

Tracing Learner Motivation in a Language Course with Structured Self-Study Components: A Longitudinal Mixed-Methods Study

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Abstract: *Building on prior research demonstrating the short-term motivational benefits of autonomy-supportive instruction, this study examines how learner motivation develops over time in a self-study-based Japanese language course. Adopting a longitudinal mixed-methods design, motivation data were collected at three points across two semesters (September 2024, December 2024, and April 2025) from undergraduate learners enrolled in an intermediate Japanese course at a U.S. university. Quantitative analyses, including repeated-measures ANOVA and effect size estimation, revealed a moderate developmental effect of time, characterized by an increase in motivation during the middle of the semester followed by greater individual variability at the end of the instructional period. To contextualize these patterns, qualitative data from open-ended surveys were analyzed using reflexive thematic analysis. The findings indicated that learners strongly valued the autonomy, personalization, and reduced anxiety afforded by the self-study project, particularly for form-focused language skills such as vocabulary, grammar, and writing. At the same time, students identified challenges related to time management, uncertainty about expectations, and limited opportunities for speaking practice. Taken together, the results suggest that self-study projects can function as effective autonomy-supportive pedagogical tools, while also requiring careful task design and variation to sustain motivation over time. Implications are discussed for the design of sustainable, learner-centered assessment practices in language education.*

Keywords: *Learner Motivation, Autonomy, Self-Study, Longitudinal Mixed-Methods, Japanese Language Learning*

1. Introduction

Motivation has long been recognized as a central factor in successful language learning, influencing learners' persistence, engagement, and achievement. In second and foreign language education, motivation is often described as the driving force that initiates learning and sustains effort over extended periods (Dörnyei, 2005). While earlier motivational research focused primarily on defining motivational constructs, more recent work has emphasized their pedagogical relevance and classroom applicability (Brophy, 2004; Dörnyei, 2001, 2006). This shift has encouraged empirical studies that examine how instructional practices shape learner motivation in authentic classroom contexts.

One influential framework in this line of research is self-determination theory (SDT; Ryan & Deci, 2020), which conceptualizes motivation in terms of autonomy, competence, and relatedness. In second

language research, SDT has been applied to explain how autonomy-supportive learning environments enhance engagement and motivational quality, particularly through learners' situated classroom experiences. Within the L2 Motivational Self System, the L2 Learning Experience has been shown to be a particularly strong predictor of motivated behavior, capturing learners' immediate engagement with classroom tasks, materials, and assessment practices (Dörnyei, 2019).

Recent large-scale syntheses of SDT research in second language learning have highlighted both the theoretical robustness of SDT and important gaps in how its mini-theories have been operationalized. In a comprehensive systematic review of three decades of research, Al-Hoorie et al. (2025) demonstrated that most L2 studies have relied on organismic integration theory and basic psychological needs theory, while other mini-theories—such as causality orientations theory and relationships motivation theory—remain underexplored. Importantly, this review also noted that many longitudinal SDT-informed studies report fluctuations or declines in learner motivation over time, particularly when instructional designs rely on limited task formats or lack sufficient novelty and challenge.

Recent classroom-based studies have begun to explore how self-directed or project-based learning can operationalize autonomy-supportive principles in practice. Prior research examining the initial implementation of a Self-Study Project in a Japanese language course demonstrated significant short-term gains in learner motivation and positive learner perceptions (Author, 2024). However, less is known about how such motivation develops over time when the same instructional format is sustained across extended instructional periods. Addressing this gap, the present study adopts a longitudinal mixed-methods approach to trace motivational development across multiple measurement points and to examine how learners interpret the benefits and challenges of a sustained self-study design.

Research Questions

This study investigates the following research questions:

How does learner motivation change over time following the implementation of a self-study project in a Japanese language course?

To what extent do learners perceive changes in autonomy and language skill development through participation in the self-study project?

How do students describe the advantages, challenges, and assessment preferences associated with the self-study project, and how do these perceptions help explain longitudinal motivational patterns?

2. Methodology

2.1. Research Design

A longitudinal mixed-methods design was employed to capture both developmental changes in learner motivation and students' subjective interpretations of the self-study project. Quantitative survey data were collected at three time points, while qualitative data were gathered through open-ended survey responses administered during the middle of the instructional period.

Participants

Participants were undergraduate students enrolled in an intermediate-level Japanese language course at a large public university in the United States. A total of 24 students participated in the study (Female = 8; Prefer not to say = 2). Participation in the research was voluntary and did not affect course grades.

Intervention: Self-Study Project

The Self-Study Project required students to create and maintain a Japanese-language blog (e.g., using WordPress or Wix) for independent learning purposes. Students posted biweekly throughout the semester, resulting in seven posts in total. Each post focused on a topic of the student's choosing, such as Japanese culture, media, current events, or personal interests, and required the use of Japanese language appropriate to the course level.

3. Data Collection

3.1. Quantitative Data

Learner motivation was measured using an adapted version of the Student Motivational State Questionnaire (Guilloteaux & Dörnyei, 2008). Surveys were administered at three points: before the intervention (September 2024), during the middle of the semester (December 2024), and after the instructional period (April 2025). Negatively worded items were reverse-coded prior to analysis.

3.2. Qualitative Data

Qualitative data were collected through open-ended survey questions administered in December 2024. These questions asked students to reflect on the advantages and disadvantages of the Self-Study Project and to indicate their assessment preferences (self-study project, final exam, or both).

4. Data Analysis

4.1. Quantitative Analysis

Repeated-measures ANOVA was conducted to examine changes in motivation over time. Effect sizes were calculated using partial eta squared (η^2), and pairwise comparisons were examined using Cohen's d .

4.2. Qualitative Analysis

Qualitative responses were analyzed using reflexive thematic analysis following Braun and Clarke (2022). An inductive coding approach was adopted, allowing themes to emerge from the data. Coding focused on identifying recurring patterns related to learner autonomy, engagement, challenges, and assessment preferences.

5. Results

Quantitative Results

TABLE 1: DESCRIPTIVE STATISTICS AND INTERNAL CONSISTENCY OF MOTIVATION SCORES

Time point	Mean	SD	Cronbach's α
Before (Sep 2024)	3.79	0.38	0.61
Middle (Dec 2024)	3.98	0.48	0.68
After (Apr 2025)	3.80	0.69	0.83

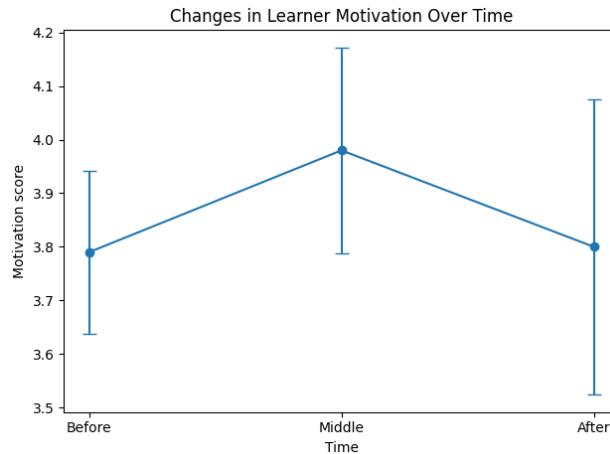


Figure 1: Changes in learner motivation over time (with 95% confidence intervals)

As shown in Figure 1, mean motivation scores increased from the pre-intervention phase to the middle of the semester, followed by a slight decline toward the end of the instructional period. Although the overall decrease from the middle to the final measurement was modest, the widening confidence intervals suggest increased individual variability over time. To further quantify the magnitude of these changes, Cohen's *d* effect sizes were calculated. The increase in motivation from the pre-intervention phase to the middle of the semester represented a small-to-medium effect ($d = .49$), whereas the overall change between the pre-intervention and final measurements was negligible ($d = .02$). The decline from the middle to the final measurement represented a small effect ($d = .28$) (Cohen, 1988).

To complement the longitudinal motivation analysis, additional descriptive statistics were calculated for students' perceptions of the Self-Study Project collected in December 2024. Responses to three global evaluation items (Q1–Q3) were measured on a five-point Likert scale (5 = strongly agree, 1 = strongly disagree). Descriptive statistics showed that students expressed a very high level of agreement with the implementation of the Self-Study Project ($M = 4.76$, $SD = .44$), indicating strong overall support. Students also perceived that participation in the project increased their motivation for learning Japanese ($M = 4.50$, $SD = .51$) and enhanced their sense of learner autonomy ($M = 4.52$, $SD = .51$). The relatively small standard deviations across these three items suggest a high degree of agreement among participants.

Beyond these global evaluations, students also rated their perceived improvement across eight specific language skills using a five-point scale ranging from no improvement to significant improvement. The results revealed a clear skill-specific pattern.

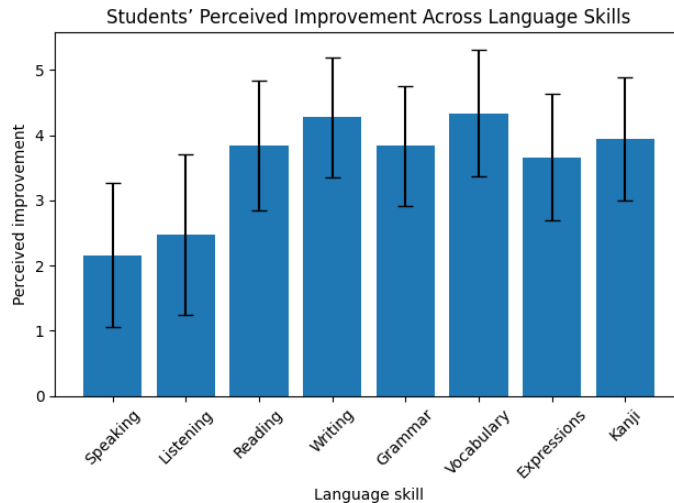


Figure 2: Students' perceived improvement across language skills

Mean ratings of perceived improvement following the Self-Study Project across eight language skills. Error bars indicate standard deviations.

As shown in Figure 2, perceived gains were highest for vocabulary and writing, followed by reading, grammar, and kanji. In contrast, perceived improvement in speaking and listening was relatively limited, indicating that the benefits of the project were skill-specific rather than uniform across all domains. Perceived gains were highest for vocabulary ($M = 4.34$, $SD = 0.97$) and writing ($M = 4.28$, $SD = 0.92$), followed by kanji ($M = 3.94$, $SD = 0.95$), reading ($M = 3.84$, $SD = 0.99$), and grammar ($M = 3.84$, $SD = 0.92$). In contrast, perceived improvement in expressions ($M = 3.66$, $SD = 0.97$) was moderate, while gains in listening ($M = 2.48$, $SD = 1.23$) and especially speaking ($M = 2.16$, $SD = 1.10$) were relatively limited. This pattern suggests that the Self-Study Project was particularly effective for form-focused and literacy-oriented skills, whereas oral skills benefited less from the primarily written and asynchronous nature of the tasks.

When considered alongside the longitudinal motivation data, these descriptive results provide a more comprehensive understanding of the project's impact. While motivation increased during the middle of the semester and remained relatively high overall, the skill-level findings indicate that the benefits of the project were not uniform across all domains of language learning.

Qualitative Results

Qualitative data from the December 2024 reflection survey were analyzed to further illuminate how students interpreted their experiences with the Self-Study Project. Using inductive, semantic-level thematic coding and allowing for code co-occurrence, several recurring themes emerged across responses to questions about advantages, disadvantages, and assessment preferences.

The most prominent theme concerned autonomy and ownership of learning. Many students emphasized that being able to choose topics and control the pace and direction of their learning made the project engaging and motivating. This theme was closely related to perceptions of personalization and relevance, as students reported focusing on areas that aligned with their individual interests or learning needs. Reduced anxiety compared to traditional final examinations was another frequently mentioned advantage, with several students noting that the project felt less stressful and more supportive of sustained engagement.

At the same time, students identified several challenges. Difficulties with time management and workload were commonly reported, particularly during periods when multiple course assignments overlapped. Some students also expressed uncertainty about expectations or criteria for success, suggesting that greater structural guidance may be beneficial. In addition, several participants explicitly noted that the project offered limited opportunities for speaking practice, a concern that aligns with the relatively low perceived gains in speaking skills observed in the quantitative results.

Responses to questions about assessment preferences revealed that most students favored the Self-Study Project either on its own or in combination with a final exam. Students who preferred the project highlighted continuous learning, autonomy, and reduced stress, whereas those who favored a combination of assessments emphasized the value of structure and accountability provided by exams. A small minority expressed a preference for traditional exams alone, citing clarity and familiarity. Together, these qualitative findings help explain the longitudinal motivational patterns observed in the quantitative data by highlighting both the strengths and the limits of a single-format self-study design.

6. Discussion

The results of this study provide converging quantitative and qualitative evidence for the motivational value of a self-study project implemented in an intermediate Japanese language course, while also revealing important constraints related to task design and sustainability. Drawing on self-determination theory and the L2 Motivational Self System, the findings underscore the central role of the L2 Learning Experience in shaping learner motivation over time.

The motivational trajectory shown in Figure 1 highlights both the strengths and limitations of a single-format self-study design. The initial increase in motivation during the middle of the semester suggests that autonomy-supportive tasks can effectively enhance engagement in the short term. However, the subsequent decline and increased variability toward the end of the instructional period mirror patterns reported in recent SDT-based longitudinal research. As noted by Al-Hoorie et al. (2025), motivational fluctuations are common in sustained interventions when task novelty diminishes, even when autonomy support remains high.

From the perspective of cognitive evaluation theory, repeated engagement in a single task format may gradually reduce perceived interest if learners no longer experience optimal challenge. Similarly, from a basic psychological needs perspective, autonomy alone may be insufficient to sustain motivation if opportunities to support competence and relatedness are limited (Ryan & Deci, 2020). In the present study, while learners consistently valued autonomy and personalization, the sustained use of blog-based self-study tasks may have contributed to motivational fatigue, highlighting the importance of task variation in long-term instructional design.

The skill-specific pattern observed in Figure 2 further reinforces this interpretation. Students reported substantial gains in vocabulary, writing, grammar, reading, and kanji—skills well suited to independent and reflective practice—while perceived gains in speaking and listening were comparatively limited. Qualitative reflections echoed this pattern, with students frequently noting limited opportunities for oral interaction. This convergence of quantitative and qualitative findings underscores the need to align task modality with targeted skill development and to supplement self-study projects with communicative activities when oral proficiency is a key learning objective.

From a pedagogical perspective, these findings also point to the importance of providing clearer guidance and concrete examples when implementing self-study projects. Introducing a range of possible self-study topics at the outset—such as Japanese traditions, religion, popular culture, media, or contemporary social issues—may help learners better manage their time by reducing the cognitive load

associated with topic selection. Drawing on examples of topics chosen by students in previous cohorts can further support learners in planning and pacing their work, particularly in long-term projects where sustained engagement is required.

In addition, explicitly introducing task options that target underdeveloped skills may help address the uneven skill gains observed in this study. Given the relatively limited improvement in speaking and listening, instructors may consider incorporating or recommending technology-mediated activities such as AI-based self-talk applications, speech-recognition tools, or interactive conversational platforms as optional components of self-study projects. Such tools can provide learners with low-anxiety opportunities for oral practice while preserving the autonomy and flexibility that students valued in the present study. Integrating these resources within a broader menu of self-study options may allow learners to align their topic choices, skill development goals, and time management strategies more effectively.

Finally, students' assessment preferences point to meaningful learner diversity. While many learners favored the Self-Study Project for its flexibility and reduced anxiety, others valued the structure and accountability provided by traditional exams. Together, these findings suggest that hybrid assessment models combining autonomy-supportive self-study with more structured evaluative components may offer a balanced approach that sustains motivation while accommodating diverse learner needs.

7. Limitations and Directions for Future Research

Despite its contributions, this study has several limitations that should be acknowledged. First, the reliance on a single self-study format may have contributed to the observed decline in motivation over time. Engaging in the same blog-based task across multiple weeks may have led to motivational fatigue, even though the task itself was autonomy-supportive. This suggests that autonomy alone may be insufficient to sustain motivation in long-term instructional contexts without adequate task variation.

Second, the study relied primarily on self-reported data, which limits the extent to which conclusions can be drawn about objective gains in language proficiency. Although learners' perceptions provide valuable insight into motivational and experiential dimensions of learning, future research would benefit from incorporating performance-based measures or longitudinal proficiency assessments to triangulate self-report findings.

Building on these limitations, future research should explore diversified self-study designs that alternate task types, such as extensive reading, structured speaking practice, and reflective writing, in order to sustain learner interest and promote more balanced skill development. In particular, incorporating technology-mediated speaking and listening activities—such as AI-based self-talk tools or interactive conversational platforms—may help address the limited gains observed in oral skills while preserving learner autonomy.

Finally, experimental or quasi-experimental studies comparing single-format and multi-format self-study projects would help clarify the role of task variation in maintaining motivation over time and enhancing both motivational and learning outcomes. Such designs would also allow future studies to more directly examine underexplored self-determination theory mini-theories in L2 contexts, including how different task configurations support autonomy, competence, and relatedness across instructional phases.

8. Conclusion

This longitudinal mixed-methods study demonstrates that self-study projects can function as effective autonomy-supportive pedagogical tools that enhance learner motivation and engagement in an intermediate Japanese language course. By tracing motivational development across multiple time points and integrating learners' qualitative reflections, the study provides a nuanced account of both the strengths and limitations of sustained self-study designs.

At the same time, the findings highlight the importance of thoughtful task design and variation to prevent motivational stagnation and to address diverse learner needs. While autonomy and personalization were consistently valued by learners, uneven skill development—particularly in speaking and listening—underscores the need to align self-study tasks with targeted learning goals.

Taken together, these results suggest that the pedagogical value of self-study projects lies not only in promoting learner autonomy, but also in integrating structured variation and skill-sensitive task options. By balancing autonomy with design diversity, language educators can move toward more sustainable, learner-centered assessment practices that support both motivation and meaningful language development over time.

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