self-rating 7-point scale was employed 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). Due to the students being from a variety of majors and from two different universities it was not possible to use a standardized test or collect final grades as different grading scales and structures were in use. The use of a self-assessment scale has been used by many researchers in SLA with effective results (Duan, 2006; Taguchi, et al. 2009; Papi, 2010; Dewaele, 2002; Dewaele, 2005; Zhou, 2016).

Procedures

A questionnaire consisting of items on motivation, anxiety, intended effort, and English language proficiency items plus items addressing biographical information, such as age and gender, was created. The questionnaire was two pages. The questionnaire was administered to students over a one-month period in 2016. The questionnaire was given to the teachers who had offered to help with data collection. Before the questionnaire was administered, students were informed that the questionnaire was not required for their classroom grade. The students were made to understand that by completing the questionnaire they were giving consent to the use of their data. Due to classroom time constraints some of the teachers gave students who were willing to participate the questionnaire to take home and complete for the next class session. Other teachers allowed five to 10 min of class time for the questionnaire. The completed questionnaires were collected and all of the data was entered for statistical analysis.

Analysis

Verification of scales

To verify the reliability of the items used in this study statistical analysis was applied. The Cronbach's alpha was calculated for all items in each category. Table 1 shows the scales and the corresponding Cronbach's Alpha coefficient. Kline (2000) states that the

Table 1 Reliability of instruments ($N = 228$)

	Ideal L2 self	Ought to self	L2 learning experience	Intended effort	Anxiety
Alpha	0.92	0.83	0.88	0.91	0.86
Mean	14.04	19.97	21.79	24.98	26.97
SD	4.96	6.61	6.12	7.397	7.75
# of items	4	5	5	6	6

criteria regarding internal consistency is .9 for an excellent fit, between .7 and .9 for a good fit, and between .6 and .7 is an acceptable fit.

Cronbach's alpha for ideal L2 self and intended effort ($\alpha = .92$ and $\alpha = .91$ respectively) showed an excellent fit, while ought-to self, L2 learning experience, and anxiety ($\alpha = .83$, $\alpha = .88$ and $\alpha = .86$) showed a good fit. All values reported exceed the threshold to be considered a good fit.

Student sample analysis

Since students from different schools and a variety of majors took part in this study, it was necessary to verify the equivalence of the data. This was done through the use of independent t-tests. First, the universities were tested against each other. No statistically significant difference was found between the two universities.

Next each major was compared with each other major for each of the variables. It was found that there were statistically significant differences within Dörnyei's L2 motivational self system. This was expected as each student was expected to be motivated to different extents. In the ideal L2 self the faculty of law showed statistically significant differences from the faculties of science and technology, humanities and social sciences, agriculture and life sciences, education, and medicine. The ought-to self showed statistically significant differences between the faculty of law and the faculties education, and agriculture and life sciences. L2 learning experiences showed differences between the faculties of education, and science and technology. Finally, intended effort showed statistically significant differences between the faculty of law and the faculties of education, and science and technology. Anxiety and self perceived proficiency were stable across all majors and universities, showing no statistically significant differences.

From this overview of the students sampled we concluded that anxiety and perceived proficiency were equivalent across different universities and majors, whereas the variables of the L2 motivational self system and intended effort changed depending on the specific educational context. As it was expected that motivation would vary greatly not only between schools and majors, but also between individual students, we conclude that the data is satisfactory for continued analysis.

Results

Overview of students' anxiety as it relates to the L2 motivational self system

To understand broadly the connection between students' anxiety and their L2 motivational self system, it is useful to have an understanding of the relationship between the variables. To do this the researchers calculated the mean, median, mode, range, skewness, and kurtosis of the data. This data is presented in Table 2. The researchers

Table 2 Report of mean, median, mode, range, skewness, and kurtosis

Measure	Mean	Median	Mode	Range	Skewness	Kurtosis
Ideal L2 self	14.05	15	16	21	-0.11	-0.65
Ought-to self	19.97	21	23	30	-0.18	-0.21
L2 learning experience	21.79	22	24	30	-0.32	0.13
Intended effort	24.98	26	29	36	-0.51	0.11
Anxiety	26.97	27	33	36	-0.41	-0.29

assigned values to the categories to explain the students' overall anxiety and motivation. Put simply, a higher value in anxiety corresponds to students who feel more anxious.

The L2 motivational self system had varying numbers of items corresponding to the questions, ideal L2 learning behavior had four items, whereas ought-to self and L2 learning experiences had five, with intended effort having a total of six. As such it is important to discuss each scale in turn. With five items in ideal L2 self, there is a minimum score of 4 and a max of 28. Students who had neither a well nor under developed ideal L2 self would have a score equal to the mean at 16. The participants in this study, conversely, had a mean of 14.05, however it is useful to note that the median was 15, and the mode was 16, which shows that students were in many cases exceeding the mean.

Students who felt neither strong nor weakly about their ought to self would score a 20, the data shows a mean of 19.97, nearly at the midpoint. In the case of the ought to self, both the median and the mode were higher than 20, showing that the participants most likely placed more value on ought-to self. Both L2 learning experience and intended effort exceeded the predicted mean with 21.79 and 24.98 to 20 and 24 respectively. It is clear that students felt more strongly about their ought to selves and L2 learning experience than their ideal L2 self.

Anxiety also showed a higher value which rejects the null hypothesis. Anxiety was measured with six items with a maximum score of 42, meaning highly anxious, and a midpoint of 24. Anxiety showed a mean of 26.97, median of 27 and a mode of 33. These numbers suggest that anxiety was present in the students' English learning process.

Finally, normal distribution can be observed in the measures, as shown by the skewness and kurtosis values. This data suggests that students were anxious when using English to communicate and were moderately motivated to learn English.

Correlations among the measured variables and the students' proficiency

Correlation analysis was completed on the data to show the relationship between the students' motivation, anxiety, intended effort, and their self perceived proficiency (See Table 3).

Table 3 shows that anxiety is indeed mediated by the L2 motivational self system. Ideal L2 self as well as L2 learning experience are negatively correlated to anxiety ($r = -0.212$ and $r = -0.097$ respectively), while ought-to self correlated positively ($r = 0.19$). Anxiety was also negatively correlated to proficiency ($r = -0.224$). The correlation to intended effort was not statistically significant.

Table 3 Correlation statistics

Spearman's R	Ideal L2 self	Ought-to	L2 learning experience	Anxiety	Proficiency	Intended effort
Ideal L2 Self	1					
Ought-to Self	0.413	1				
L2 Learning Experience	0.516	0.431	1			
Anxiety	-0.212	0.19*	-0.097**	1		
Proficiency	0.535	0.191*	0.401	-0.224	1	
Intended effort	0.513	0.5	0.697	ns	0.25	1

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

The regression model

A regression model was used to show the relationship between anxiety and the other measured variables (See Table 4).

As can be seen in Table 4 ideal L2 self and L2 learning experience were both negative predictors (beta = -0.568 and beta = -0.252 respectively). This result further supports the hypothesis that anxiety and ideal L2 self and L2 learning experiences are inversely connected. It fit our research model that students who have good learning experiences and a well developed sense of ideal L2 self will be less anxious in the classroom. Proficiency also showed a negative predictor (Beta = -0.120), however as with the correlation model the low value along with a p value of $p = 0.176$ leads the researcher to conclude that this is a weak connection, indeed this is consistent with studies which have found mild anxiety to increase proficiency, while others have shown the opposite.

The regression model also showed that anxiety is a positive predictor for ought-to self and intended effort (beta = 0.355 and beta = 0.290). Students who feel a lot of external pressure, in the form of a more highly develop ought-to self, feel more anxiety, as well as having a strong sense of intended effort. The data shows that external factors, as well as the students' own understanding of their motivation, lead to higher levels of anxiety.

The second regression analysis (Table 5) shows the connection between proficiency and the other variables.

As can be seen ideal L2 self and L2 learning experiences were the biggest predictors of proficiency (beta = 0.425 and beta = 0.226 respectively). This is to be expected as the correlation model also shows a strong connection between ideal L2 self, L2 learning experience, and perceived proficiency. Both intended effort and anxiety were negatively related to perceived proficiency, that is to say, when students were anxious, or had a strong sense of intended effort, their perceived proficiency decreased. This is fitting with the model we have created which shows that having a strong sense of intended effort creates anxiety, which in turn lowers perception of proficiency.

Table 4 First regression model

		Ideal L2 self	Ought-to self	L2 learning experience	Intended effort	Proficiency
Anxiety	Coefficient	-0.568	0.355	-0.252	0.290	-0.120
	Std. error	0.133	0.084	0.122	0.103	0.129
	t	4.257	4.237	2.064	2.807	0.935
	p	0	0	0.020	0.003	0.176

Table 5 Second regression model

		Ideal L2 Self	Ought-to Self	L2 Experience	Intended Effort	Anxiety
Proficiency	Coefficient	0.425	0.005	0.226	-0.117	-0.033
	Std. error	0.066	0.045	0.062	0.541	0.035
	t	6.407	0.114	3.632	2.169	0.935
	p	0	0.455	0	0.016	0.176

Discussion

As MEXT continues to move towards a heavy focus on the globalization of Japanese schools from the primary level, the results from this study are essential. While this study is limited to students' perceptions of their experiences in English language classes and their attitude toward English language use, it is certain that to some extent the anxiety and motivation they feel, with regard to learning English, will be transferred to other classes, where they find themselves forced to use English for other academic purposes.

The first research question asked whether there is a connection between anxiety and motivation. The results show that while ideal L2 self and L2 learning experiences are negatively correlated with anxiety, ought-to self is positively related to anxiety. This result is heartening as Aubrey (2014) showed that students engaged in the Global 30 English Medium classroom initiative increased both their ideal L2 self and L2 learning experience motivation over the course of a semester of study. This combined with the results from our study show that English language instruction, as it helps to develop students' ideal L2 selves and positive L2 learning experiences, may help lower student anxiety. From our results, we surmise that students engaged in English medium instruction will increase motivation, which will mediate their anxiety, as anxiety is negatively correlated to proficiency.

In the particular Japanese context, the connection between English language anxiety and the ideal L2 self can be understood in light of what Kojima-Takahashi (2013) found about the ideal L2 selves of Japanese university students. She discovered that one of the main components of students' ideal L2 self was to be able to communicate with foreigners (native speakers). This, along with a desire for higher test scores, was the main component of students' ideal L2 selves. Therefore, our results that anxiety and ideal L2 self were negatively correlated is fitting with the Japanese concept of ideal L2 self. As students' anxiety about communication with foreigners decreases, their own motivation to communicate increases.

For the sampled population it is also important to note that the students' sense of ideal L2 self was not highly developed as it did not reach the mean. Perhaps to alleviate anxiety in the classroom it would be effective for teachers to guide students in developing their own goals towards a clearer ideal L2 self. With MEXT pushing forward reforms designed to increased actual communication, it is better for students to work to develop their ideal L2 self. By doing so they may increase their understanding of their own anxiety towards the use of English. Aubrey (2014) found that that students who participated in English medium classrooms increased their ideal L2 selves and L2 learning experiences. Therefore, if the decision by MEXT to increase classroom English is properly implemented by teachers, it could lead to a decrease in English language anxiety.

In the regional context, similar results have been found in Asia. Papi (2010) in Iran, Liu and Huang (2011) in China, and Islam et al. (2013) in Pakistan, all found that anxiety and the L2 motivational self system were highly correlated, and that to some degree anxiety was negatively correlated to motivation. Our results are similar and show that motivation and anxiety are largely negatively correlated. In a similar study of Indian undergraduate students, Ghodke (2015) found that anxiety was present in all parts of language learning. The current study suggests that Ghodke is correct in this and further suggest that by closely examining the way in which different aspects of motivation interact with English language anxiety in individual classroom settings, teachers will be better able to support student language learning.

While MEXT continues to shift language learning toward a more communicative language learning classroom experience, it is also necessary for teachers to understand the anxiety that may be created by increased pressure. Indeed, This problem has been explored by Sampson (2015) who found that the expectations students face are multifaceted and in some cases may be positive and in others may be negative. We conclude that the connections between motivation and anxiety are complex, yet in the Japanese context there are important patterns that can be explored to help learners.

The second research question focused on the connection between anxiety, motivation, and English proficiency. The L2 motivational self system was found to account for 65.6% of the variation in perceived proficiency. Much as with the connection between motivation and anxiety, ideal L2 self accounted for much (42%) of the variation. It was expected that all parts of the L2 motivational self system would be responsible for students perceived proficiency. An unexpected result was that while ought-to self was a strong indicator of overall motivation, it was not strongly indicative of perceived proficiency. The current study suggests that the ought-to self while an effective construct for understanding motivation among Japanese students, is not suited to explaining learning results.

Anxiety was shown to be related to proficiency, yet only 3% of the variation in proficiency was explained by anxiety. This result was unexpected as Zhou (2016) in China and Dewaele (2002) in Flanders, both found that anxiety and self perceived language competence were strongly linked. We draw the conclusion that while anxiety may interfere with learning, in the case of the students in this study, both *facilitating anxiety* and *debilitating anxiety* were present. The combination of both types of anxiety would lead to the result we found, wherein the correlation between anxiety and perceived proficiency is statistically significant. Yet upon closer inspection anxiety only accounts for a small amount of change in perceived proficiency. The connection then is both positively and negatively linked to learning results. Thus, we suggest that the low variation is a result of conflicting interactions between anxiety and students understanding of their own English language competence.

The third research question asked how intended effort was related to outcomes. The data showed that intended effort was positively correlated to proficiency, however the regression analysis, which took multiple factors into consideration, showed a negative relationship. This shows that when we consider intended effort on its own, we can see that it is positively related to proficiency, yet when taken in the broader context of motivation and anxiety, intended effort can hinder proficiency. Intended effort accounted

for 11.7% of the variation in proficiency. While intended effort was designed as a measure of overall motivation as students view it, our results suggest that while it is closely related to the different types of motivation felt by students, it is not as effective for explaining anxiety and self perceived proficiency as the L2 motivational self system is.

Intended effort showed a strong connection to all factors of the L2 motivational self system. These results were at odds with those of Igawa (2015) who found ought-to self was perhaps not a relevant construct for measuring motivation, further suggesting that peer pressure does not exert a strong influence on motivation in Japan (p. 399). Our results also showed some weakness with the ought-to self construct in Japan, yet the strong connection to intended effort indicate that it is an integral part of the motivation of Japanese students.

The current study shows that while anxiety is a factor in proficiency, motivation is by far a better predictor of language ability. Indeed, ideal L2 self accounted for nearly 43% of the variation in proficiency. Clearly motivated students have better results; therefore it is crucial for teachers to direct student motivation. This was also found in a study of would-be English language teachers versus teachers of other subjects which found that would-be English teachers engage in behaviors that lead to better outcomes, and as a result the students' willingness to communicate and ideal L2 selves were more highly developed (Miyasako 2016).

We conclude the most important factor for development of student language ability is motivation, particularly in terms of the ideal L2 self. While L2 learning experience was also shown to be an important factor in this study, showing a stronger correlation to learning results, it was the ideal L2 self which account for the largest variation. When considering the results of the current study, we must also take the limited size of the sample into consideration. While the L2 motivational self system was strongly linked to both anxiety and learning results, in the Japanese context it may also be important to examine the role that parental encouragement plays. When analyzing the ought-to self we note that Igawa (2015) found that peer pressure was not an important factor on motivation. As such we concur with Suzuki (2014) who suggests that parental encouragement is by far the strongest predictor of student motivation, this study found that ought-to self, which included items dealing with parental pressures, are connected to perceived proficiency. This suggests the importance of family, taken in the context of Japan as a familial society, may be a substantial predictor of motivation, anxiety, and indicative of learning results.

Conclusion

This study found a strong connection between Dörnyei's L2 motivational self system and English learning anxiety within Japanese university students. While a developed ideal L2 self and L2 learning experience were indicative of low anxiety, ought-to self showed a positive connection. Students who had good classroom experience and a developed sense of their future selves were less anxious than those who were motivated by external factors (via ought-to self). In addition, it was found that students who were more proficient were less anxious. This may seem obvious, but as the students' self rated their proficiency, there may be an underlying relationship between the students' ideal L2 self with their own sense of proficiency.

The effect that classroom teachers have on student anxiety cannot be understated. With the pressure from MEXT to reform classroom dynamics, it falls on teachers to implement those guidelines in such a way that allows students to better develop their self system while also working to alleviate anxiety and achieve the learning results which MEXT expects from schools. Ultimately the role of the teacher in the classroom plays a large role in both motivation and anxiety. The ought-to self, along with intended effort, causes anxiety, while positive L2 learning experiences and ideal L2 self lower anxiety. It is the role of the teacher to mediate expectations while providing a good learning experience. Teachers must make sure that the existing anxiety towards English is correctly focused to support rather than hinder learning. Teachers can achieve a reduction or refocusing of anxiety by emphasizing the positive outcomes, which result when students have an understanding of their own goals (leading to increases in ideal L2 self). Combining this with an L2 learning experience that reduces fear of negative evaluation would be a step towards reducing anxiety and increasing L2 motivation and proficiency.

In light of the recent reforms aimed to increase English communication education in the classroom in Japan, this study suggests that anxiety may hinder students' abilities to cope with the continually changing classroom environment in Japan. Teachers will have to work to ensure that the changes being made do not create an environment in which students are over anxious and unable to effectively learn. Without extra attention paid to student anxiety in the classroom, learning may suffer.

Authors' contributions

The first author did the statistical work presented in the methods section, as well as writing the first draft of the result and conclusion. The second author wrote the introduction and made changes to the results and conclusion. Both authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

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Received: 22 February 2017 Accepted: 11 July 2017

Published online: 18 July 2017

References

- Aubrey, S. (2014). Development of the L2 motivational self system: English at a University in Japan. *JALT Journal*, 36(2), 153–174.
- Brown, J. D., & Rosenkjar, P. (1996). *Personality, motivation, anxiety, strategies and language proficiency of Japanese students*. University of Hawaii Working Papers in ESL (pp. 33–72).
- Cheng, Y. (2002). Factors associated with foreign language writing anxiety. *Foreign Language Annals*, 35, 647–656.
- Csízér, K., & Kormos, J. (2009). Learning experiences, selves and motivated learning behaviour: a comparative analysis of structural models for Hungarian secondary and university learners of English. In Z. Dörnyei & E. Ushida (Eds.), *Motivation, Language identity and the L2 self* (pp. 98–119). Clevedon: Multilingual Matters.
- Dewaele, J.-M. (2002). Psychological and Sociodemographic correlates of communicative anxiety in L2 and L3 production. *International Journal of Bilingualism*, 6(1), 23–38 <https://doi.org/10.1177/13670069020060010201>.
- Dewaele, J.-M. (2005). Sociodemographic, psychological and politicocultural correlates in Flemish students' attitudes towards French and English. *Journal of Multilingual and Multicultural Development*, 26(2), 118–137.
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. New York: Routledge.
- Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushida (Eds.), *Motivation, language identity and the L2 self* (pp. 9–42). Clevedon: Multilingual Matters.
- Dörnyei, Z., & Csízér, K. (2002). Some dynamics of language attitudes and motivation: results of a longitudinal nationwide survey. *Applied Linguistics*, 23, 421–462.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation* (2nd ed.). Harlow: Longman.

- Duan, G. (2006). *Acculturation and achievement in English among Chinese immigrant adolescents: a comparison of two populations which vary in density of speakers of Chinese*. Auburn: Auburn University.
- Gardner, R. C. (1985). *Social psychology and second language learning: the role of attitudes and motivation*. London: Edward Arnold.
- Gardner, R. C. (2005). Motivation and attitudes in second language learning. In K. Brown (Ed.), *Encyclopedia of language and linguistics* (pp. 348–355). Boston: Elsevier.
- Ghodke, D. D. (2015). The significance of understanding learning anxiety among the ESL learners in teacher education. In G. Pickering & P. Gunashekar (Eds.), *Ensuring quality in English language teacher education* (pp. 131–137). Huderabad: International Teacher Educator Conference.
- Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological Review*, *94*, 319–340.
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *Modern Language Journal*, *70*, 125–132.
- Igawa, K. (2015). *EFL Learners' attitudes and motivations toward learning English: a case study of Japanese university students*. 四天王寺大学紀要 (pp. 379–408).
- Islam, M., Lamb, M., & Chambers, G. (2013). The L2 motivational self system and National Interest: a Pakistani perspective. *System*, *41*, 231–244.
- Kline, P. (2000). *The handbook of psychological testing*. London: Routledge.
- Kojima-Takahashi, C. (2013). Ideal L2 self and university English learners: An interview study. *The Language Teacher*, *37*(6), 3–8.
- Lamb, M. (2004). Integrative motivation in a globalizing world. *System*, *32*, 3–19.
- Liu, M., & Huang, W. (2011). An exploration of language anxiety and English learning motivation. *Education Research International*, *2011*, 1–8. doi: 10.1155/2011/493167
- MacIntyre, P. D., & Gardner, R. C. (1991). Methods and results in the study of anxiety and language learning: a review of the literature. *Language Learning*, *41*, 85–117.
- MacIntyre, P. D., Baker, S. C., Clement, R., & Donovan, L. A. (2002). Sex and age effects on willingness to communicate, anxiety, perceived competence, and L2 motivation among junior high school French immersion students. *Language Learning*, *52*, 537–564.
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, *41*, 954–969.
- McClelland, N. (2000). Goal orientation in Japanese college students learning EFL. In S. Cornwell & P. Robinson (Eds.), *Individual differences in foreign language learning: effects of aptitude, intelligence, and motivation*. Japanese Association for Language Teaching. (pp. 99–115). Tokyo: Japanese Association for Language Teaching.
- MEXT. (2014). *English education reform plan corresponding to globalization*. Tokyo: MEXT.
- Mineshima, M. (2014). *How critical thinking is taught in high school English textbook*. Tokyo: JALT.
- Mitchell, C. (2017). Language education pressures in Japanese high schools. *JALT Shiken*, *21*(1), 1–11.
- Miyasako, N. (2016). How different is L2 learning motivation between would-be English teachers and would-be non-English teachers at the tertiary level? *International Journal of Curriculum Development and Practice*, *18*(1), 15–26.
- Noels, K. A. (2003). Learning Spanish as a second language: Learners' orientations and perceptions of their Teachers' communication style. In Z. Dörnyei (Ed.), *Attitudes, orientations, and motivations in language learning* (pp. 97–136). Oxford: Blackwell.
- Papi, M. (2010). The L2 motivational self system, L2 anxiety, and motivated behavior: a structural equation modelling approach. *Elsevier*, *38*, 467–479.
- Sampson, R. J. (2015). Absorbed expectations about English study of adolescent Japanese students: insights into the ought-to L2 self. *The Language Teacher*, *39*, 3–8.
- Scovel, T. (1978). The effect of affect on foreign language learning: a review of the anxiety literature. *Language Learning*, *28*, 129–142.
- Spielberger, C. D. (1983). *Manual for the state-trait anxiety inventory*. Palo Alto: Consulting Psychologists Press.
- Suzuki, M. (2014). Ideal L2 selves of Japanese university freshmen: a change from high school. Retrieved from 創価大学人間学会: <http://hdl.handle.net/10911/4008>.
- Taguchi, T., Magid, M., & Papi, M. (2009). The L2 motivational self system among Japanese, Chinese and Iranian learners of English: a comparative study. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 66–97). Bristol: Multilingual Matters.
- Ushioda, E. (2001). Language learning at university: exploring the role of motivational thinking. In Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 91–124). Honolulu: University of Hawaii Press.
- Young, D. J. (1991). Creating a low-anxiety classrooms environment: What does the anxiety research suggest? *Modern Language Journal*, *75*, 426–439.
- Zhou, M. (2016). The roles of social anxiety, autonomy, and learning orientation in second language learning: a structural equation modeling analysis. *System*, *63*, 89–100.

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