Student Reactions to Self-Organised Learning Environments (SOLEs) in Japanese Universities

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Abstract

In self-organised learning environments (SOLES), students work in groups to answer "big questions" (BQs) and then present their findings. The teacher does not teach, but rather takes on the role of facilitator, encouraging maximal student autonomy and collaborative learning. It is an approach to education that diverges from traditional teacher-cantered education systems. As such, it might seem unorthodox to school administrations and confusing to students. This study, conducted in Japan in 2024, offers a framework for conducting SOLEs in conventional tertiary EFL programs. It provides data on student reactions to SOLEs and points the way for future studies.

Keywords: SOLE; EFL; tertiary; presentations.

INTRODUCTION

Sugata Mitra's "Hole in the Wall" experiments, conducted during the late 1990s and early 2000s, demonstrated that groups of children are capable of independently acquiring complex knowledge without formal instruction or the conventional structures of institutional education (Mitra, 2012). These findings laid the foundations for the development of the SOLE approach, a student-centred educational framework where students learn collaboratively with minimal teacher intervention.

A typical SOLE session begins with the introduction of a "Big Question" (BQ), intended to stimulate curiosity and promote higher-order thinking. Students work in groups searching the internet for possible responses to the BQ. The role of the teacher in SOLEs shifts from that of a traditional instructor to that of a facilitator who intervenes only when necessary and supports students in taking ownership of their learning journey. The session concludes with students presenting their findings.

Empirical studies on the method have been positive. They indicate that SOLEs contribute to increased student engagement and the development of self-regulatory learning behaviours (Dolan et al., 2013).

THEORETICAL FOUNDATIONS

SOLEs align with several modern learning theories:

Constructivism: Vygotsky's social constructivism highlights the importance of social interaction and communication in cognitive development. SOLEs provide a framework for discussion and social learning that fits the constructivist model. (Miller, 2011).

Connectivism: This emerging theory for the digital age emphasises the role of social and technological networks in learning. SOLEs, where groups of students pool their skills to sort through information on the Internet, are essentially connectivist activities (Siemens, 2004).

Humanism: this approach to education focuses on students' holistic development and learning. Curiosity, emotional well-being, self-direction, creativity and critical thinking are all emphasised. SOLEs promote learner autonomy and self-regulation, which are key aspects of humanistic educational theory. By allowing students to take control of their learning, SOLEs foster intrinsic motivation and personal growth (Rogers, 1985).

Cognitivism: This learning theory stresses the importance of mental processes such as problem-solving. SOLEs support cognitive learning theories by encouraging discussion and rhizomatic learning. Students develop critical thinking skills

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and enhance their cognitive abilities through discussion and teamwork (Bruner, 1996).

Relationship Between SOLEs and Inquiry-Based Learning

SOLEs and inquiry-based learning share a foundational emphasis on student-centred education. Both approaches promote autonomy, critical thinking, and active exploration. Both prioritise student agency, collaboration, and real-world relevance. Both start with BQs. The role of the teacher, however, is markedly different. Inquiry-based learning may incorporate more guided instruction, while SOLEs operate with minimal teacher intervention. As such, inquiry-based learning can be directed by the teacher and can more easily be applied to a predefined curriculum. SOLEs offer students a more organic and unbridled exploration of knowledge that is less appropriate for testing.

Roles in SOLEs

In traditional classrooms, teachers typically assume the role of authoritative knowledge providers (Serin, 2018), directing the learning process through structured lessons and maintaining control over classroom activities. Teacher-centred learning environments result in a hierarchical power structure, with students positioned as passive recipients of information. Such dynamics can limit student engagement and autonomy, as learners have little influence over the direction of their education. SOLEs are student-centred; students take charge of their learning while the teacher acts as facilitator. This shift encourages students to develop critical thinking and problem-solving skills, fostering a sense of ownership over their educational journey (O'Malley, 2013).

The differing roles in these educational settings have significant implications for student outcomes. Traditional teacher-centred classrooms might hinder the development of independent learning skills, as students rely heavily on direct instruction. Conversely, the facilitator role adopted by teachers in SOLEs supports the development of self-regulation and intrinsic motivation among students, as they engage more deeply with the material and collaborate with peers (Keiler, 2018).

Implementing SOLEs in traditional education systems requires a paradigm shift for both educators and students who are used to teacher-centred education methods. The transition can be challenging but offers the potential for more dynamic and engaging learning experiences. By embracing the facilitator role, teachers can create learning environments that empower students, encourage exploration, and adapt to the diverse needs of learners (Hill, 2018).

For educators interested in experimenting with SOLEs, here are some points to keep in mind:

- The teacher as facilitator has an unobtrusive role in the classroom. Not required to impart information, the teacher's primary responsibility is to maintain a comfortable physical and social environment and ensure all students have access to the Internet. The teacher can improve the class atmosphere by acting the part of "granny", a benevolent adult who encourages curiosity and communication (Mitra et al., 2016).
- Acute self-awareness on the part of the educator is vital to protect students from teacher bias (Lyons, 2023) and to elevate minimally invasive education. A SOLE class might appear disorganised, but as the groups self-organise into small communities of practice, they can parse web sources with extraordinary depth and speed. Hints from the teacher might assuage confusion in the short term, but they undermine the students' ability to self-organise.
- Self-organised learning is rhizomatic. It is nonlinear, complex, and driven by the interactions of the group (Cormier, 2008). The teacher should encourage the students to follow their research in whatever direction it takes them. This can appear chaotic, especially to educators who are unused to student-centred approaches. Educators should trust that "learning happens at the edge of chaos" (Schoengold, 2016).

SOLEs in EFL

SOLEs are highly communicative group activities, which makes them appropriate for language learning. They have been increasingly integrated into English as a Foreign Language (EFL) instruction. Research indicates that SOLEs can positively affect EFL learners by enhancing language skills, fostering critical thinking, and addressing learning loss (Al Zakwani & Walker-

Gleaves, 2019; Azizah & Putra, 2024; Puspitasari et al., 2023).

SOLEs in Tertiary Education

Although research in SOLEs at a tertiary level is limited, the method can positively impact learners of any age by enhancing metacognitive skills and conceptual understanding, and by fostering innovation (Naval Postgraduate School, 2020). Similar to EFL contexts mentioned above, SOLEs in higher education address learning challenges and align with the digital literacy demands of the 21st century.

CURRENT STUDY

Participants and environment

The SOLE method was the basis of English courses at three universities in the Nagoya area from April 2024 to January 2025. 64 students aged 18-19 took part in a compulsory English course at Meijo University (Faculty of Urban Informatics), 8 students aged 19-21 took part in an elective English course at the Nagoya University of Music, and 8 students aged 18-21 took part in an elective English course at the Nagoya University of Art and Design. The total number of students was N=80, 45 male, 25 female. One of the students was an exchange student from Korea. The rest were Japanese. None of the students had ever heard of SOLEs before.

The school year at these universities comprises two 15-week semesters. At each university, there was one 90-minute SOLE lesson per week. The classrooms were spacious and comfortable, noise-insulated, had electrical outlets that students could use to charge their devices, and had strong Wi-Fi. Groups could move around the room and sit where they pleased. Each classroom had a screen to which students could connect their devices for presentations. All of the students had basic-to-advanced digital literacy skills. They all had smartphones, and many of them had laptops as well.

During most of the SOLE sessions, groups consisted of 5-6 students. Each group self-organized its own methods, but generally there was one central laptop where students in a group compiled their findings, while individual group members conducted research on their smartphones, tablets or laptops.

Structuring these SOLEs in tertiary programs

Research published to date shows that self-organized learning happens most successfully in environments free of institutional or teacher-implemented restrictions. (e.g., Grubb, 2017). This makes SOLEs inherently difficult to assess and to assign grades. In Japan's tertiary education system, grades are vital to graduation. Teacher-centred lectures, memorisation, and tests are prioritised (Matsuyama et al., 2019). SOLEs are strictly student-centred and are not appropriate for testing. English presentation lessons, on the other hand, are increasingly common in Japanese tertiary education (Brooks & Wilson, 2014): and SOLEs can be used to research content for English presentations.

For this study, SOLEs were fit into an English Presentation course format. Lessons were divided into two parts:

- SOLE: Students were free to research answers to the BQ with minimal academic restrictions.
- English presentation: students had to follow regular academic rules and procedures. They were assessed based on their English and communication skills.

Lesson plans followed this pattern:
- The teacher posed a BQ to the students.
- The teacher defined the lengths of the SOLE (1, 2 or 3-weeks) and of the presentations (2-4,- 4-6, or 6-8 minutes).
- The teacher divided the students into groups.
- Students self-organized to research answers to the BQ, using their findings to prepare English presentations.
- Prior to presenting, the teacher made language corrections to the students' slides and scripts.
- Groups presented. The presentations were recorded for video review.

In the first semester, the teacher gave feedback on the students' English and presentation performances. In the second semester, students self-assessed their own presentation parts.

The SOLE instructions were simple, as befits Self Organized Learning's insistence on minimally invasive education. Students could switch groups for the research portion of the lesson. However, they had to present with their assigned group. Nothing else! No other instructions were required.

The English Presentation instructions were typical. For example, Each student in a group was required

to participate roughly equally. Commonly held academic guidelines were applied to the presentations. For example, they needed to start and finish on time, content needed to be cited, plagiarism (of text and images) was not permitted, etc. Parameters differed slightly from session to session. The teacher decided:

- the BQ.
- the length of the SOLE.
- the length of the presentations.
- how the presentations would be recorded (either by the teacher if the presentations were delivered live, or by the students who could create presentation videos in relative privacy by themselves).
- whether the presentations would be teacher or self-assessed.

Big Questions

The following BQs were used for this study:

- What makes a good presentation?
- Does coffee prevent cancer?
- How can we reduce the numbers of dogs and cats that are euthanised?
- How does travel broaden the mind?
- In what ways does art reflect and challenge cultural norms?
- Should public health checks be mandatory?
- What are the psychological mechanisms behind the emotional impact of music?
- How much do we know about the extinction of the megalodon?
- What role does cultural bias play in AI-generated art, and how can it be mitigated?
- What are the causes and implications of the weak yen?
- How can we protect endangered cultures?
- How does media portrayal of LGBTQ+ relationships affect the acceptance and normalization of LGBTQ+ relationships in society?
- How does intelligence manifest in the animal kingdom?
- How does the appropriation of traditional cuisines of developing nations by chefs in developed nations impact cultural identity and economic sustainability in the original community?
- What (new) smartphone would you recommend between 70-80,000yen?
- How do consumer preferences for donut flavors and styles differ across demographics and regions?

- What are the ethical implications of continuing violent sports in modern society?
- What role did Mahatma Gandhi's religious beliefs play in his political strategies and leadership style?
- How has privatization impacted the pace of technological innovation in space exploration?
- Which kiva.org applicant should we support?
- What is one amazing use of chocolate?
- What is the purpose of idioms?

RESEARCH METHOD

A mixed methods approach was utilized. Both quantitative and qualitative data were attained through two kinds of anonymous survey forms (explained in the next paragraph), while additional qualitative data was attained through semi-structured interviews.

At the conclusion of each SOLE, students were asked to watch their presentation videos and answer a self-assessment questionnaire that provided primarily quantitative data. The total number of completed self-assessment forms was N=488. At the conclusion of the course, students anonymously completed a final reflection questionnaire that provided both quantitative and qualitative data (N=72). Most of the results summarised below are from the latter survey.

RESULTS

Students overwhelmingly approved of the course.

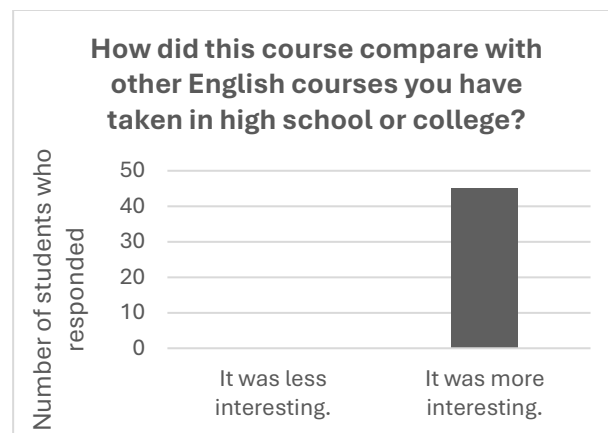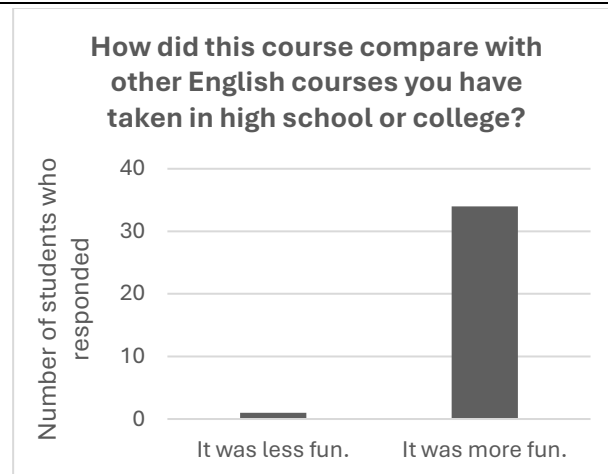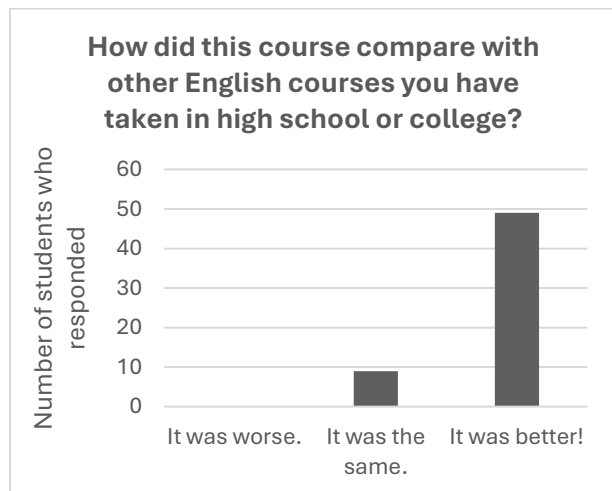How much did you enjoy this SOLE course?
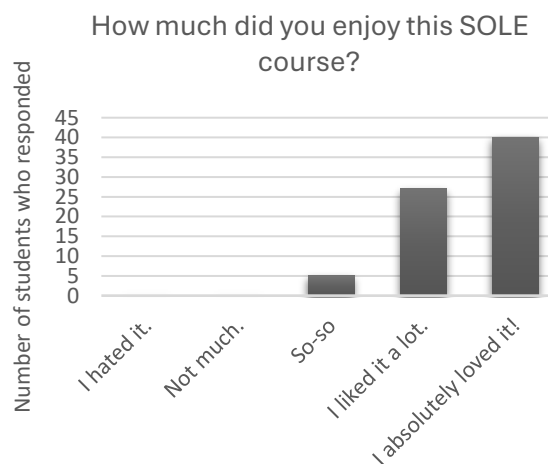
The following selection of student comments demonstrates fondness both for the SOLEs and for giving presentations:

- "The fun part was that I was able to learn new things that I didn't know until now while looking into the topics and questions presented."

■ "It was fun to be able to interact with various people."

■ "I enjoyed the time spent making and presenting slides with my peers."

■ "I enjoyed the fact that the content was different each time and I was able to tackle it with a fresh mindset."

■ "Of course, it was difficult to create a lot of presentation materials, but I feel like I was able to develop more know-how in creating presentations. Presentations are rare in university lectures, and in that sense, I feel that this lecture was a multi-skilled lecture that required not only practical use of English, but also ease of communication."

■ "It was fun to get to know the joy of actually having a conversation."

■ "It was fun to create a presentation by thinking of the structure and assigning roles by ourselves. It was fun because there was no other lecture where we had to create a presentation from scratch as a group."

■ "Discussing various topics with different people and collaborating to create presentations was enjoyable. It was fun to think about what kind of "creativity" to bring to each session."

■ "I was able to learn English in a more practical way, closer to business, etc."

The attendance rate for the SOLE classes at Meijo University was 90%. This was slightly higher than average attendance in all other English courses in the same faculty (86%). Attendance data at the other participating universities was not available.

Students overwhelmingly found the course better, more fun, and more interesting than "other English courses [they had] taken at or high school or college".

How did this course compare with other English courses you have taken in high school or college?

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The clear majority of students also found the course more difficult.

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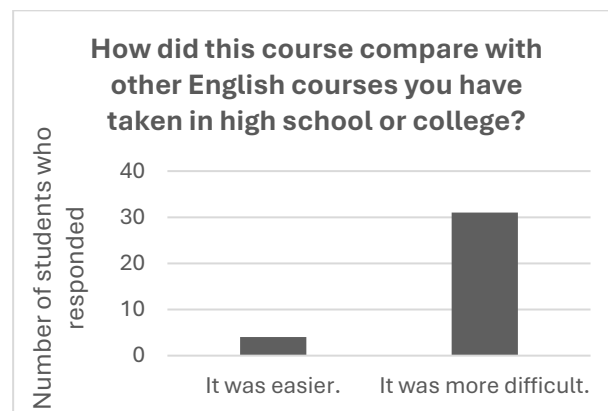
Teacher assessment was slightly more popular than self-assessment (by 42 votes to 30). Creating presentation videos was slightly more popular than presenting live in front of the class (by 41 votes to 31). Analysis of self-assessment forms showed no correlation between interest in a BQ, the difficulty of the BQ, and the students' self-assessment scores for that session. No correlation was found between student gender and response to the SOLE method.

The following is a representative sample of student comments providing valuable feedback on what constitutes a successful BQ:

- Argument against something for which there is no clear answer
- Familiarity, personal interest, etc.
- Where there is no correct answer
- I think a grand topic makes it more enjoyable.
- New discoveries by thinking about questions that we don't normally think about, in a language we don't normally use.
- The presentation of completely different ideas by each group.
- Whether the topic will generate a variety of opinions and interpretations. Whether the topic is likely to generate discussion.
- Content of the presentation that showcases who you are

FURTHER RESEARCH

Students in this study overwhelmingly approved of their experience. More research is needed to determine how much of this popularity was due to the SOLE method. It is possible that the students' positive feedback had tangentially related factors. They might, for example, have been reacting to the novel experience of a student-centered class. More tertiary education research is needed comparing SOLEs to other student-centered methods.

The SOLE method likely was a motivating factor in the course, but it is not clear whether self-organized learning has any correlation to effective language learning. A direct comparison of language acquisition in SOLE-based and in conventional English presentation classes might provide some answers.

This study found a clear correlation between overall course enjoyment and overall difficulty. Yet no correlation was found between the students' enjoyment of each BQ and the BQ's difficulty. This appears somewhat paradoxical, and it should be clarified with more research.

CONCLUSION

In this study, SOLEs were integrated into EFL programs at three Japanese universities. While Japan's conservative tertiary education system does not typically promote rhizomatic student-centered models, SOLEs were used in the research portion of an English Presentation format. The programs proved highly popular with students. The study demonstrates that SOLEs can be effectively integrated into a structured curriculum in a conservative education system. Students praised the autonomy, creativity, and practicality the SOLE method affords.

The results of this study challenge traditional EFL teaching practices in Japan and point to the potential for broader educational reform. However, while student feedback was overwhelmingly positive and the approach aligns with progressive educational theories, more research is needed to clarify the impact of SOLEs on language acquisition.

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