

A Confirmatory and Exploratory Approach to the Dimensions and Sources of Foreign Language Enjoyment Among Japanese University English Learners

by
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Abstract

The Foreign Language Enjoyment Scale is a popular measure of enjoyment, however the validity of this scale has yet to be examined in the Japanese context. This study used mixed methods to investigate the validity of this scale and uncover sources of positive classroom emotions in a sample of 514 Japanese university English learners in a blended learning course. Results from confirmatory factor analysis indicated poor fit for four models of the scale from past studies. Exploratory factor analysis subsequently revealed two dimensions. One factor, Foreign Language Enjoyment-Social, comprised items related to the social aspects of a positive learning experience, while the second, Foreign Language Enjoyment-Private, concerned personal feelings of achievement and success in learning. Several prominent sources of social and private enjoyment, including pride, realization of progress and meaningful engagement with peers, emerged from analysis of qualitative data from a subset of 329 respondents. The findings add to knowledge on the structure and validity of the Foreign Language Enjoyment Scale in the Japanese context and suggest the need for further in-depth study of this emotion in different cultural contexts.

Key Words : Foreign language enjoyment; Positive psychology; Oral communication; Validity; Confirmatory factor analysis

1. Introduction

With the introduction of tenets from positive psychology into the study and practice of language learning (e.g., Lake, 2013; Mercer & MacIntyre, 2014), there has been a shift from the study of the debilitating effects of negative emotions to the enabling power of positive ones. In particular, the role of enjoyment in language learning has received considerable attention since Dewaele and MacIntyre's (2014) original study. The influence of foreign language enjoyment (FLE) on a range of positive outcomes, such as willingness to communicate (Dewaele, 2019), language development (Saito et al., 2018), achievement (Jin & Zhang, 2018), and reduced anxiety (Dewaele & MacIntyre, 2014) underline the importance of continued research on this emotional construct.

Research on FLE has come to encompass a wide range of educational contexts, including Belgium (De Smet et al., 2018), Turkey (Uzun, 2017), Saudi Arabia (Dewaele & Alfawzan, 2018), Kuwait (Dewaele et al., 2022), Kazakhstan (Dewaele et al., 2019), China (e.g., Jiang & Dewaele, 2019) and Japan (e.g., Saito et al., 2018). There have as of yet been few studies on the dimensionality of FLE in these different contexts, however. Dewaele and MacIntyre's (2016) pioneering study outlined two dimensions underlying FLE, Social and Private, using an international sample, and Botes et al. (2021) used this same data

set to develop a short version of the Foreign Language Enjoyment Scale (FLES), the S-FLES. In the Chinese context, both Jin and Zhang (2018) and Li et al. (2018) have proposed models of the FLES. However, in Japan, research on the dimensions underlying FLE remains sparse, with only Saito et al. (2018) reporting the results from exploratory factor analysis (EFA) in their study focused on emotion, motivation and second language comprehensibility development.

As the number of studies in Japan investigating the impact of positive emotions, and FLE in particular, increases (e.g., Inada, 2022; Inada & Inada, 2021; Kitaoka, 2021; Xethakis et al., 2022), there is a need to place research in this area on a more secure foundation. Differences in learners' experiences of positive emotions may exist between cultures (MacIntyre & Vincze, 2017), and thus the dimensions that underly the FLES in a sample of international learners, or Chinese learners, may not be the same as those for learners in the Japanese context. This study aims to address this gap in research on FLE by examining the dimensionality of this emotional construct among Japanese university-level English language learners and add to the knowledge base in this area by providing a better understanding of the nature and sources of this emotion in Japanese learners of English.

2. Literature Review

2.1 Positive Emotion in SLA Research

With few exceptions, the study of learners' affective states has

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received limited attention in educational research until recent decades (Pekrun & Linnenbrink-Garcia, 2014). In the area of second language acquisition, this has been especially true, reflecting the field's emphasis on cognition and its role in language learning (Swain, 2013). Even in the exceptions to this cognitive paradigm, research on affect in language learning has often focused on its debilitating and limiting effects, such as Krashen's (1985) proposal of the affective filter, or the impact of forms of anxiety (e.g., Young, 1991), with Foreign Language Classroom Anxiety (FLCA) one of the most studied negative emotions (Horwitz, 2010).

However, following the broader shift in the field of psychology from a focus on emotional pathology to the factors that enable well-being (e.g., Seligman, 2011; Csikszentmihalyi, 2008), a similar redirection has taken place in the psychology of language learning (see Mercer & MacIntyre, 2014), moving from an emphasis on overcoming negative affect to an appreciation of the possibilities of positive emotion. One particular positive emotion, enjoyment, has taken a central role in the study of positive emotion in language learning. Not only has it become one of the most often investigated of these emotions but has also served as a representative for the influence of positive emotions in the language classroom more generally (Botes, 2022).

Initially conceptualized by Dewaele and MacIntyre (2014), foreign language enjoyment is based on two strains of the positive psychology movement. The first of these is Fredrickson's (2001, 2013) broaden and build theory. In this theory, positive emotions act to broaden the courses of action available to an individual in a particular situation, widen their scope of attention, and in turn, cause them to engage more fully with their environment. In this state, they are more open to new experience and new information (Fredrickson, 2001). In the language learning context, positive emotions act to enhance learners' awareness of language input, enabling them to more easily absorb the L2 (Dewaele et al., 2018). In addition to their learner-internal influences, positive emotions also help to build relationships with others by encouraging an urge to explore and play, as well as an openness to new experiences (Fredrickson, 2001), which when shared with others encourages social bonds and group cohesion (Dewaele & Dewaele, 2017). The second foundation of foreign language enjoyment lies in Csikszentmihalyi's (2008) notion of optimal experiences. Such experiences provide opportunities for individuals to apply their abilities and skills to achieve a desired end or goal. The need to apply oneself in order to achieve an end, and the attendant sense

of accomplishment, novelty and personal growth, is what makes the activity enjoyable by Csikszentmihalyi's definition, rather than simply being pleasurable, which is the feeling one has when one's more basic needs, such as food or rest, are met. Placing this concept in the context of language learning, Dewaele and MacIntyre (2014) note that "it is the match between the challenge of the activity and the skill of the learner that form a foundation for enjoyment," (p. 257). Enjoyment can thus be seen as a broad, positive emotion that underlies an individual's flourishing inside and outside the classroom.

The importance of enjoyment, and the efficacy of positive emotions in the context of language learning more generally, can be seen in the positive outcomes that have been linked to this emotion. Botes et al. (2022), in their meta-analysis on the effects of foreign language enjoyment note four areas where this emotion has had a significant impact: FLCA, willingness to communicate (WTC), self-perceived proficiency and academic achievement. The association between FLE and FLCA, specifically that learners with higher levels of FLE experienced lower levels of FLCA, was found in Dewaele and MacIntyre's (2014) initial study. This relationship has been substantiated in the majority of subsequent studies examining these two emotions in tandem (e.g., Dewaele et al., 2018; Jiang & Dewaele, 2019; Uzun, 2017). One of the first studies to examine the relationship between FLE and WTC was Khajavy, MacIntyre and Barabadi (2018). In their study on 1528 Iranian English language learners, the effects of FLE on WTC were examined at both the individual and classroom levels with the result that learning experiences which encouraged individual enjoyment and fostered a supportive atmosphere enhanced learners' WTC. Dewaele (2019) similarly found that WTC among Spanish learners of English benefited from increased FLE. The influence of high levels of FLE on learners' self-perceived English proficiency has been investigated in a number of studies. In both Dewaele and Alfawzan (2018) and Li et al. (2020), FLE was found to be a significant predictor of proficiency for learners at a range of levels of language ability. Similarly, in Japan, Inada (2022) reported that FLE was associated with gains in proficiency. With regard to language achievement, in terms of exam or test scores or grades, levels of FLE have been shown to significantly predict test scores (e.g., Jin & Zhang, 2018), and this is particularly the case for learners with either higher levels of FLE (Dewaele & Alfawzan, 2018), or higher language levels (Li et al., 2018).

In addition to these four, FLE has been linked to both motivation, with a case study by Pavelescu (2019) showing that

positive emotion can help strengthen and maintain learners' motivation, and language development, where Saito et al. (2018) in their study on high-school English learners in Japan, found that those with learners higher levels of FLE exhibited greater improvements in their oral proficiency over the term of the study. Moreover, FLES has been tied to a range of demographic variables, (age, gender, and multilingualism), and personality traits, such as emotional intelligence and grit (see Botes et al., 2022 for a review). In view of its centrality to the study of positive emotions and their impact on language learning, there is need to ground the measurement of FLE on secure empirical foundations. This study represents an initial step in this direction by examining the validity of four versions of the FLES prominent in the literature.

2.2 Measuring Emotion

The FLES was developed by Dewaele and MacIntyre (2014) for their original study on FLE and has subsequently become the most often utilized measure of both enjoyment specifically and positive emotion in the language classroom more generally (Botes, 2021). Taking Ryan et al.'s (1990) Interest/Enjoyment subscale as its basis, the 21-item FLES was designed to be a global measure of enjoyment in the language classroom, reflecting aspects of positive experiences, such as interest, creativity, pride, and a sense of accomplishment, as well as those of a positive classroom environment, such as social cohesion, feelings of group membership, and assessments of peers and the teacher (See Appendix). The reliability of the scale was estimated to be .86 using Cronbach's alpha, and similar levels of reliability ($\alpha \geq .85$) have been found in other studies (e.g., Kitaoka, 2021; Shirvan & Taherian, 2021). The discriminant validity of the FLES was investigated through comparison with the FLCAS, and a moderate negative correlation ($r = -.36$) between the two scales was reported.

The dimensionality of the FLES was first examined by Dewaele and MacIntyre (2016) in their study on the structure of the FLES and the Foreign Language Classroom Anxiety Scale (FLCAS), where they carried out EFA on the data set from their previous study (Dewaele & MacIntyre, 2014). The results of the analysis suggested a three-factor solution, with the FLCAS forming one factor, and surprisingly to the authors of the study, the 21 enjoyment items resolving into two factors. The first of these represented the social side of enjoyment such as a positive environment, a good atmosphere, nice peers, and supportive teachers. This factor was named Foreign Language Enjoyment-Social. The second enjoyment factor comprised items reflecting

internal feelings of pride, interest, and fun. Dewaele and MacIntyre characterized this factor as expressing "private feelings of enjoyment from accomplishing something that was difficult and in spite of obstacles," (p. 232), and termed it, Foreign Language Enjoyment-Private.

On the basis of this study, a shortened version of the FLES, with ten items, and reflecting both the private and social dimensions of FLE was developed. This scale has been widely used in a range of studies including Dewaele and Dewaele (2018), Dewaele and MacIntyre (2019), and Jiang and Dewaele (2019). While the reliability of this version of the scale has been consistently high ($\geq .85$), it should be noted that as Botes et al. (2021) point out, the choice of items included in this version of the FLES was primarily based on "expert knowledge" (p. 860) rather than factor analysis or other psychometric criteria. The structure of this version of the FLES was examined by Saito et al. (2018) as part of their study on emotions and language development in a sample of Japanese high-school English learners. An EFA on the 10 items together with a shortened version of the FLCAS revealed three factors. The items from the FLCAS loaded primarily on one factor, while the 10 items from the FLE were split evenly between two factors, whose content closely resembled the two factors from Dewaele and MacIntyre (2016). As such, these two factors were named Social Enjoyment and Private Enjoyment.

Dewaele and MacIntyre's (2014) data set has also served as the basis for a short nine-item version of the FLES (the S-FLES; Botes et al., 2021). This version was developed using all 21 items from the original FLES. The original data set was split, with one sample used to determine the factor structure using EFA, and the other used to confirm this structure using confirmatory factor analysis (CFA). An initial EFA was conducted using PCA with Promax rotation, due to the degree of correlation shown between the underlying factors in previous studies. This solution suggested four factors, but four items had weak loadings on all factors and were removed. A second EFA with the remaining 17 items resulted in a three-factor solution. In order to make the scale as brief as possible, the three most representative items from each factor were selected on the basis of theoretical considerations and confirmed using an algorithmic procedure. This nine-item, three-factor model was then tested using CFA, and displayed good fit with the scores in the second of the split samples.

Two versions of the FLES have been developed for use with Chinese respondents. The first of these comes from Li et al. (2018). Their study on over 2000 Chinese high-school English

learners examined the factor structure of a 14-item version of the FLES, hypothesized to reflect the two dimensions found in Dewaele and MacIntyre (2016). However, when this structure was tested using confirmatory factor analysis (CFA), it was found to fit poorly. A series of EFAs and CFAs resulted in a three-factor, 11-item version of the FLES. The first dimension comprised five items, whose content was similar to that of the third factor in Dewaele and MacIntyre (2016), and thus it was termed FLE-Private. The second and third factor were each made up of three items, and were termed FLE-Teacher, and FLE-Atmosphere, respectively.

A second Chinese version of the FLES has been proposed by Jin and Zhang (2018). Rather than using a shortened version of the FLES, Jin and Zhang began their examination of the structure of the FLES with all 21-items from the original FLES. A series of EFAs using PCA with Direct oblimin rotation revealed a three-factor structure. The first factor, comprising three items related to learners' assessment of the teacher, was named Enjoyment of Teacher Support. The second factor, with 9 items, was named Enjoyment of English Learning. The content of this factor resembled those from previous studies concerned with private feelings of enjoyment. The third factor, named Enjoyment of Student Support, had five items, all of which were related to social cohesion and peer relationships. Jin and Zhang named this 17-item version of the FLES the English Classroom Enjoyment Scale.

The versions of the FLES outlined above differ in both the number of items in the scale (from 9 to 17), and the number of underlying dimensions (two versus three), as well as the item content of each of these dimensions (See Table 1). Moreover, the only version whose dimensionality has been investigated in the Japanese context is the 10-item version of the FLES (Saito et al., 2018). The validity of the other versions of the FLES in the Japanese context, as well as the validity of the 10-item FLES in a different sample of Japanese learners, remains an open question. As Flake and Fried (2020) point out, measurement is a "foundational aspect of the research process," (p. 458), and construct validation is an indispensable part of this. This may be especially true in the measurement of affective states, such as enjoyment, whose experiential aspects may differ across cultures (MacIntyre & Vincze, 2017).

To address these issues, and further, to provide a better understanding of the nature of positive emotions in language learning classroom, this study aims to investigate the dimensions underlying FLE in the context of Japanese university language learners as well as examine their characterizations of enjoyable

Table 1. Structure and Content of Four Versions of the Foreign Language Enjoyment Scale (FLES)

Source	# Items	# Factors and Factor Names	Factor Content
Botes et al. (2021)	9	1. Teacher Appreciation	15, 16, 17
		2. Personal Enjoyment	4, 8, 9
		3. Social Enjoyment	19, 20, 21
Saito et al. (2018)	10	1. Social Enjoyment	3, 4, 7, 9, 11
		2. Private Enjoyment	10, 12, 14, 18, 21
Li et al. (2018)	11	1. FLE-Private	3, 4, 8, 9, 12
		2. FLE-Teacher	15, 16, 17
		3. FLE-Atmosphere	10, 18, 19
Jin and Zhang (2018)	17	1. Enjoyment of Teacher Support	15, 16, 17
		2. Enjoyment of English Learning	1, 3, 4, 5, 6, 7, 8, 9, 12
		3. Enjoyment of Student Support	14, 18, 19, 20, 21

Note: Item numbers listed under factor content are those from Dewaele and MacIntyre (2016).

experiences.

2.3 Research Questions

This study is framed by two research questions:

Research Question 1: What are the dimensions of FLE for Japanese university-level English learners? More specifically, are the proposed models of the FLES valid measures of FLE in this context?

Research Question 2: What do these learners report as sources of enjoyment in the classroom?

3. Methodology

3.1 Research Design

This study adopted a convergent parallel design (Creswell & Creswell, 2018). In this design, quantitative and qualitative data are gathered simultaneously, and the qualitative data serves to provide greater depth to the results of the quantitative analysis. In this study, quantitative data was used to ascertain the validity of the four versions of the FLES, determine the dimensions of FLE, and calculate the reliability of the factors emerging from the factor analysis. Qualitative data provided insight into how Japanese university students characterize their experience of FLE in the classroom and what they consider to be the sources of their emotions.

3.2 Participants and Context

A total of 514 Japanese university students took part in this study.

All of the participants were first-year, non-English majors at a private university in southern Japan, and thus constituted a convenience sample. There were 331 (64.4%) male respondents, 179 (34.85) females, and four who declined to provide a gender. The large majority of respondents were studying in STEM disciplines: Engineering (31.0%), Computer and Information Sciences (22.6%), Pharmaceutical Sciences (21.2%), and Biotechnology and Life Science (15.5%). All participants were enrolled in a first-year English communication course. The course is compulsory and centered on learner interaction and the development of oral communication skills. Learners regularly engage in short (3- to 5-minute), non-rehearsed conversations on topics directly relevant to their lives (e.g., free-time activities, music, YouTube, favorite places, etc.), in addition to other pair- and group-work activities carried out in each class. The aim of the course is to allow learners to focus on meaningful interactions with their classmates, and for them to come to see English as a tool for authentic communication. In response to the Covid-19 pandemic, classes transitioned from two in-person classes per week to a blended learning framework where students spent one class per week in the classroom, and the other working individually with online materials designed to review content and prepare learners for the following in-person class. During these in-person classes, students worked primarily in pairs and small groups engaged in activities focused on encouraging interaction and communication.

3.3 Data Collection

The data set employed in this study was gathered from learners in November and December of 2021. The survey was administered using Google Forms. Learners took the survey during their English language class. Permission to conduct this study was obtained from university administrators after ethical review, and the informed consent of the participants was obtained by means of a statement at the beginning of the survey form informing participants that they need not take part in the survey, and that by answering the questions on the form they were giving their consent for their responses to be used in the study.

3.4 Instrument

3.4.1 Demographics

The first section of the survey asked participants to provide information concerning their gender and faculty, as noted above in Section 3.2.

3.4.2 Foreign Language Enjoyment Scale (Dewaele & MacIntyre, 2014)

The second section of the survey comprised a Japanese version of the FLES (Dewaele & MacIntyre, 2014), comprising 21 items. It contains items such as: *I enjoy studying English*; *In my English class, I feel proud of my accomplishments*; *My classmates are nice*; and, *There is a good atmosphere in my English class*. Participants were asked to respond to the survey items on a six-point Likert scale (from 1 = Strongly disagree, to 6 = Strongly Agree), as in Saito et al. (2018). All items were translated into Japanese by the author together with a Japanese L1 specialist with experience in scale development, then back-translated into English by two bilingual English professors.

3.4.3 Qualitative Data

Following the FLES items, respondents were asked an open-ended question based on those used in previous studies of FLE (e.g., Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014; Li et al., 2018), which aimed to uncover the sources of learners' positive emotions in the classroom: In as much detail as you can, write about an enjoyable learning experience in your English class, and how you felt about it. The question was presented to participants in Japanese, and learners were encouraged to respond in Japanese to ensure that they were able to fully express their feelings about the experience. From the 514 participants, 347 (67.5%) provided replies to this question.

3.5 Data Analysis

Data screening procedures to identify univariate and multivariate outliers were carried out (Hair et al., 2019), and the normality, linearity, and multicollinearity of scores in the data set was determined prior to factor analysis. The suitability of the data set for factor analysis was assessed using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy.

Analysis took place in three stages. The first stage of the analysis was carried out using CFA to determine the construct validity (i.e., whether the structure of the scores in this data set matched that of the proposed models) of four versions of the FLES: Botes et al. (2021), Jin and Zhang (2018), Li et al. (2018), and Saito et al. (2018). The analysis employed AMOS v28 with maximum likelihood estimation. Bootstrapping was applied to account for multivariate non-normality. Model fit was determined using the chi-square statistic (χ^2), the Tucker-Lewis Index (TLI > .94), Comparative Fit Index (CFI > .94), Standard Root Mean Square Residual (SRMR < .08), and Root Mean Square Residual (RMSEA < .07) (Hair et al., 2019).

Following this, EFA, using SPSS v28, was conducted to investigate the structure of the scores in the second stage. Principal component analysis was employed to determine the initial factor structure, and then maximum likelihood estimation with direct oblimin rotation was used to refine the structure. The number of factors to be retained was determined on the basis of three criteria: 1) an eigenvalue greater than 1.0; 2) examination of the scree plot; and 3) the results of parallel analysis carried out using JASP v17. The content of each factor was determined following a three-step process outlined by Hair et al. (2019). First, a criterion of .40 for an item to be considered to load significantly on a factor was established. Next, the ratio of the variance of any cross-loading items was compared, and those items with a ratio of less than 2.0 were considered for removal. Finally, item communalities, which estimate the proportion of variance explained by the underlying factors, were examined, and those items with communalities below .5 (meaning that less than half the item's variance was explained by the factors) were considered for removal. Reliability of the factors was determined using Cronbach's alpha ($\alpha > .7$), with 95% confidence intervals (Hair et al., 2019).

In the third stage, qualitative data was analyzed taking a concept-driven approach (Gibbs, 2007), where responses were considered primarily, although not exclusively, in terms of the sources of enjoyment identified in previous studies on FLE (e.g., Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014; Jiang & Dewaele, 2019) in order to identify sources of FLE among these learners, as well as exemplify and situate the dimensions emerging from the factor analysis.

4. Results

4.1 Data Screening

Two univariate outliers (z -score > 3.3 on four or more items; Tabachnick & Fidell, 2019), were found in the data set and removed. In addition, one multivariate outlier (ratio of Mahalanobis distance and degrees of freedom > 3.5 ; Hair et al., 2019) was found and removed, leaving a final sample size of 511. One-sample Kolmogorov-Smirnov tests revealed non-normal distribution in the scores. However, as noted by Hair et al. (2019), sample sizes greater than 200 can reduce the effects of non-normality in factor analysis. Furthermore, the degree of kurtosis for each item did not exceed the level (> 7) which Byrne (2016) describes as indicating a departure from normality. Therefore, it was considered acceptable to employ maximum likelihood estimation with bootstrapping in the CFA. The linearity of each

data set was determined using scatterplots, and no non-linear relationships were found. The results from Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.942) indicated suitability for factor analysis (Field, 2018).

4.2 Confirmatory Factor Analysis

As the initial stage of the analysis, the four proposed models for FLE were tested using CFA. The results of these tests are outlined in Table 2. The two-factor model of the 10-item FLES suggested by Saito et al. (2018) arguably performed the most poorly of the four models, however both the model proposed by Jin and Zhang (2018) and that of Li et al. (2018) fell substantially short of the criterion for good fit as well. The model for the S-FLES proposed by Botes et al. (2021) came very close to matching the criterion, however the RMSEA value for this model exceeded even the more relaxed criterion of .08 suggested by Browne and Cudeck (1993). These results strongly suggest that the four models cannot serve as valid measures of FLE in this sample of learners.

Table 2. Values of Goodness-of-Fit Indicators for Models for the Foreign Language Enjoyment Scale (FLES)

Model	Botes et al. (2021)	Jin and Zhang (2018)	Li et al. (2018)	Saito et al. (2018)
TLI	.926	.843	.855	.782
CFI	.951	.866	.892	.835
RMSEA	.099	.112	.142	.161
95% CI	.084 / .115	.105 / .119	.130 / .153	.148 / .174
SRMR	.0570	.0800	.0754	.0682
χ^2	143.518*	863.591*	460.741*	482.784*
df	24	116	41	34

TLI: Tucker-Lewis index; CFI: Comparative fit index; RMSEA: root mean squared error of approximation; CI = Confidence Interval;

SRMR: standardized root mean square residual; χ^2 : Chi-square.

* $p < .001$

4.3 Exploratory Factor Analysis

As none of the four models tested exhibited an adequate degree of fit, a series of EFAs was carried out to determine the structure underlying the scores. An initial solution using PCA suggested three factors, however, only three items loaded on the third factor, with two of the items cross-loading on the second factor, which suggested over-factoring. In addition, the results of the parallel analysis suggested only two factors (Figure 1), and therefore, two factors were retained in subsequent EFAs carried out using maximum likelihood with direct oblimin rotation.

In the first of these, the determinant was found to be smaller than .00001, indicating issues with multicollinearity (Field, 2018). Upon examination of the correlation matrix, Item 17 was found to have a correlation of .812 with Item 16, and Item 12 was found to be correlated with Item 4 at .772, degrees of correlation which can be indicative of multicollinearity according to Field (2018). In such cases, Loewen and Gonulal (2015) suggest eliminating one of the highly correlating variables. Items 17 and 12 were therefore removed in a step-wise process and the analysis re-run. The removal of these two items resolved the issues with multicollinearity. The loadings of the remaining 19 items on the two factors were then inspected, and one item, Item 20, was found to load below the criterion of .4. In addition, Items 2, 3 and 10 cross-loaded on both factors, and in all three cases the ratios of their variances was < 2.0 . These four items were removed and the analysis re-run. The resultant EFA displayed simple structure, with all items loading above .4 and no evidence of significant cross-loading, therefore the communalities of the 16 items were examined. As a result, 3 items, (Items 5, 11 and 13) were found to have communalities close to .4 and so were removed from the analysis. The final two-factor solution comprised 12 items and explained 65.8% of the variance (Table 3). The two factors were positively correlated (.610).

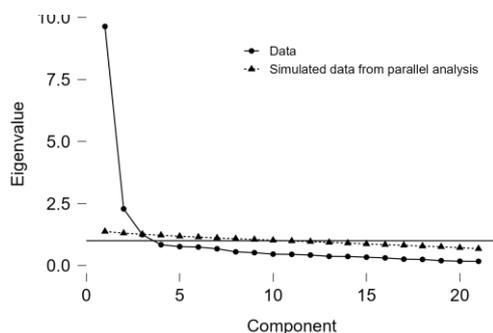


Figure 1. Scree Plot of FLES Including Results of Parallel Analysis

The six items on the first factor concerned the social aspects of a positive learning experience, in particular social cohesiveness and the role of the teacher in helping to establish this kind of environment. The six items on the second factor expressed learners' feelings of personal pride, accomplishment and interest in learning English. The content of the two factors resembled those found by Dewaele and MacIntyre (2016), and so the factors were similarly named FLE-Social and FLE-Private.

4.4 Reliability

As a measure of reliability, the internal consistency of each subscale was estimated using Cronbach's alpha with 95% confidence intervals. Alpha for the FLE-Social was .90, with a 95% confidence interval (CI) of .89 and .91. For the FLE-Private the respective value was .88 (CI: .86 and .89), suggesting that both subscales possess sufficient reliability.

Table 3. Results from Exploratory Factor Analysis on the items of the Foreign Language Enjoyment Scale (FLES)

No.	Item	Factor	
		FLE-Social	FLE-Private
1	I can be creative in my English class.		0.689
4	I enjoy studying English.		0.614
6	I learnt to express myself better in English.		0.783
7	I'm a worthy member of my English class.		0.809
8	I've learnt interesting things in my English class.		0.660
9	I feel proud of my accomplishments in my English class.		0.760
14	My classmates are nice.	0.756	
15	The teacher is encouraging.	0.737	
16	The teacher is friendly.	0.907	
18	There is a good atmosphere in my English class.	0.923	
19	We form a tight group.	0.621	
21	We laugh a lot in my English class.	0.465	

Extraction Method: Maximum Likelihood with Direct Oblimin rotation.

4.5 Levels of FLE

Averages scores for FLE-Social and FLE-Private, as well as means and standard deviations with 95% CI were calculated using bootstrapping to account for non-normality (Table 4). Levels of FLE-Social and FLE-Private reported by learners were compared using the Wilcoxon signed-rank test. Levels of FLE-Social (Mdn = 4.83) were significantly higher than those for FLE-Private (Mdn = 4.00), $z = 17.55$, $p < .001$, with a large effect size, $r = .78$, applying Plonsky and Oswald's (2014) recommendations for effect sizes in L2 research.

Table 4. Descriptive Statistics and Reliability for SFLE and PFLE

Scale	FLE-Social	FLE-Private
M	4.79	3/97
95% CI	[4.71 – 4.86]	[3.89 – 4.04]
SD	.820	.829
95% CI	[.775 – .861]	[.772 – .879]
α	.90	.88
95% CI	[.89 – .91]	[.86 – .89]

Note: CI = Confidence Interval.

4.6 Qualitative Analysis

The qualitative data collected in this study was used to reveal what learners considered to be sources of enjoyable classroom experiences, as well as to help situate the dimensions emerging from the factor analysis and clarify the content of these dimensions. Among the 347 respondents to the open-ended question, 18 provided only very short answers such as “nothing special” or simply “fun.” These responses were removed from the analysis, leaving 329 valid responses, producing a total of 13,549 characters, for an average of 41 characters per response.

The thematic analysis of learner responses is a complex process, and while the majority of the responses were short, many of them mentioned more than one source of emotion. For this reason, there was a degree of overlap in the coding of the responses. The results of this process are summarized in Table 5. The responses highlighted below were chosen to exemplify more prominent sources of positive emotion and while this cannot be an exhaustive description of the responses due to space restrictions, it allows connections between aspects of learners’ classroom experience and the two dimensions of FLE to become apparent.

Table 5. Sources of Enjoyable Classroom Experiences Categorized by FLES

Dimension		
Dimension	FLE-Private	FLE-Social
Source	Sense of accomplishment, new experiences/sense of novelty, realization of progress, having fun, interesting	Building bonds, class activities, having fun together, working together, support from peers, meaningful engagement, teacher, atmosphere, learning from others
Number of Mentions	131	214

Note: FLES = Foreign Language Enjoyment Scale

4.6.1 FLE-Private

In line with Dewaele and MacIntyre’s (2016) characterization of private enjoyment as an “internal sense of enjoyment in the face of challenges,” (p. 231), the most prevalent source of this of this emotion was a sense of accomplishment. For many learners in this study, these were moments of pride, satisfaction or self-confidence that came when they were able to convey their thoughts, talk about personal experiences or simply share likes and dislikes using English, as in these examples (numbers in parentheses are the ID number given to each learner’s response):

(309): *I was very happy when I could explain what I was thinking to my partner in English and they understood.*

(305): *Talking with friends in English on a variety of topics was a lot of fun and gave me confidence in myself, even if I could not speak English well.*

For other learners, this sense of accomplishment came from overcoming challenges, whether those were imposed from the outside, as in a class activity, such as when playing Taboo (where learners have to get their partner to guess a keyword or phrase without using certain other words related to the keyword), or by their own language abilities:

(148): *I enjoyed the game of guessing English words. It was difficult because of the limited number of words available, but I enjoyed trying my best to find different words and tell them.*

(243): *It was enjoyable to discuss our life experiences in English. It was difficult, but it was a great experience.*

Rather than momentary successes, many learners described feelings of achievement that came when they realized the progress they had made in their language learning journey:

(321): *I feel that I am getting better and better at discussing certain topics with my classmates as we continue to practice. I am very happy to be able to feel that progress.*

(122): *I enjoyed talking with other people in English, talking about myself and asking them about theirs. I tend to use Japanese when I don't understand something, but I think I gained some skills in explaining in English through the pair work where we had to explain the words in English, and the work itself was interesting.*

(199): *Conversation activities are interesting. This is because I had never practiced it in school, but only learned English in lecture classes. I could enjoy the fun of using English and the flow of progress (rapid spurts of growth and stops).*

As in this last comment, another important aspect of personal enjoyment was a sense of novelty and differences from learners’

previous English classes:

(171): *Compared to high school and junior high school, I find it very practical and fun to have a more natural learning environment for speaking English.*

4.6.2 FLE-Social

This dimension of enjoyment was characterized primarily by a sense of meaningful interaction or engagement with peers or the teacher. The most often mentioned source of this form of enjoyment was the development of bonds between learners. The conversational nature of class, the focus on learner interaction and the sharing of personal information allowed learners to get to know one another and thereby build personal relationships:

(74): *One of the most enjoyable experiences in the English Communication class at the university was discussing our favorite music and artworks with each other in English. It was a great class because we could share what we liked with each other, and we could get to know each other and learn how to speak English instantly as we spoke.*

(139): *When I practiced conversation with other class members, I was able to talk to people from different departments and learn a little about them in English. There were experiences, music, and food that I didn't know about, which I found interesting and amazing.*

Sharing personal experiences and information in the target language may not only help to increase positive emotions in a classroom, but by engaging students in learning about each other, it may also serve as a means to overcome the oft-felt artificiality of speaking the target language with other learners who share the same L1.

Obviously, the activities that learners are engaged in during the class have a strong influence on their emotional experience. As Dewaele and MacIntyre (2016) have pointed out, an enjoyable and suitably challenging activity for one learner, can be an overpowering or anxiety provoking one for another. For the learners in this study, activities that allowed them to express themselves formed one source of enjoyment as noted above. A further source was found in gamified online activities such as Quizlet or Kahoot, which emphasized both cooperation and competition between learners:

(189) : *Kahoot was fun. Once I was able to win the competition by cooperating with my partner, and I was happy about that.*

(82): *I found the quiz competition, which also served as English vocabulary practice, to be very enjoyable. The quiz competition was usually done in groups of three, but I was*

very happy because I was able to cooperate more by sharing what I knew and by sending signals.

The following responses show many of the aspects of a learning environment where positive emotions can flourish: student-centered activities, the building of bonds between learners, a sense of personal accomplishment, positive feelings that come from a sense of social support, and recognition from others.

(197): *Since there were many individual and group conversations, I was able to talk a lot with friends I normally don't talk to and increase my connections with them. Although I was not able to express everything I was thinking in perfect English, I was very happy when I could express myself well or when I received sympathy from my friends.*

(68): *I'm not very good at English, and as you can see from my tests and such, my grammar is a mess. But when I try to speak as hard as I can, other friends and teachers recognize me. I feel a sense of accomplishment.*

This supportive atmosphere can help to create a learning environment where mistakes can be laughed off and come to be seen as one means of learning, rather than as a source of anxiety or fear:

(302): *If you make a mistake, you can laugh and correct it.*

(326): *Even when I didn't understand something, the teacher would tell me in detail, and even if I made a mistake in a conversation with a friend, we could have fun, and I enjoyed the fact that we could look up proper English and restate it to each other, which I felt was a good class.*

As noted in this last comment, the teacher plays an important role in establishing the social atmosphere of the class, and creating an environment where learners feel safe enough to make mistakes and express themselves freely. It is interesting to note, however, that the teacher was mentioned explicitly by only a small number of respondents in this study. One possible reason for this may be the blended nature of the course and resultant emphasis on learner interaction and communication in pairs and groups during in-person classes. This atmosphere, while created by the teacher through their choice of activities, may have altered the usual social dynamic, transforming the teacher from a distinct source of positive emotions to one of several more or less co-equal influences on the overall learning environment and learners' emotional experiences, albeit while remaining an important one.

5. Discussion

This study investigated the validity of four versions of the FLES for use in the context of Japanese university-level language learners. It was framed by the need for solid foundations in the measurement of psychological constructs (Flake & Fried, 2020), and by MacIntyre and Vincze's (2017) call for the investigation of positive emotions in different cultural contexts. The initial aim of the study was thus to determine if the presently proposed versions of FLE (Botes et al., 2021; Jin & Zhang, 2018; Li et al., 2018; Saito et al., 2018) could serve as valid measures of FLE in the context of Japanese university-level language learners. The results of the CFAs carried out in this study showed that none of the four versions tested exhibited a degree of fit sufficient for their un-critical use in the Japanese context.

As a consequence of the poor fit exhibited by each of the models tested using CFA, an exploratory approach was adopted, and a series of EFAs were conducted. These suggested a two-factor structure for the FLES. Similar to the EFAs conducted by Dewaele and MacIntyre (2016), there was a degree of cross-loading between the two factors, resulting in the removal of several items to clarify the structure and content of the two dimensions. The resultant two-factor solution comprised 12 items in total (from the original 21), with six items loading on each factor.

The first dimension was termed FLE-Social following Dewaele and MacIntyre (2016), and comprised items expressing social cohesion, shared experiences, and encouraging and friendly peers and teachers. This dimension can be seen to exemplify the role positive emotions play in helping to build relationships with others by encouraging the urge to explore and openness to new experiences (Fredrickson, 2001), which when shared with others encourages social bonding. Qualitative analysis of learner responses helped to situate this dimension in learners' experience by making manifest the importance of sharing experiences and personal information, building bonds between classmates, activities promoting cooperation and competition, and support from teachers and peers in creating a positive social atmosphere.

The second dimension was termed FLE-Private, with items expressing concepts such as creativity, expressing oneself well, and a feeling of pride in one's accomplishments. This factor reflected the internal nature of Csikszentmihalyi's (2008) concept of optimal experiences, and was centered around a sense of achievement and personal growth that comes after making an effort to overcome a challenge. In relation to this dimension of

FLE, learners reported feelings of enjoyment from being able to convey meaning, in moments of language learning success and realizations of longer-term progress, as well as from novelty and differences from their previous classroom experiences.

The poor degree of fit exhibited by the versions of the FLES developed for use with Chinese language learners underline two points made by Li et al. (2018). First, establishing the validity of an instrument used in cultural contexts different from that in which it was developed is a necessity. This study has shown that such validation is needed even when the two contexts can be considered relatively close, either culturally (such as in the case of China and Japan) or in terms of teaching style (in this case, traditionally lectures and a focus on tests), let alone when employing instruments developed on the basis of scores from learners in Europe or America. Second, as the qualitative data from this study shows, while the learners across cultures may have broadly similar views on what makes a language class enjoyable, there are differences between them, and these differences suggest the need for more detailed research investigating the sources of positive emotion.

The results of this study also suggest that the commonly used 10-item version of the FLES may not be a suitable representative of FLE in the Japanese context, and therefore it should be used with caution by researchers and practitioners. Evidence for or against the validity of an instrument is an accumulative process however, and thus the results of any one study should not be considered as definite evidence for or against using a particular version of an instrument. This may be particularly the case for the S-FLES (Botes et al., 2021), which came very close to meeting the criteria for good fit, with only the RMSEA failing to meet the stipulated value. This suggests that there is a need for further research into the use of this version of the FLES in the Japanese context.

One interesting area of further investigation here would be the fact that, in this study, items related to the teacher loaded on a larger social enjoyment factor. This differs not only from the findings of Botes et al. (2021), but also those of Jin and Zhang (2018) and Li et al. (2018). In all three of these studies, items related to the role of the teacher formed a separate dimension. Furthermore, in this study, the teacher was a minor theme in the qualitative analysis in this study. This is not to suggest that the teacher did not play a significant role as a source learners' positive emotions, but rather that there may be other factors behind these differences in the structure of the FLES and learners' responses.

An intriguing possibility lies in King and Smith's (2017)

characterization of the Japanese language classroom as “a highly public social performance situation” (p. 99). It may be that in such a situation, where learners feel they are under constant observation by both the teacher and their peers, the differences between teachers and peers in establishing the social atmosphere of the class are reduced and both come to play more equal roles. That is to say, in the eyes of Japanese university learners, the teacher may be just one part of the social dimension of the language classroom, working in tandem with peers to create the overall atmosphere of the class.

The other possibility, as mentioned above, is that the particular learning context in which this study took place, a blended learning environment with in-class time focused intensively on learner interaction in pairs and small groups, altered the position of the teacher, with he or she becoming a co-equal architect of learners’ enjoyable experiences. These possibilities are not mutually exclusive, and both suggest avenues for future research, as well as the need to validate the findings of this study in other samples of Japanese learners.

The nature of the course that forms its context points to one limitation of the study. The learning environment in this study differed from that in previous studies on FLE, and that may limit the generalizability of the results, making comparisons between this study and others more difficult. However, the learning environment in this study is similar to the present situation many language learners find themselves in—limited and socially-distanced interaction with other learners—and so in that sense it may contribute to future research examining learners’ emotions in non-traditional learning environments.

A further limitation is one more common to studies in this area, as well as in the social sciences more generally. The data set employed in this study was collected from learners at a single institution, and while relatively large and comprising learners from a range of majors, thus represents a sample of convenience rather than a random sample of Japanese university English learners. One means of contending with this issue is repeated sampling of this population. While these further samples are also likely to be samples of convenience, the limitations of each could be overcome through the use of meta-analysis.

6. Conclusion

This study investigated the validity of four versions of the FLES in a sample of Japanese university English language learners, as well as the sources of learners’ enjoyable experiences in the language classroom. Models of all four versions of the FLES

exhibited an insufficient degree of fit with the structure underlying scores in the data set, and thus their un-critical use in this context is not recommended. Subsequent EFAs revealed two dimensions underlying FLE. One, which was characterized by individual experiences of a sense of accomplishment and overcoming challenges, was termed FLE-Private, and the other grounded in the social aspects of language learning, such as relationships with peers and the teacher, and the atmosphere of the classroom, was named FLE-Social. These findings represent a step towards extending knowledge of the structural components of the FLES in the Japanese university context, as well as adding to the literature on the sources of learners’ emotional experiences in the language classroom.

In terms of practical implications, an awareness of these dimensions and understanding of the sources of social and private enjoyment identified in this study can help guide teachers when planning classroom activities aimed at engaging learners’ positive emotions. One example of this is the use of gamified study applications, such as Quizlet or Kahoot, which allow learners to both cooperate within their group and also compete against other groups, encouraging social cohesion and thereby enhancing the social aspects of enjoyment. In addition, these activities raise the stakes in a safe way and provide learners with manageable challenges they can meaningfully engage with and overcome, increasing personal enjoyment as well. As a further example, structured and scaffolded activities which encourage the sharing of personal information and experiences in the target language not only provide learners with opportunities to experience language learning success, but can also help to build social bonds between learners as well.

While the knowledge-base of FLE has widened considerably since Dewaele and MacIntyre’s (2014) pioneering study, and much more is known about what constitutes an enjoyable experience for language learners, there is a need for further research which adopts more in-depth approaches, such as interviews and focus groups, as well as case studies, such as that carried out by Pavelescu (2019). The qualitative data gathered in this study provided a sense of learners’ self-perceived sources of enjoyment that helped to ground the dimensions of the FLES in learners’ lived experiences. However, it consisted mostly of short comments, rather than rich descriptions of enjoyable experiences, which would have allowed for a deeper understanding of both the sources of emotions and their influence on learning.

As a supplement to this deeper investigation of FLE, there may be a need for instruments that measure more specific aspects of FLE. As originally conceived, the FLES was designed

to be a broad, general measure of FLE, and it has served this task well. However, moving forward, one path could be the development of instruments to investigate more specific aspects of FLE, such as peer support and recognition, competition and cooperation between learners, or differences between momentary feelings of success and longer-term recognition of progress in one's language learning journey. Instruments focusing on such aspects would not only help researchers by enabling greater understanding of FLE, but also provide a tool for teachers to help create enjoyable experiences for their learners.

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Appendix:

The Foreign Language Enjoyment Scale (FLES; Dewaele & MacIntyre, 2014)

(Item numbers are those from Dewaele and MacIntyre, 2016.)

- | Item | |
|------|---|
| 1. | I can be creative in my English class.
私は英語の授業中にクリエイティブ（創造的）になれる |
| 2. | I can laugh off embarrassing mistakes in English.
恥ずかしい間違いをした時でも、笑い飛ばすことができる |
| 3. | I don't get bored in my English class.
私は英語の授業中に退屈することはない |
| 4. | I enjoy studying English.
私は英語を勉強することが楽しい |
| 5. | I feel as though I'm a different person during my English class.
私は英語の授業中には、まるで違うひとになったかのように感じる |
| 6. | I learnt to express myself better in English.
私は英語で自分の伝えたいことを伝えられるようになった |
| 7. | I'm a worthy member of my English class.
私は英語の授業にふさわしいメンバーである |
| 8. | I've learnt interesting things in my English class.
私は英語の授業で興味深いことを学んだ |
| 9. | In my English class, I feel proud of my accomplishments.
私は英語の授業中に、自分が達成したことを誇りに思う |
| 10. | I always feel like there's a positive environment in my English class
私は、英語の授業にはいつもポジティブな雰囲気があるように思う |
| 11. | It's cool to know English.
英語を知っていることは素敵なことだ |
| 12. | Studying English is fun.
英語の勉強は面白い |
| 13. | Making errors is part of the learning process.
間違えることも、学びにおいて重要なプロセスだ |
| 14. | My classmates are nice.
私はいいクラスメイトに恵まれている |
| 15. | The teacher is encouraging.
先生は、いつも勇気や自信を与えてくれる |
| 16. | The teacher is friendly.
先生は、フレンドリー（友好的）だ |
| 17. | The teacher is supportive.
先生は、支援しようとしてくれる |
| 18. | There is a good atmosphere in my English class.
私の英語の授業には、良い雰囲気がある |
| 19. | We form a tight group.
私たちのグループには結束力がある |
| 20. | We have common "legends", such as running jokes.
私たちにグループの共通語となっているようなお決まりのジョークのようなものが存在する |
| 21. | We laugh a lot in my English class.
私たちは、英語の授業中によく笑いあう |