Syllabus Design and Foreign Language Anxiety

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Reference Data:

Dykes, R. (2018). Syllabus design and foreign language anxiety. In P. Clements, A. Krause, & P. Bennett (Eds.), *Language teaching in a global age: Shaping the classroom, shaping the world*. Tokyo: JALT.

Very few studies in Japan have focused on changes in foreign language anxiety (FLA) over the medium term (weeks or months), a gap this research was aimed at addressing. This study spans 2 years of data collected from Japanese university students with the goal of shedding some light on how curriculum design can reduce FLA. The 1st year's data indicated that stressors such as speaking or peer evaluation in one situation may increase FLA, but the same stressors in a different situation such as a classroom with a strong sense of community may help decrease FLA. The project was repeated under similar conditions during the following year with a refined research design to compare results. The 2nd year of data collection showed that the communicative approach used in this study had a statistically significant effect on FLA, albeit much smaller than observed in the 1st year of the study.

日本で、外国語不安に関して中期的に生徒らの不安の変化を追っている研究はまだ少ない。本論はその研究における隙間を補うことを目的とする。本研究では、カリキュラムデザインがどのように学生らの外国語不安を減少させるのかということに焦点をあて、2年間日本の大学生の外国語不安を追った。初年度のデータから、特定の場面では、英語を話すことやピア評価などのストレス要因が言語不安を高める一方、それらの要因が異なる状況下―例えば強いコミュニティのような感覚が持てる教室内―では言語不安を下げる要因になりうることが示された。リサーチデザインを改良し初年度と同様な調査を同様な状況下で再び行った。そして、初年度と2年目の結果を比較したところ、2年目の調査で用いられたコミュニカティブなカリキュラムは1年目の結果と比較すると、かなり低い値ではあったが、わずかとはいえ言語不安に対して統計的に有意な効果があることが示された。

There has been a strong interest in foreign language anxiety (FLA) research since the mid-1970s. There have been numerous studies that examined FLA within the Japanese context, but there is a major gap in this research that requires further attention. Causes, characteristics, and effects of FLA have been well documented and researched as well as the connection of second language acquisition success with levels of anxiety (Kondo & Yang, 2003), but one area that has rarely been researched in the context of Japan is the change in FLA over time. This is the second paper of ongoing research aimed at examining the change in FLA over time in the Japanese university context.

Dykes (2017) was a quantitative study that examined the FLA of a group of Japanese university students (N = 397) enrolled in a mandatory English class over the course of a 16-week semester using the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz et al., 1986). The data collected for that study indicated that a statistically significant drop in FLA had occurred. It was hypothesized that the measured decrease in FLA could possibly be due to the use of a student-centered, CLT-based (communicative language teaching) course that encouraged close peer support through numerous small group communicative activities. This hypothesis was in line with some studies that examined change in FLA over time (Alrabai, 2015; Sağlamel & Kayaoğlu, 2013; Suwantrarathip & Wichadee, 2010). Dykes also reached similar conclusions as Young (1999) regarding the effect of quality peer support on FLA and Von Worde (2003) about the connection between FLA and sense of community. The initial Dykes study, although opening some points of interest, used a less than ideal research design, specifically the lack of a control group. The present study covers the next step in the research by replication of the original data collection under very similar conditions, this time with the addition of a second group to allow for comparison. The two main points of interest in continuing the research for a second year were to see if the results of the 2017 study would be replicated and how the results from each of the data collections would compare to those of the newly added comparison group. The second round of data and analysis measured a similar drop in FLA in the communicative group, but when analyzed against the

comparison group (which was taught with a different course design), the results suggest that the course design had little effect on the drop in FLA.

Literature Review

FLA was first remarked upon in Dunkel (1947) and Hobart (1950). FLA as a field of academic research saw a rise in interest with the publications of Chastain (1975) and Scovel (1978), but follow-up studies remained sparse until the 1980s when the FLCAS was published. In the past 25 years several dozen FLA studies have been conducted in the context of Japanese students learning English. Roughly one third of these studies employed the FLCAS (see Kawashima, 2009; Williams & Andrade, 2008), the same measuring tool the current study used. Many of the Japanese studies examined such topics as self-report anxiety scales and their reliability (Brown, Robson, & Rosenkjar, 1996) as well as FLA's relationship to reading (Matsuda & Gobel, 2001; Miyanaga, 2002), listening (In'nami 2006; Matsumura, 2000), and language performance, proficiency, and/or achievement (Asano, 2003; Falout, 2004; McLaughlin & Yamashiro, 2001; Matsuda & Gobel, 2004). In an extensive search only two studies from Japan (Asano, 2003; Shillaw & Iwaki, 2004) were found that focused on examining the change in FLA over the medium term in a pre- and posttest design, a gap that Dykes (2017) and the current study are attempts at addressing.

Objectives of the Research

Dykes (2017) measured the change in FLA in a single group of 397 students who participated in a mandatory English class with a student-centered and CLT-based approach. The data in the current study were collected the following year from two groups of students. One group was taught using the same CLT syllabus as the group in the Dykes 2017 study, and a new group (taught with a reading and test-heavy syllabus) was added to the data collection. The main goals of the current study are

- Research goal 1: To replicate the original project from Dykes (2017) and compare results between the communicative-approach groups; and
- Research goal 2: To compare the changes in FLA between the communicative-approach group and the reading- and test-heavy-approach group.

Research Methodology

Participants

The present study employed two sample groups in a pretest/posttest design. Both groups attended the same Japanese national university and were enrolled in mandatory 16-week English courses. Classes typically met twice a week for 90-minute lessons (the total number of lessons was 28). The students come from 15 departments and majors and were taught by 12 different teachers. The student's English level is estimated to be between CEFR A1 and CEFR A2. The first group is designated herein as *communicative group* (n = 266). This group was taught using a student-centered and communication-heavy course design. These classes used *In My Life* (Kluge & Taylor, 2011), employed small group conversation and presentation practice, and had little to no testing or quizzes (this aspect varied slightly from teacher to teacher). Each class culminated with a group poster presentation (approximately six minutes in length) in which the students, in groups of three, presented multiple times in a carousel-style method. That is, groups of three students presented five to six times to other groups of three. The syllabus assigned to this group is identical to the *communicative curriculum group* used in Dykes (2017). It should be noted that the use of "curriculum" was overstated or misused in some instances in Dykes (2017) and "syllabus" would have been a more correct term.

The second sample group is designated herein as *reading group* (n = 327). This group attended a reading-oriented course with a TOEIC preparation component. This class used the *Reading Explorer* series of books (Douglas & Bohlke, 2015) with a heavy emphasis on both reading and TOEIC-prep quizzes. This course included weekly TOEIC quizzes for the first two thirds of the semester, and most teachers in this course also included semi-regular chapter tests for *Reading Explorer*. This course incorporated a small presentation component in which students, one by one, gave a 3- to 4-minute PowerPoint presentation in front of the entire class two times during the 16-week course. The topics differed from teacher to teacher and included self-introductions, a unit from *Reading Explorer*, or various famous people from history.

A correlation analysis was conducted in Dykes (2017) that looked at the major, age, and sex of students. It was determined that these factors had no significant correlative effect on the changes in FLA and subsequently these data are not included in this paper.

Instrument

This study used the 33-item FLCAS (Horwitz et al., 1986) and employed the Japanese translated version from Yashima et al. (2009). The original 5-point Likert scale was

changed to a forced choice hybrid 6-point scale, which better accommodates Asian cultures and more specifically Japanese respondents who tend to choose the middle or neutral answer not to indicate indifference, confliction, or ambivalence, but as a cultural choice unique to Asian and collectivist societies (see Dykes, 2017). The 6-point scale includes the following measures and weights, *strongly agree* = 1, *moderately agree* = 2, *lightly agree* = 3, *lightly disagree* = 4, *moderately disagree* = 5, and *strongly disagree* = 6. Items 2, 5, 8, 11, 14, 18, 22, 28, and 32, on the FLCAS were negatively worded and their scores were reversed and recoded for the data analysis portion of this project.

Procedure

The FLCAS was administered at the beginning and again at the end of the 16-week semester. For a participant to be included in the final results they had to return a signed purpose of study and consent form and must have marked at least 30 of the 33 items on both administrations of the FLCAS. Extreme outliers were also eliminated from the final data collection (i.e., participants who marked the same answer for all questions or filled in the questionnaire in an obviously nonrandom pattern).

Data Analysis

From this point forth data from Dykes (2017) will be referred to as Year 1 data and the new data presented for the first time in this paper will be referred to as Year 2. The Likert-scale data was analyzed as interval measurements, and parametric analyses methods were run using SPSS (Year 1 data—v.22; Year 2 data—v.23).

Research Results

The first goal of this project was to compare the results of the Year 1 and Year 2 communicative approach groups. To measure if a change in FLA had occurred, a paired sample *t* test was run to calculate the mean of the two FLCAS administrations. The data analysis from Year 1 (see Table 1) confirmed there was a significant decrease in FLA that occurred between the first FLCAS administration (M = 126.00, SD = 23.87) and the second administration (M = 115.16, SD = 23.63), $t(396) = 14.361$, $p < .001$ (2-tailed). The effect size of the results can be considered large (d =.72). The 95% confidence interval for the mean difference between the two scores was 9.36 and 12.32. Cronbach's alphas for both administrations were 0.93. (Findings taken from Dykes, 2017, p. 42.)

Table 1. Year 1 Communicative Group FLCAS Administrations —Pretest vs. Posttest

Test	*M*	*SD*	*t* value (*N* = 396*)	Significance *p* value (2-tail)	Effect size
Pretest	126.00	23.87	14.361	Significant $p < 0.001$	Large $d = 0.72$
Posttest	115.16	23.63			

Note. Data reproduced from Dykes, 2017, p. 42. *Error in original.

A paired samples *t* test on the Year 2 data returned similar results to the Year 1 data (see Table 2). Again the data analysis confirmed there was a significant decrease in FLA that occurred between the first FLCAS administration (M = 125.45, SD = 25.08) and the second administration (M = 117.61, SD = 24.14), $t(266) = 8.08$, $p < .001$ (2-tailed). The effect size of the results can be considered medium (d =.5). The 95% confidence interval for the mean difference between the two scores was 5.93 and 9.74. Cronbach's alphas for the FLACAS pretest and posttest administrations were .94 and .89, respectively.

Table 2. Year 2 Communicative Group FLCAS Administrations —Pretest vs. Posttest

Test	*M*	*SD*	*t* value (*n* = 266)	Significance *p* value (2-tail)	Effect size
Pretest	125.45	25.08	8.08	Significant $p < 0.001$	Medium $d = 0.5$
Posttest	117.61	24.14			

The second research goal of this project was to compare the communicative group and the reading group from the Year 2 data collection. The first step in this process was to run a paired samples *t* test to determine the mean of the reading group's change in FLA, the same process as in the previous two analyses. The data analysis of the Year 2 reading group (see Table 3) also confirmed that there was a significant decrease in FLA that occurred between the first FLCAS administration (M = 122.34, SD = 23.06) and the second administration (M = 118.49, SD = 23.14), $t(327) = 5.45$, $p < .001$ (2-tailed), albeit a slightly smaller decrease than that for the Year 2 communicative group (7.85 compared to 3.64). In addition to the smaller decrease in FLA, the effect size of the reading group (d =.3) was lower than that of the Year 2 communicative group (d = .5). The reading

group's effect size (d = .3) is considered small. The 95% confidence interval for the mean difference between the two scores was 2.46 and 5.25. The internal consistency (Cronbach's alpha coefficient) was calculated to be to be .93 for both administrations.

Table 3. Year 2 Reading Group FLCAS Administrations —Pretest vs. Posttest

Test	*M*	*SD*	*t* value (n = 327)	Significance *p* value (2-tail)	Effect size
Pretest	122.34	23.06	5.45	Significant $p < 0.001$	Small $d = 0.3$
Posttest	118.49	23.14			

The second step in the process was to compare the Year 2 communicative and reading groups. This required an analysis of the mean change in FLA of both groups. An independent samples *t* test was conducted to evaluate whether the hypothesis in Dykes (2017), that a student-centered and communicative approach would reduce FLA more than a non-CLT teaching approach, in this case a test-heavy and reading-centered course (see Tables 4 and 5). The *t* test value was significant, $t(505.32) = 3.33$, $p < .001$ (2-tailed), indicating that the communicative group (M = 7.85, SD = 15.81) experienced a larger drop in FLA than the reading group (M = 3.64, SD = 12.99); however, the effect size was small (d = .21) indicating that the if the class syllabus/design was swapped only 8% of the students would be affected. The small difference between groups is better visualized in a box plot (see Figure 1). The 95% confidence interval for the difference in means is 1.62 to 6.34.

Table 4. FLCAS Administrations: Group Statistics

Change in FLA	*M*	*n*	*SD*	*SE* Mean
Communicative group	7.85	266	15.81	0.97
Reading group	3.64	327	12.99	.71

Table 5. FLCAS Administrations: Independent Samples *t* Test

	t test for equality of means			
	t value	*df*	Significance *p* value (2-tail)	Effect size
Equal variances not assumed	3.33	505.32	Significant $p < 0.001$	small $d = 0.21$

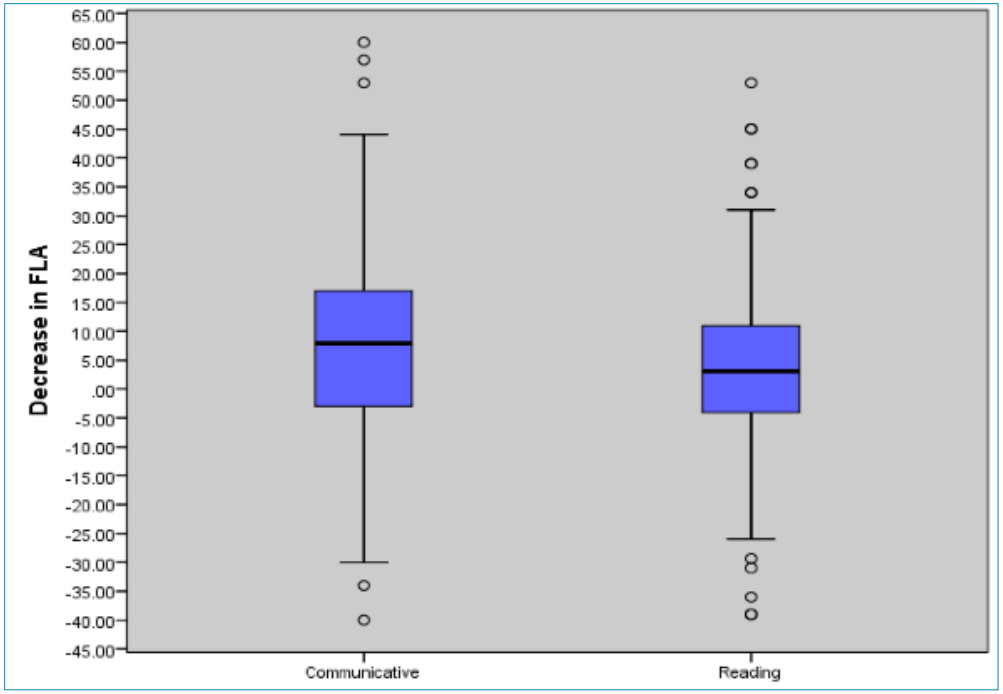

Figure 1. Year 2 drop in FLA. Communicative = classes taught using a CLT-based syllabus; reading = classes taught using a test-heavy and reading-based syllabus.

Discussion and Conclusion

Upon initial inspection the results from the data analysis support the idea that the communicative design helped facilitate a greater drop in anxiety than the reading and

test-heavy design; however, when taking the effect size into consideration, this study shows a more complete view of the data. The final *t* test comparing the change in FLA between the reading classes and the communicative classes has a very small effect size (*d* = 2.1). Although this doesn't entirely disprove the notion that a student-centered class with close peer support helps decrease FLA more than a test-heavy reading-centered class, it makes a weak case for it. The differences in the drop in FLA are hardly enough to advocate rethinking skill-specific class design or teaching approaches. However, to understand the drop in FLA more comprehensively this line of research should be continued. There are numerous ways to improve upon this avenue of research (see "Recommendation and Limitations" below) and countless contexts both inside and outside Japan where this line of inquiry may find application. The types of curricula and methods of ESL and EFL teaching used today are endless. The better educators and researchers understand how to observe and measure the variables that affect FLA, the more educators will be able to refine teaching approaches for teaching contexts in which students may suffer from high anxiety.

Recommendations and Limitations

In this author's opinion, research that examines changes in FLA over the medium term is still in need of development. Only two studies were found that used an adequate research design (Alrabai, 2015; Chang, 2010). The use of an adequate research design is not the only area in which the research needs to improve. Studies exploring changes in FLA over time have not provided much insight. Studies such as Suwantrarathip and Wichadee (2010), Asano (2003), and Sağlamel and Kayaoğlu (2013) did not include an effect size or a control or comparison group. The inclusion of these two layers of data analysis in the current study were necessary if reliable conclusions are to be drawn regarding what is affecting FLA in the classroom. In Dykes (2017) a comparison was made to Suwantrarathip and Wichadee (2010) to support the hypothesis of that paper. However, now that in the current study a comparison group has been added to the research design, the conclusions of previous papers have begunto break down. Dykes (2017) was thought to be a promising first step, but it turns out to have used an unsuitable research design. Nagahashi (2007) concluded that their research was a successful intervention and that cooperative learning produced a significant change in FLA compared to the control group; however, no effect size was included in the published paper, so readers cannot know if Nagahashi's successful intervention can be expected to affect 1% or 100% of similar student participants.

The current study very weakly supports the original hypothesis that a student-centered and communicative approach reduces FLA. The more important takeaway is the necessity of including indices, namely effect size, in studies. Asano (2003) examined a group of "very low-level university students" who were taught using an audio-visual approach, but Asano did not include an explanation of "very low level" nor gave any explanation of the "audio-visual approach" classroom or syllabus.

Although the current study was an attempt to rectify omissions such as those discussed above, it still adopted an almost purely quantitative approach. In future research into changes in FLA over time, a control or comparison group should be used. Effect size is also essential to the data analysis, and it is vital to provide detailed descriptions of as many contextual variables as possible to better determine what, if any, variables may be affecting FLA.

Some form of qualitative observations should also be carried out. The lack of a systematic qualitative observation was the biggest limitation of the current study. The researcher could not verify to what accuracy the assigned syllabus was followed. A detailed qualitative analysis would have also identified any additional variables that may have affected FLA. Interviews were conducted with many, but not all, the instructors, and some brief observations of the classes were made. A few short interviews were conducted with the director of the English program who assigned the syllabus. He had personally observed all the instructors who participated in this study. Based on his in-class observations, the director stated that although some small variations took place, the teachers conducted the classes as designed. Ideally multiple repeat observations of all classes involved would allow for a more substantiated claim that the classes and their syllabi transpired as described. More in-depth observations would also allow for a clearer picture of what variations may take place between classes as well as present an opportunity to discover what other variables may be at play affecting FLA in the classroom.

Bio Data

Robert Dykes currently works at Jin-ai University. His main research interests include the motivation for and anxiety in foreign language learning.

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