Experience Sampling Approaches to the Felt Need to Use and Study an L2 outside the Classroom: A Pilot Study[1]

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Introduction

Studying a second/foreign language (L2) outside the classroom is essential for developing L2 ability. In fact, out-of-class study is a prerequisite for students to spend their classroom time maximizing their L2 learning opportunities. Nevertheless, because many L2 researchers have focused exclusively on classroom learning, out-of-class learning has been less researched.

Studying online or outside the classroom has been recommended due to the maintenance of social distancing under the current pandemic situation between 2020 and 2022 in Japan and substantial introduction of the "flipped classroom" model. Many L2 researchers and practitioners have solid knowledge of when and how learners study—and, more fundamentally, when and how they are motivated to study—in the classroom. Despite this accumulated knowledge about classroom learning and classroom motivation, our knowledge about students' learning opportunities and learning needs (or motivation) outside the classroom is limited. This research aims to fill these gaps using a research method that is relatively new in the L2 field.

Relationships between L2 Learning Situations and L2 Motivation

Learning situations exert a great impact on learners' minds and behaviour. This paper will look at two broad classes of learning situation:

(1) target language use and learning in society, and (2) target language use and learning in the classroom. With regard to the former, two environments can be distinguished: second-language environments and foreign-language environments. Ellis (2008, 2015) explains the distinction between these two environments. In a second-language environment, the target language plays an institutional and social role in the community (e.g., learning English as a second language in the UK) and learners can learn it through the everyday communication situations they experience. By contrast, a foreign-language environment can arise in a classroom through instruction where there are no or limited opportunities to use the target language in daily life (e.g., learning English as a foreign language in Japan).

It is not difficult to imagine the types of learner motivation that work in each learning environment. Although it may be too simplistic, research using Gardner and Lambert's (1972) L2 motivation theory has been performed. This theory conceptualized motivation in two ways: *integrative orientation*, referring to a willingness or desire to be like representative members of a language community, and *instrumental orientation*, referring to a desire to gain social recognition or economic advantages such as a job or a higher salary through knowledge of a target language. Gardner and Lambert (1959) found that in Canada, where high school students study French as a second language, integratively oriented students were generally more successful in acquiring French than those who were instrumentally oriented. On the other hand, Yoneyama (1979) found that in Japan, where junior high school students learn English as a foreign language, there was only a slight correlation between integrative orientation and achievement but a higher correlation between instrumental orientation and achievement. These results indicated the importance of taking learning environments into consideration in the context of motivation.

The other learning situation to consider is the classroom. This is assumed to be the main venue for learning, especially in foreign-language environments, and many teachers and researchers have focused on the classroom in their research, and classroom motivation in particular. Regarding theoretical aspects, Dörnyei (1994) reviewed several studies to identify motivational components influential in L2 learning situations (i.e., the classroom, in this case). These components are course, teacher, and group. On the practical side, there are several studies investigating L2 classroom motivation. One example is Noels, Clément, and Pelletier (1999), who found that the more controlling and less informative students perceived teachers to be, the lower students' intrinsic motivation was. Another study is Guilloteaux and Dörnyei (2008), who explored the link between teachers' motivational teaching practice and their students' motivation for L2 learning and found a significant positive correlation between them.

Although learning opportunities and classroom time are very limited in learners' daily lives, especially in foreign-language environments, little attention has been paid to the dimensions of students' out-of-class study. Fukuda and his associates (Fukuda, Sakata, & Pope, 2019; Fukuda & Yoshida, 2013) argue for the importance of conducting research outside the classroom. For example, Fukuda et al. attribute students' insufficient out-of-class study time to their lack of learning skills. While this is essentially true, we lack a fundamental understanding of when and how learners are motivated to study English in their daily lives. Thus, to expand our knowledge about Japanese learners of English, research investigating when and what situations make them feel the need to use and study English in their everyday life is necessary.

Experience Sampling Method (ESM)

What people are feeling, thinking, and doing in the ordinary

environments of their everyday lives (i.e., the "real world") has been a target of research in many disciplines. There are several research methods investigating people's daily experiences. The interview is one popular example. Although such retrospective methods are useful for capturing significant events or experiences, one limitation is that these methods mainly ask participants to think about their past, and memories are sometimes biased. One methodology for overcoming this shortcoming is called the "experience sampling method" (ESM) or "momentary sampling method." ESM is "a research procedure for studying what people do, feel, and think during their daily lives" (Larson & Csikszentmihalyi, 2014, p. 21; see also Larson & Csikszentmihalyi, 1983, p. 41).

Silvia and Cotter (2021) identify three defining features of ESM:

(1) People are assessed in their *natural environments*.
(2) Events and experiences that people have are assessed in *real time*, capturing them close to when they happen.
(3) People are *assessed intensively over time*, the results of which can provide a large sample of emotions, thoughts, and actions.

A typical procedure using ESM involves asking participants to answer questions about what they are doing, with whom, and in what situation, when they receive a survey signal. This procedure is repeated several times a day for a few days or weeks.

Although this method has high potential and appeal for its ability to reveal daily lives in depth, there are several obstacles to conducting ESM research (Hofmann & Patel, 2015; Silvia & Cotter, 2021). One is choosing a system to signal participants and collect data. In the early days of ESM research, pagers and paper-and-pencil notes were used. Nowadays, however, as mobile technology advances and smartphones become

common among the general population, making ESM more popular, further considerations are necessary: for example, whether systems can be used only for signalling or surveying, or for both; which signalling system should be adopted to improve responses (possible systems include email, short message service (SMS), and others); and whether the devices used for signalling and surveying belong to participants or researchers. In Europe and America, because specifically designed applications have been developed, ESM research has become more prevalent (e.g., *SurveySignal* in Hofmann & Patel, 2015). However, this is not the case in Japan (Ozaki, Kobayashi, & Goto, 2015). One major obstacle is the unavailability of ESM-specific systems. Few Japanese language–based ESM systems are available. In addition, email signalling is at risk of being classified as spam (Okumura, 2019). This means that response rates may be low.

In the field of psychology, there are several studies using ESM (Baumeister, Wright, & Carreon, 2019; Hofmann, Vohs, & Baumeister, 2012). For example, Hofmann, Baumeister, Förster, and Vohs (2012) investigated 205 German adults using beepers for one week to explore through ESM how often and how strongly people experience desires, to what extent their desires conflict with other goals, and how often and successfully people exercise self-control.

In the L2 field, ESM has rarely been used as a research tool. Quite recently, Hiver and Al-Hoorie (2020) called attention to the suitability of this method for the field. One early example of ESM use in the L2 field was Guilloteaux (2016), which used ESM to examine the learning engagement levels (i.e., the simultaneous experience of concentration, interest, and enjoyment) of 224 high school students during English classes in Korea. Students received signals to their pager prompting them to produce a maximum of six responses during the lesson. Guilloteaux's inspection of students' mean score revealed that the

majority of students were classifiable as low-engagement and that only 13% of the students were optimally engaged in the lesson. She speculates that a possible factor in such low engagement is the prevalence of teacher-centred instructional practices.

The Present Research

The current study is a pilot study for a larger project. The purpose of this study is twofold. One is to investigate the usability of ESM as a research tool. Response rate is an important indicator of survey quality, and email systems which have been frequently used in ESM research may result in lower responses, which may lead to invalid results. If this is the case, alternative signalling systems such as instant messaging (IM) have to be considered, but there is no evidence that alternative systems work better. Thus, this study aims to compare response rates between email and IM for the sake of further ESM research. Its other purpose is to understand when and how Japanese learners feel the need to use and study English in their everyday lives. This is especially the case during holiday periods, when no regular L2 classes are offered and it is assumed that learners have very few opportunities to feel to study English. Under such situations, whether learners feel to study English is an enigma. Based on these issues raised above, the following research questions are addressed:

RQ1: *Which signalling system, IM or email, has a higher response rate? Are there any preferences in use for each system for responding?*

RQ2: *What are Japanese students doing when they feel the need to use English outside the classroom?*

RQ3: *To what extent do Japanese students feel the need to study English? What makes them feel this need?*

RQ4: *Does the felt need to use and study English in daily life lead to actual learning behaviour?*

Method

Participants

In total, 24 students (11 male; 13 female) from a national university in central Japan participated in this study. They were recruited through announcements in class and through word of mouth. Their grade level ranged from first-year undergraduate to second-year postgraduate (17 undergraduates; 7 postgraduates). Their majors ranged from human sciences to creative sciences to natural sciences (13 English majors; 11 non-English majors). Participants were given compensation based on how many times they answered.

Instruments

Questionnaire. This study adopted two types of questionnaire. The first type was for experience sampling purposes, asking about participants' experiences related to English use and learning. The total number of items was six and they were specifically designed for the current study:

Q1: "*What were you doing for the last 90 minutes before responding to this survey? Please specify as concretely as possible (e.g., working part-time, studying, playing with friends, etc.).*"

Q2: "*Did you feel the need to use English (reading, listening, speaking, or writing) in the last 90 minutes before responding to this survey? Please choose one number that applies to you.*" This question was assessed with a scale from 1 (*Never felt it at all*) to 4 (*Felt it very strongly*).

Q3: "*Did you feel the need to study English in the last 90 minutes before responding to this survey? Please choose one number that applies to*

you, with a scale of 1 (Never felt it at all*) to 10* (Felt it very strongly*).*"

Q4: "*Please write your reasons for choosing the number you did in the previous question (Q3).*"

Q5: "*Did you study English in the last 90 minutes before responding to this survey? Please choose one number that applies to you.*" This question was assessed with a scale from 1 (*Did not study it at all*) to 4 (*Studied it a lot*).

Q6: "*If you answered 2* (Studied it a little*) or higher in Q5, what kinds of study did you do? Please specify as concretely as possible. If you answered 1* (Did not study it at all*) in the previous question (Q5), please write 'Nothing.'*"

The second type of questionnaire was reflective, asking participants what they thought about the signalling systems. There were three questions for this purpose (note that the second and third questions were asked only in the second reflective questionnaire):

R1: "*Please write the advantages and disadvantages of answering with the LINE [email] system this time in at least 100 Japanese characters (Note that you will not finish this question unless you have written at least 100 Japanese characters*)."

R2: "*You answered Surveys 1 and 2 using email and LINE. If you participated in similar surveys, which system would you like to use? 'LINE,' 'Email,' or 'No preference.'*"

R3: "*Please write your reasons for your answer to R2 in at least 30 Japanese characters. The reasons can be the same as R1. (Note that you cannot finish this question unless you have written at least 30 Japanese characters.)*"

All the instructions in both questionnaires were written in Japanese in order for participants to fully understand the surveys.

Survey Signalling System. Two survey delivery systems were adopted in this study. One was email, in which a questionnaire developed through online survey software called "SurveyMonkey" (https://jp.surveymonkey.com/) was delivered to participants. The other was LINE, a freeware IM application for electronic devices, e.g., smartphones, tablet computers, and PCs. A survey specifically developed by an ESM expert for Japanese language environments called "exkuma" (https://exkuma.com/) was sent to respondents through the LINE app. Both systems asked participants to click a link to go to the relevant online survey.

Data Collection Procedure

Data were collected in March 2021. Participants were randomly classified into two groups—the EL group (email first and LINE second) and the LE group (LINE first and email second). In Week 1 (Survey 1), the EL group randomly received an email three times per day for one week asking them to respond to the email survey. After Week 1, one week interval was taken. Then, in Week 2 (Survey 2), they randomly received a LINE signal three times per day for one week asking them to respond to the LINE survey. After each survey week, participants were asked to complete the reflective questionnaire. For the LE group, the order of the data collection procedures was reversed (i.e., LINE first followed by email). In both cases, participants were asked to complete the survey within 90 minutes of receiving the signal. In the case of the reflective questionnaire, they were asked to respond to it within three days. Responses received after these time limits were treated as invalid.

Table 1

Descriptive Statistics of LINE and Email Responses

Signalling system	*M*	*SD*	Response rate
LINE	17.18	2.63	78%
Email	14.50	6.33	66%
Overall	15.84	4.98	72%

Signals were sent to participants between 9 A.M. and 10 P.M., with at least two hours between each signal. The overall response rate was 72% (722 responses out of 1008: 24 people x 3 times a day x 14 days).

Data Analysis Procedure

The collected survey data were processed using IBM SPSS Statistics 26. For closed-ended questions, descriptive statistics were applied, with *t*-test, correlation technique, and multiple regression technique conducted. For open-ended questions, similar opinions were grouped together and typical opinions were used to illustrate issues in point.

Results

Signalling Systems, Response Rates, and Preferences

In order to examine the difference in survey responses when using LINE and email signals, an analysis was conducted. Table 1 presents the descriptive statistics of the responses for both systems. The number of responses to survey signals were compared through the use of the paired-samples *t*-test (note that those who did not respond at all to either system were excluded from this analysis). The analysis showed that although no statistical significance was observed between LINE and email ($t(21) = -1.85$, $p = .078$, $d = 0.55$[2]), the effect size of Cohen's *d* is medium. This result concludes that Japanese students responded to LINE more frequently than email.

In addition to the statistical result about the response difference between LINE and email, further analysis was conducted concerning

Table 2

Preferred Signal Type for Future Surveys

LINE	Email	No preference	Total
14	4	2	20

preferences regarding signalling systems. Table 2 displays the response preference for future use of each system. The analysis showed that Japanese students greatly preferred LINE to email for ESM investigation (14 vs. 4).

Further analysis of the open-ended question revealed distinct characteristics. Here are typical comments from those preferring LINE:

- *I use LINE more often than email and am familiar with LINE. In addition, LINE easily displays who senders are, when they send messages, and what the messages are.* (Student 2)
- *I check LINE very frequently; I don't open emails often.* (Student 9)

A possible major reason for this frequent checking lies in the fact that LINE has a dedicated app appearing on the home screen of the smartphone. In contrast, a typical comment from a respondent preferring email is as follows:

- *As long as email reception notifications are set up on my smartphone, I can more easily notice those signals, because of less frequent use of email than LINE.* (Student 8)

These results suggest that LINE can work as a basic system of ESM research for Japanese university students, with email as a supplemental option depending on participants' preference.

Table 3

Number of Responses for Each Scale Option regarding the Felt Need to Use English

Scale option	1	2	3	4	Total
Responses	576	44	68	34	722
Ratio	80%	6%	9%	5%	100%

Situations Inducing a Felt Need to Use English

The question of when Japanese learners felt the need to use or study English in their everyday lives was another topic of this research. First, how much respondents felt the need to use English in their daily lives was investigated (Q2). Table 3 displays the response numbers for each point on the scale regarding this matter. As expected, more than 85% of responses (576 responses of "1" and 44 responses of "2") indicated that the participant had not felt the need to use English in the 90 minutes before the signal they were responding to, and only 14% of them indicated the opposite. This is not unusual in an English-as-a-foreign-language environment.

When students felt the need to use English, what were they doing? In order to examine situations and activities inducing a more strongly felt need to use English, the answers supplied for the open-ended questions in survey responses where "3" (*Felt it a little*) or "4" (*Felt it very strongly*) were chosen for Q2 were scrutinised. Table 4 summarises the responses to Q1, which asked participants about the situations or activities they were engaged in. It was found that 26% of responses were related to pastimes, specifically watching videos (e.g., YouTube, Netflix) and listening to music. The next most common type of response involved working. This included part-time jobs, mainly home and after-class tutoring, and volunteering activities at school. The third most frequently mentioned type of situation or activity was studying, which accounted for 17% of all responses. Because this ESM survey was conducted in March,

Table 4
Types of Situations and Activities that Made Participants Feel the Need to Use English

Situation/activity	Responses	Ratio
Pastime	27	26%
Working	25	25%
Studying	17	17%
Transferring	12	12%
Socializing	8	8%
Class	7	7%
Others	6	6%

which is a university holiday period, neither the relatively infrequent mention of these situations and activities, nor the ranking of "Class" as the sixth most commonly mentioned situation or activity, was a surprise. These results indicate that although students did not take regular English classes in the university holiday period, their daily situations and activities still induced the felt need to use English.

Degrees of the Felt Need to Study English

With regard to the third research question, this study investigated how strongly Japanese university students felt the need to study English in their daily lives (Q3 & Q4). Table 5 displays the results of the responses for each option on the scale from 1 to 10. It showed that, on most daily occasions, students felt no need to study English ("1," 522 responses: 72%), or very little need ("2," 36 responses: 5%; "3," 22 responses: 3%). Taken together, 80% of daily occasions did not make learners feel much need to study English. Furthermore, to investigate whether the felt need to use English was linked to the felt need to study it, a correlational technique was employed. A high correlation coefficient was observed (r = .80, p < .001), meaning that the two were strongly linked.

On the other hand, it is a mystery that some students did not feel the need to use English in their daily lives but did feel the need to study it

Table 5

Number and Ratio of Responses for Each Scale Option regarding the Felt Need to Study English

Scale option	Responses	Ratio
1	522	72%
2	36	5%
3	22	3%
4	19	3%
5	42	6%
6	16	2%
7	29	4%
8	12	2%
9	6	1%
10	18	2%
Total	722	100%

(as indicated by a response of "4" or higher to this question). Why did they feel this way? Comments from those who felt no or little need to use English (i.e., those responding with "1" or "2" in Q2) were examined. In total, nine students responded with "1" or "2" in Q2 but still felt the need to study English. Table 6 showed the reasons they felt the need to study English. Since each person responded on several occasions, the number of responses itself was not meaningful. Thus, the categories of activities or occasions were considered.

There are many reasons why learners feel the need to study English, and these can be grouped into five major categories. The first category is "Pressure to study English." This is concerned with pressure learners felt to develop English ability to meet expectations and obligations from others. The second category is "Imagining future English-use events." This is related to English-use events learners imagined having in near future (e.g., studying abroad and socializing with international students). The third category is "Talking about English with family/friends." This is associated with conversations learners had with significant others about the importance of English. The fourth category is "Hoped-for benefits

Table 6

Number of Responses for Each Category of Reason for Feeling the Need to Study English

Category	Responses
Pressure to study English	23
Imagining future English-use events	13
Talking about English with family/friends	5
Hoped-for benefits from using English for personal matters	5
Memorable experiences of using English	1
No response	4
Total	47

from using English for personal matters." This concerns benefits learners hoped to gain from using English for their part-time jobs or hobbies/interests (e.g., listening to English songs or communicating through social media). The fifth category is "Memorable experiences of using English." This is related to learners remembering previous experiences they had about using English. These results indicate some hints for making learners feel the need to study English even in out-of-class environments. Among the reasons identified above, imagination seems to be one key in this respect and is discussed further below.

Extent to Which English was Studied

Finally, whether the felt need to use and study English in daily life led to actual learning behaviour was examined. It was found that Japanese university students actually took action to study on 46 out of 722 occasions (6%), as indicated by answering "2" or above in Q5. This means that they rarely took action to study. This is not surprising because some students did not need English in their lives or have regular English classes during the investigation period.

Next, to examine the relative contribution of the felt need to use and study English, respectively, to the extent of study behaviour, a multiple regression was conducted. Each predictor was entered into a regression

Table 7
Results of Multiple Regression Analysis

	B	S.E.	β	R^2
English use	.15	.03	.27***	.35
English study	.07	.01	.35***	

***$p < .001$

model consecutively in the order indicated. As seen in Table 7, the regression results showed a coefficient of determinant of .35, meaning the model explained 35% of the variance in study behaviour and that the felt need to study English was more predictive than the felt need to use it. These results indicate that (1) because one-third of learners' daily occasions of felt need to use or study English lead to actual study, other influences such as personality should be explored in connection with this to explore learners' actual study behaviour, and (2) because the felt need to study English is more influential on actual study behaviour in daily life, some intervention stimulating this need might be encouraged for future research.

Discussion

This study investigated two matters: (1) the feasibility of ESM as a research instrument regarding survey quality for further use, and (2) using ESM, the felt need to use and study English alongside actual study behaviour.

With regard to the first matter, it was found that LINE had a significantly higher response rate than email. This is most probably due to the popularity of LINE as a communication tool, especially for younger generations. That said, we cannot ignore the opinions of the minority who prefer email. Perhaps, in ESM research, the best strategy to increase response rate is to provide multiple delivery options depending on participants' preference, with the LINE option being a default and the

email option supplementing.

As for the second matter, it was clear that some daily events and activities (e.g., watching English videos during pastimes and working part-time) led to some learners feeling the need to use and/or study English, although students in general did not feel this way. On the other hand, while the felt need to use and study English was strongly connected according to the correlation analysis, it was surprising that some learners were motivated to study English even during holiday periods, without immediate English study situations at school.

The reasons for this are diverse (see Table 6) but some can be classified into three broad areas. These are positive future imagination or hope ("Imagining future English-use events" & "Hoped-for benefits from using English for personal matters"), preventive reasons ("Pressure to study English"), and learning experiences ("Memorable experiences of using English"). These areas seem to correspond with the components in the L2 self system proposed by Dörnyei (2005, 2009). These are: *ideal L2 self* (L2 specific facet of one's ideal self), *ought-to L2 self* (the attributes one ought to possess to avoid possible negative outcomes or to meet expectation from significant others), and *L2 learning experiences* (situation-specific motives to the immediate learning environment and experiences). The first and second components are related to imagination or vision and the third is associated with real learning. While the current study did not clarify self aspects of imagination components, it is assumed that imagination can be influential to drive learners to actual behaviour, or at least the felt need to study, even during periods with no regular class.

From the perspective of teachers, university holiday seasons are when learners lose opportunities to maintain the learning engagement required to develop their L2 abilities due to the absence of regular classes. The current results provide some clues for motivating learners to

study outside the classroom, including university holiday periods. From the perspective of classroom practice, teachers may need to provide practical learning experiences irrespective of success or failure, although the failure experiences should be treated with care to become constructive. These experiences may remind learners of where they have succeeded (or sometimes failed), which might lead them to additional attempts at L2 use even during periods of no regular class. From the viewpoint of out-of-classroom practice, since imagination seems to be a driving force in learners' minds to feel the need to study English, some mental stimulation should be attempted to increase learner engagement in L2 learning. While some practical books about this (e.g., Dörnyei & Kubanyiova, 2014; Hadfield & Dörnyei, 2013) are dedicated to classroom practice, several strategies in them can be applied to L2 study even in out-of-class environments.

Conclusion

This study is a relatively early study in investigating how Japanese learners felt and behaved in relation to English learning in their everyday lives using ESM.

ESM is a promising research tool to reveal L2 learners' learning experiences in their daily lives. In addition, although L2 learning out-of-class environments can maximise the effectiveness of classroom learning, how and when they study English in such environments is an enigma from the teacher's perspective. In fact, because our daily lives are filled with many temptations distracting us from study, including the study of English (Taguchi, 2020), more research with larger and more diverse samples will be needed to reveal the ethology of students' study behaviour in their daily lives and its relationship to classroom learning in particular.

Notes

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[2] According to Roever and Phakiti (2019), there is disagreement about whether correlation should be taken into account in calculating the effect size of the paired-samples *t*-test. In this study, following their suggestion, the correlation value is not integrated into the computation.

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