

Sampling the Need to Use and Study English Felt Daily by University Students in Japan

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Abstract

In the English as a Foreign Language (EFL) setting, the classroom has been the primary venue for language learning and has received significant attention for its influence on second language (L2) learners' motivation to study. However, this focus has often led to overlooking the role of L2 learning in learners' everyday lives outside of the classroom, including the motivation to study English. To address this gap, researchers have emphasized the importance of exploring out-of-class situations. One effective approach to overcoming this challenge is the experience sampling method (ESM), which randomly collects data on individuals' thoughts, emotions, and behaviors over time. This study used ESM to examine the factors influencing the perceived need to use and study English in L2 learners' everyday lives, focusing on variables such as gender and university majors. In total, 113 university students in Japan participated in the study and answered a questionnaire three times a day for one week. The results showed that academic majors had a stronger influence than gender on students' perceptions. English majors reported a consistently higher perceived need to use and study English, whereas non-English majors tended to feel the need to study English more than the need to use it. While English classes were the primary motivator for English majors, non-English majors were particularly influenced by the exam, peer and family interactions, and media. These findings highlight the importance of considering learners' academic and social contexts beyond the classroom, and provide insights for enhancing motivation in diverse settings.

Keywords: Experience Sampling Method (ESM), English Learning, Out-of-School Learning

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Introduction

Out-of-class learning plays a crucial role in the development of foreign/second (L2) language proficiency. This is particularly evident in the context of English as a foreign language (EFL), where opportunities for exposure to the target language are limited compared to English as a second language (ESL). Classrooms have traditionally served as primary venues for L2 learning in such environments. Reflecting on this reliance on classroom instruction, research has predominantly focused on understanding classroom-based motivation for L2 learning and identifying various influential factors (e.g., Dörnyei, 1994; Mercer & Dörnyei, 2020). However, this emphasis on classroom research has often overshadowed the exploration of out-of-class learning experiences. To address this gap, prior research has underscored the need to explore learning contexts beyond the classroom (e.g., Fukuda et al., 2019; Fukuda & Yoshida, 2013).

Moreover, in out-of-class contexts, it is crucial to examine how external factors shape learners' emotions, thoughts, and behaviors. These factors significantly affect L2 learners' learning processes and learning outcomes, thereby influencing the overall effectiveness of out-of-class learning. Investigating these factors can offer a more comprehensive understanding of L2 learning processes and bridge the gap between L2 learners' psychology and real-world language learning.

A particularly promising method for exploring these under-researched dimensions is the experience sampling method (ESM), which captures individuals' thoughts, emotions, and behaviors through random sampling over time. This study employed ESM to examine the factors influencing L2 learners' perceived need to use and study English in their everyday lives. By investigating these aspects, this study aims to deepen our understanding of how out-of-class experiences interact with classroom-based learning.

Literature Review

Research on Out-of-Class Learning

Several existing studies have assumed that out-of-class learning plays an important role in L2 acquisition. For example, Lai, Zhu, and Gong (2015) investigated the quality of out-of-class English learning among 82 middle school students in China. They found that diverse out-of-class activities addressing various language learning needs combined with in-class instruction that balanced attention to meaning and form were strongly associated with better English grades, higher confidence in language learning, and greater enjoyment. Further, Sundqvist (2011, as cited in Lai et al., 2015) explored the relationship between Swedish learners' time spent on out-of-class learning and their conversational proficiency. The results revealed a positive correlation of 0.31 between time spent on out-of-class learning and conversational proficiency, with a correlation of 0.36 with vocabulary knowledge. Additionally, the analysis showed that increased time spent on out-of-class learning was positively associated with learners' English self-efficacy.

Despite recognizing the importance of out-of-class learning environments, little attention has been paid to the fundamental question of when and how learners are motivated to engage in English learning in their daily lives. To deepen our understanding of Japanese English learners, it is essential to explore the core of their motivation, specifically the situations in which they feel the need to use and study English in their everyday lives.

One significant barrier to researching daily experiences related to target language is the methodological difficulty involved in capturing such phenomena. In the field of psychology, studying people's daily experiences (i.e., what they feel, think, and behave in the real world) has been a key focus of research. Among the various methods available, the interview method is the most common. While interviews successfully capture memorable events and experiences, retrospective methods such as these have notable limitations, including inaccuracies caused by reliance on participants' recollections of past events (Silvia & Cotter, 2021). One method for overcoming this pitfall is called the "experience sampling method" (ESM).

The Experience Sampling Method (ESM)

ESM is "a research procedure for studying what people do, feel, and think during their daily lives" (Larson & Csikszentmihalyi, 1983, p. 41; Larson & Csikszentmihalyi, 2014, p. 21). Silvia and Cotter (2021) identify three defining features of ESM.

1. People are assessed in their *natural environments*.
2. The events and experiences that people live are assessed in *real time*, capturing them close to when they occur.
3. People are *assessed intensively over time*, and the results can prove a large sample of emotions, thoughts, and actions.

A typical ESM procedure involves participants receiving a survey signal and subsequently answering questions about what they are doing, with whom, and in what situation. This procedure is repeated several times daily for a few days or weeks. In the early stages of ESM, paper and pencils or beepers were used. Nowadays, owing to technological advances and the prevalence of smartphones, email, short messaging services (SMS), and applications are accessed on smartphones.

ESM Research in Psychology and L2 Fields

In psychology fields, several studies have used ESM as a research tool to investigate various phenomena (e.g., Baumeister et al., 2019; Hofmann, Vohs, et al., 2012). For example, Hofmann, Baumeister, et al. (2012) investigated 205 German adults using beepers for one week to explore 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 field of L2 research, ESM has rarely been used as a research tool. However, Hiver and Al-Hoorie (2020) and Arndt, Granfeldt, and Gullberg (2023a) have recently highlighted the suitability of this method for L2 research. An early example of ESM use in L2 research was introduced by Guilloteaux (2016), who examined 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 pager signals prompting them to produce a maximum of six responses during lessons. Guilloteaux's analysis of the students' mean scores revealed that most students were classified as having low engagement, with only 13% showing optimal engagement in lessons. She speculated that the prevalence of teacher-centered instructional practices could be a possible factor in such low engagement.

The number of studies employing ESM in the L2 field has been increasing. For example, Khajavy, MacIntyre, Taherian, and Ross (2021) focused on L2 willingness to communicate (WTC), and Arndt, Granfeldt, and Gullberg (2023b) studied language exposure and use. The

most relevant research conducted to date includes a series of studies by Taguchi. Taguchi (2022) investigated the felt need to use and study English alongside actual study behavior in the everyday lives of 24 Japanese students in Japan outside the academic semester. The study revealed that certain daily events and activities (e.g., watching English videos during leisure time and working part-time) contributed to some learners feeling the need to use and study English. Furthermore, some learners remained motivated to study English even during holiday periods, when there were no immediate English study situations at school. Another study by Taguchi (in press) examined the extent to which Japanese university students felt the need to use and study English in their everyday lives, the situations in which this need arose, the reasons for it, and the gap between the need to use and study English. This study found that ordinary daily activities triggered this need. Moreover, it identified factors that enhanced this need, such as heightened interest, immediate necessity, and future necessity. Conversely, it highlighted factors that diminished this need, including a perceived lack of ability and negative learning experiences.

Modifying Factors in Language Attitudes and Motivation

The studies mentioned above present a relatively straightforward picture of how one factor influences others in the realm of English learning. While the results outlined provide a reasonably accurate description of what has been under investigation, they do not suggest that the participants' responses were entirely uniform. Certain systematic variations can be identified within the general trends. There are several sources for these variations. For instance, Dörnyei, Csizér, and Németh (2006) examined whether Hungarian students' attitudinal and motivational variables were influenced by factors such as gender and the L2 they were studying at school. Their findings revealed a consistent trend, in which girls scored significantly higher than boys on attitudinal/motivational measures. Similarly, instructional differences played a notable role, with students actively involved in learning an L2 exhibiting higher levels of motivation for the target language than those who were not studying it. Furthermore, Ngo, Spooner-Lane, and Mergler (2017) compared English majors and non-English majors in Vietnam, focusing on their motivation to learn English. They found that English majors were more intrinsically motivated and felt less obligated to learn English than non-English majors.

These studies highlighted important trends and provided a foundation for understanding motivational differences in various contexts. However, a closer examination of these variations is necessary to gain deeper insight into out-of-class learning. These findings raise questions about how different factors influence learners' motivation, or, more fundamentally, the need to use and study English. Based on these results, the following research questions were addressed:

- RQ1: Which factors contribute to the perception of the need to use and study English in daily life?
- RQ2: Are there any differences between English majors and non-English majors in terms of their daily perception of the need to use and study English?
- RQ3: What are the reasons for the perceived need to use and study English among English and non-English majors?

Method

Participants

A total of 113 students (28 males; 85 females) participated in this study, primarily from universities in central Japan, with the majority enrolled at a single university. The participants were 58 first-year, 44 second-year, and 11 third-year students. They studied English and/or English-related subjects. Their majors covered a wide range of disciplines, including humanities, social sciences, and natural sciences. Among them, 30 majored in English-related fields, while 83 in non-English-related fields. Most participants (102 students) thought that English would be necessary after graduation.

Research Instruments

This study uses two types of research instruments. Questionnaires were used to collect data, and ESM software was used to deliver the questionnaires.

Questionnaires. This study used two questionnaire types. The first focused on participants' experiences related to perceived English use and study. The following six items were originally designed by Taguchi (in press).

Q1: What were you doing for the last 90 minutes before responding to this survey? Please select main activities among 14 activities (e.g., working part-time, attending a class at university, doing club activities, etc.).

Q2: To what extent did you feel **the need to use English (reading, listening, speaking, or writing)** in the last 90 minutes before responding to this survey? Choose one number which is applicable to you from 0 (Never felt it at all) to 5 (Felt it very strongly).

Q3: Please specify reasons for it as concretely as possible.

Q4: To what extent did you feel **the need to study English (reading, listening, speaking, or writing)** in the last 90 minutes before responding to this survey? Choose one number which is applicable to you from 0 (Never felt it at all) to 5 (Felt it very strongly).

Q5: Please specify reasons for it as concretely as possible.

Q6: Did you study English in the last 90 minutes before responding to this survey? Choose one number which is applicable to you from 0 (Didn't study at all) to 5 (Studied quite a lot).

The second questionnaire type contained 13 questions about the participants' backgrounds, including their gender, academic majors, year at university, degree of necessity for English after graduation, and English proficiency.

All questions and instructions in both questionnaires were written in Japanese to ensure that the participants fully understood the surveys.

ESM software. The present study employed ESM software called "Exkuma" (<https://exkuma.com/>), which was specifically developed by an ESM expert for use in Japanese language environments. This software used LINE, a freeware communication application available for electronic devices such as smartphones, tablets, and PCs, to send respondents a link to Exkuma.

Data Collection Procedures

The participants were recruited through classroom announcements and word-of-mouth. Data were collected during the semesters in 2022. The survey was distributed via LINE, with signals sent to participants at three randomly chosen times per day between 9:00 am and 10:00 pm, ensuring a minimum interval of two hours between each signal. Participants were instructed to complete the survey within 90 min of receiving the signal. If the survey was not completed within 60 min, a reminder was sent. The survey period lasted for one week. In the background questionnaire, participants were asked to answer all questions after the ESM survey. Participants were compensated based on the number of times they answered.

The overall response rate was 86%, with participants completing the survey an average of 18 times out of 21 received signals. Given that the general response rate for ESM research typically ranges from 70% to 80% (Hektner et al., 2007), the response rate observed in the present study was notably high.

Data Analysis Procedure

All data were analyzed using Microsoft Excel and IBM SPSS version 29. For RQ1, to compare the means of the two groups of learners' attributes, independent samples *t*-tests were performed. For RQ2, to compare the means of English and non-English majors in terms of their two types of felt needs on a daily basis, independent samples *t*-tests were conducted, and to examine the differences between the two types within the same participants, paired samples *t*-tests were carried out. Furthermore, to indicate the effect sizes of the mean differences, Cohen's *d* was reported, with thresholds of 0.20, 0.50, and 0.80 or higher indicating small, medium, and large effects, respectively (Cohen, 1988). For RQ3, participants' responses were coded and similar comments were categorized into subcategories, which were then grouped into broader categories. Throughout this process, responses related to Q1 were consulted as required.

Findings and Discussion

Factor Contributing to the Perception of the Need to Use and Study English in Daily Life (RQ1)

RQ1 examined the factors influencing the perception of the need to use and study English in daily life. Table 1 presents the results of *t*-tests comparing gender (boys and girls) and academic majors (English and non-English majors). Note that English proficiency was not included here as the groups created based on English abilities were almost the same as the groupings of academic majors.

Table 1: Summaries of *t*-Test Analyses of the Perceived Need to Use and Study

	<i>n</i>	<i>Q2: Felt need to use</i>		<i>Q4: Felt need to study</i>	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Gender</i>					
Male	28	0.86	0.59	1.06	0.77
Female	85	0.73	0.59	0.89	0.67
<i>df</i>			111		111
<i>t</i>			0.98		1.14
<i>d</i>			0.21		0.25
<i>Major</i>					
English	30	1.16	0.56	1.36	0.60
Non-English	80	0.62	0.54	0.78	0.66
<i>df</i>			111		111
<i>t</i>			4.60***		4.25***
<i>d</i>			0.98		0.90

****p* < .001 (2-tailed).

The analyses revealed no significant differences between male and female students. In contrast, a statistically significant difference was observed between English majors and non-English majors, with large effect sizes (*ds* = 0.90 & 0.98). These findings suggest that academic majors exert a stronger influence than gender on learners' perceptions of the need to use and study English in their daily lives.

These results can be interpreted as follows. Regarding gender differences, previous studies have frequently reported that female students tend to be more motivated to learn an L2 than their male counterparts (e.g., Dörnyei et al., 2006). However, this study found no significant differences between males and females. One possible reason lies in the assumption that learning Global English in Japan may neutralize gender-specific tendencies in terms of the felt need to use and study English in daily life. Regarding academic majors, the results of this study align with those of previous research (e.g., Ngo et al., 2017), suggesting that English majors are more likely to perceive the need to use and study English in their daily lives. This highlights the stronger influence of academic focus than other demographic factors such as gender on shaping learners' daily perceptions of the need to use and study English.

Given these findings, further analyses will focus on whether the students are English majors.

Differences Between Academic Majors in Terms of the Daily Perception of the Need to Use and Study English (RQ2)

RQ2 investigated the differences between English and non-English majors regarding their daily perceptions of the need to use and study English. Table 2 presents the results of the *t*-tests, revealing two key features.

Table 2: Differences Between English and Non-English Majors in Terms of the Daily Perception of the Need to Use and Study English

Major		Survey day						
		Day1	Day2	Day3	Day4	Day5	Day6	Day7
<i>Q2: Felt need to use</i>								
English	<i>M</i>	1.17	1.61	1.27	0.87	0.80	0.95	1.23
	<i>SD</i>	0.99	1.06	1.29	1.08	1.10	1.05	1.16
Non-English	<i>M</i>	0.81	0.55	0.65	0.62	0.55	0.53	0.71
	<i>SD</i>	0.94	0.85	0.96	1.01	0.88	0.85	1.10
	<i>df</i>	111	110	41.22	109	108	110	109
	<i>t</i>	1.79	5.43***	2.39*	1.15	1.23	2.19*	2.32*
	<i>d</i>	0.38	1.17	0.58	0.24	0.26	0.47	0.50
<i>Q4: Felt need to study</i>								
English	<i>M</i>	1.64	1.60	1.42	1.03	0.93	1.18	1.46
	<i>SD</i>	1.24	1.08	1.30	1.21	1.19	1.07	1.2
Non-English	<i>M</i>	1.03	0.71	0.84	0.79	0.70	0.66	0.79
	<i>SD</i>	1.13	0.95	1.15	1.15	0.95	1.00	1.15
	<i>df</i>	111	110	111	109	108	110	109
	<i>t</i>	2.46*	4.21***	2.31*	0.97	1.05	2.38*	2.66**
	<i>d</i>	0.52	0.91	0.49	0.21	0.23	0.51	0.57
Comparison of means between Q2 and Q4								
English	<i>df</i>	29	28	29	29	29	28	29
	<i>t</i>	3.06**	0.08	1.05	1.38	2.07*	2.45*	1.71
	<i>d</i>	0.56	0.01	0.19	0.25	0.38	0.46	0.31
Non-English	<i>df</i>	82	82	82	80	79	82	80
	<i>t</i>	2.56*	2.89**	2.64**	3.07**	3.04**	2.86**	1.64
	<i>d</i>	0.28	0.32	0.29	0.34	0.34	0.31	0.18

* $p < .05$ (2-tailed), ** $p < .01$ (2-tailed), *** $p < .001$ (2-tailed).

First, statistically significant differences were observed between English and non-English majors on several days of the week. For the perceived need to use English, significant differences emerged on four days (i.e., Days 2, 3, 6, & 7), with medium to large effect sizes ($ds = 0.47$ – 1.17). Similarly, significant differences in the perceived need to study English were found on five days (i.e., Days 1, 2, 3, 6, & 7), indicating medium to large effect sizes ($ds = 0.49$ – 0.91). These findings indicate that English majors consistently perceive a greater need to use and study English throughout the week, suggesting greater engagement in language learning in their daily lives.

Second, the mean values for the perceived need to study English were generally higher than those for the perceived need to use English, regardless of the students' majors. To confirm that this result was statistically significant, paired samples t -tests were conducted. The analyses revealed significant differences for English majors on three days (i.e., Days 1, 5, & 6), with small to medium effect sizes ($ds = 0.38$ – 0.56). For non-English majors, significant differences were found on six days (i.e., Days 1–6), with small effect sizes ($ds = 0.28$ – 0.34). These results highlight that English majors tend to feel a similar level of need both to study and to use English, whereas non-English majors feel a stronger need to study than to use it.

Previous research on L2 motivation indicates that English majors are generally more motivated to study English than non-English majors (e.g., Ngo et al., 2017). Similar to RQ1,

our findings are consistent with these results. However, an intriguing observation is that learners, particularly non-English majors, often perceive a greater need to study English than to use it. While the need to use English is typically expected to motivate learners to study it, the findings suggest that, for some students, the perceived need to use English may demotivate them from studying it. Similarly, Taguchi (in press) reported that the felt need to use English could enhance or diminish learners' motivation to study, depending on the individual. This variation may be attributed to differences in the learners' academic majors, which will be further explored to address the third research question.

Reasons for the Need to Use and Study English Between English and Non-English Majors (RQ3)

RQ3 examined the reasons behind the differences in the perceived need to use and study English between English and non-English majors. Table 3 presents the results of comment analysis. To better understand these differences, we explored the characteristics specific to each group.

In the case of English majors, the dominant factor influencing their perceived need to use and study English was English classes (52% for Q3 and 49% for Q5). English classes refer to activities, topics discussed in class, and assignments that must be completed outside the classroom. Given that English majors typically take more English classes, it is natural for these classes to serve as a primary source of motivation for both using and studying English.

Table 3: Reasons for the Felt Need to Use and Study English Between English and Non-English Majors

	English class	Non-English class	English exam	Surrounding environment	Entertainment	Part-time	Self-study	Others
<i>Q3: Reasons for the perceived need to use English</i>								
English (n = 201)	105 (52%)	6 (3%)	7 (3%)	28 (14%)	19 (9%)	10 (5%)	17 (8%)	9 (4%)
Non-English (n = 361)	107 (30%)	24 (7%)	44 (12%)	95 (26%)	46 (13%)	20 (6%)	16 (4%)	9 (2%)
<i>Q5: Reasons for the perceived need to study English</i>								
English (n = 245)	120 (49%)	7 (3%)	13 (5%)	31 (13%)	21 (9%)	10 (4%)	16 (7%)	27 (11%)
Non-English (n = 422)	146 (35%)	20 (5%)	73 (17%)	89 (21%)	42 (10%)	20 (5%)	12 (3%)	20 (5%)

On the other hand, for non-English majors, while the main factor is still represented by English classes (30% for Q3 and 35% for Q5), other factors also played a notable role. Two of these factors are the English exam and surrounding environment (12% & 14% for Q3 and 26% & 21% for Q5, respectively). First, the English exam primarily refer to the TOEIC test, which almost all the students in this study are required to take at the end of the semester as part of their English class credit. Non-English majors often have low confidence in their English proficiency. This lack of confidence appears to heighten their awareness of the exam,

likely because of the pressure to achieve the minimum required score. This heightened awareness may stem from test anxiety (e.g., MacIntyre & Gardner, 1991), which could amplify their perception of the need to use and study English.

The second factor, surrounding environment, includes interactions with friends and family, encounters with non-Japanese people, and exposure to English media. This result is caused by two potential reasons. First, their lack of confidence in the English exam may have led them to talk about it with others, thereby increasing their awareness of English. Second, participation in this study may have heightened their sensitivity to English-related contexts.

Finally, it is worth noting that there was an increase from the felt need to use to the felt need to study. For English majors, the percentage of the “Others” category increased from 6% to 12%. Further analysis of this category suggested that some students sought to improve their English proficiency and seemed motivated to study English more actively. Conversely, for non-English majors, the percentages for English classes and the exam increased significantly from the felt need to use to the felt need to study (30%→35% and 12%→35%, respectively). Due to their limited English abilities, they seemed particularly compelled to study English in situations related to classes and the exam. These results reveal that, while the perceived needs to use and study English are closely connected, their relationship is not always straightforward—learners’ awareness of the necessity of using English influences their felt need to study the language, sometimes increasing it and at other times decreasing it.

These findings suggest that immediate learning environments (e.g., English classes and exams) play a crucial role in making students feel the need to study English. Additionally, other stimuli, positive or negative, may enhance students’ awareness of English learning. Such stimuli could encourage deliberate engagement in English learning even in the absence of opportunities for direct usage. Future research should explore how these additional stimuli interact with students’ long-term motivation and actual English learning performance.

Conclusion

The present study explored differences in learners’ perceptions of the need to use and study English in their daily lives, focusing on academic majors (i.e., English majors and non-English majors) and addressing three research questions (RQs). For RQ1, the findings demonstrated that students’ academic majors had a stronger impact on their daily perceptions of the necessity of using and studying English than their gender. For RQ2, the results revealed that English majors consistently perceived a greater need to use and study English throughout the week, whereas non-English majors reported a stronger perceived need to study English than to use it. Regarding RQ3, English classes were identified as the primary motivators for English majors to use and study English. In contrast, for non-English majors, in addition to English classes, the English exam and environmental factors such as interactions with peers and family and exposure to English media played relatively stronger motivational roles.

Our findings provide valuable pedagogical insights. First, we found that English classes significantly influence students’ daily perception of studying English, both during class and through assignments. Activities and assignments that provide an appropriate level of challenge are essential to maximize this impact. In addition, given that students daily encounter various stimuli that encourage English use and study, classroom activities should be designed to leverage real-world connections. For non-English majors, English exams are

important for raising awareness of the need to engage in the language; however, instruction should minimize undue pressure or anxiety.

Despite its contributions, this study had several limitations. Most of the participants were from a single university, which may have limited the generalizability of the findings. Future research using more diverse samples is recommended. Additionally, the scope of the questions used in this study was limited. Expanding the range of questions could provide deeper insight into learners' perceptions and experiences.

This study highlights a relatively underexplored area, namely learners' daily perceptions of their need to use and study English. By understanding students' real-life experiences of English use and study, educators can design better strategies to enhance their learning outcomes. The experience sampling approach is a promising method for capturing learners' real-time perceptions and behaviors. Further studies employing this method could provide more nuanced insights into the dynamic interplay between learners' environments and their motivation to use and study English.

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