

## Japanese Pre-Service Teachers' Learning Experience Using Moses' Student-Centered Pedagogical Framework

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This case study examines four Japanese pre-service teachers' (PST's) experience of learning Bob Moses' student-centered pedagogical framework (Moses & Cobb, 2001) in the context of teaching English as a foreign language, a subject arguably the most difficult for both Japanese students and teachers. The framework is most effective when used to teach diverse learners, including English-as-second or foreign-language learners (Ahn et al., 2018), but its effectiveness in linguistically and culturally different contexts such as Japan has not been researched yet. To examine this, we provided an opportunity for pre-service teachers from the Kobe University teacher education program to learn and teach using the framework. Four PSTs were recruited to participate in three online meetings. First, they watched a model five-step lesson, followed by choosing a difficult English concept to teach in pairs for upper elementary school students. After planning and receiving feedback on their lesson plans, each pair taught a lesson in front of the online group. The leaders and peers provided continuous feedback to improve their lessons, culminating in short online lessons for 5th and 6th grade elementary students. The data consist of PSTs' written reflections, lesson plans, and a researcher memo of a group interview done after the lesson. We aimed to answer the question: What were the most impactful elements of the Moses' student-centered framework for the PSTs as they learn to apply it in their own teaching? The following three themes emerged in regard to the PSTs' learning: (1) modeling teaching, (2) formative feedback, and (3) scaffolding steps. The results indicated that Moses' approach is a promising pedagogical framework that can be successfully applied in the Japanese educational context to guide those who wish to apply active learning and student-centered approaches in their teaching practice, including English language education.

**Keywords:** student-centered pedagogy, pre-service teacher education, English language education

### Introduction

#### Active Learning in Japanese Education

Japan's K-12 education system is well known around the world for high scores in international student assessments such as the Programme for International Student Assessment or PISA (OECD, 2018). Over the past decade, national core curriculum has pushed for Japanese teachers to move away from teacher-centered learning to more student-centered active learning (Monbugakakushô, 2011, 2017). In Japan, heavy emphasis is put on group activities and communal learning. Students are encouraged to solve problems among themselves and organize classroom work and other activities in small groups called *han* (Cave, 2007; Sato, 2004). Furthermore, learning and teaching approaches in Japanese elementary education often utilize multisensory modes of learning, attend to different competencies, and utilize various integrative approaches such as incorporating arts and crafts into mathematics lessons (Sato, 2004).

However, these kinds of activities are still often lacking in Japan's English education where lessons tend to center around texts and dialogue (Kubota, 2019).

English language education has received attention in Japanese education due to the major curriculum change implemented in 2020: All 5<sup>th</sup> graders in Japan's elementary schools begin learning English in the form of foreign language activities (*gaikokugo katsudo*), unlike the previous curriculum where English was taught beginning in 7<sup>th</sup> grade focusing on grammar (Monbugakakushô, 2017). However, despite various reforms and projects, the communicative abilities in the English language have remained low and behind Japan's neighboring countries throughout the post-war period. Possible reasons for this have been attributed to lessons being teacher-centered and learning focusing mostly on grammar and vocabulary. Lessons often focus on translating texts and there is also lack of opportunities to use the language on a daily basis. Insufficient skills of the teachers to conduct lessons that center on communication have also been suggested as reasons for poor student performance (Kubota, 2019; Yamaoka, 2010).

Active learning is considered part of student-centered pedagogical strategies, which puts students at the center of instruction by shifting the focus from teaching to learning (National Research Council, 2000). It promotes social interactions, enabling students to take ownership of their own learning (Ahn & Wilson, 2011). In Japan, many of the active learning approaches used correspond to Bonwell and Eison's (1991) list of general characteristics of active learning, a variation of which has been endorsed by Japan's Ministry of Education, Culture, Sports, Science, and Technology (MEXT). It consists of the following traits: 1) Students are involved in more than listening; 2) Emphasis on student skill development rather than transmission of information; 3) Students participate in critical thinking or higher order thinking, including analysis, synthesis, and evaluation; 4) Students participate in activities, involving reading, arguing, and writing; and 5) Students explore their own attitudes and values. In particular, Asanuma (2015) has critically examined the call for increasing the use of active learning and the lack of theoretical explanations and concrete examples of what active learning is. According to Asanuma, although MEXT supports the use of active learning in primary and secondary classrooms, their statements are vague and even the list provided above does not help teachers with how they should proceed with active learning lessons and what those lessons should encompass. As a critique of the underdeveloped and misunderstood ideas of employing active learning, and poor results of implementing it in especially university settings in Japan, Matsushita (2017) argues for deep active learning where there are activities that promote both internalization and externalization of knowledge. Internalization refers to acquisition of knowledge while externalization refers to using it as an instrument to solve problems, discussing with others, drawing, and so forth. Against this backdrop, a solid student-centered pedagogical framework is much needed as an evidence-based approach for implementing active learning.

### **Student-Centered Pedagogical Frameworks**

While there are numerous active, student-centered learning methods such as think-pair-share, reciprocal teaching, group projects, and cooperative learning, which are all grounded in social constructivist theory (Woolfolk, 2019), there are some pedagogical frameworks that guide teachers to plan step-by-step student-centered lessons. One that stands out is Kolb's Experiential Learning Cycle, which includes four steps starting with a concrete experience, followed by reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). Another framework used primarily in mathematics teaching is the Concrete-Representational-Abstract (CRA) sequence model, which starts with a concrete experience using manipulatives,

followed by drawings to translate mathematical representations, ending in using numbers (Flores, 2010). Other student-centered pedagogical frameworks include problem-based learning and inquiry-based learning methods. Originated in medicine, problem-based learning poses a real-life scenario through which students investigate and solve the problem collaboratively with peers. Inquiry-based learning originates in science with four steps of inquiry: Teachers engage students through questions, students investigate through experiments, students explain by identifying patterns, and finally students report the results (Woolfolk, 2019). These examples of pedagogical frameworks indicate a critical aim of the teaching profession in K-12 and beyond: Learning to plan and present academic content in a way that actively engages diverse learners in highly contextualized classroom settings.

Although these student-centered frameworks and models resemble Bob Moses' framework (Moses & Cobb, 2001), Moses' framework goes deeper by tapping into students' funds of knowledge (Moll et al. 1992) through using their everyday home language, gradually providing scaffolding to use the academic language, and ultimately empowering students by having them create their own symbols to represent the concepts learned. Most of these features are initiated and done by students, not by teachers, making Moses' framework a uniquely student-centered approach (Ahn et al., 2018). In this framework, learning is scaffolded through common socially and physically grounded activities to build prior knowledge for all participating students. Following this step, teachers continue to build scaffolding through visual and verbal means and finally present the key academic concepts and vocabulary. In the end, students have an opportunity to express their understanding of the concepts symbolically through hand gestures or other means (see the Editorial in this issue for details). As a student-centered pedagogical framework, the teacher's role increasingly becomes less noticeable by taking the backstage to put the students at the center of the lesson. The goal is to guide students through step-by-step scaffolding to enable them to own their learning from passive to active production of knowledge.

### **Aims of the Study**

All prior research on Moses' framework comes from the U.S. As such, this study seeks to extend Moses' student-centered pedagogical framework beyond the U.S. to see if it is also effective in and generalizable to socio-culturally and linguistically different environments such as Japan. In this case study, we address this gap through examining four Japanese pre-service teachers' (PSTs') experience of learning the framework and using it to teach English as a foreign language, which is a core subject and arguably one of the most difficult subjects for Japanese teachers to teach and students to learn. In this research we aimed to answer the question: *“What were the most impactful elements of the Moses' student-centered framework for the PSTs as they learn to apply it in their own teaching?”* Our examination may offer insights to those teachers who are seeking a structured, step-by-step framework that enables them to put students at the center of learning, resulting in empowering students to take ownership of their own learning in a socially constructed environment.

## Research Method

### Participants

Four pre-service teachers (PSTs), who took part in the study, were enrolled in the elementary teacher education program at Kobe University, which is a national university in Western Japan. Like most other universities, the teacher education program at Kobe University is four-years in length serving undergraduate students. It consists of early childhood, elementary and secondary education each with a three-week long main teaching practicum at the third year the program. The participants were recruited through an open call via the faculty of education mailing list. They were selected based on the following criteria: Readiness for the required time commitment, open-mindedness to learning new things and receiving feedback, and sufficient competency in English communication.

For the purposes of planning and teaching, we formed two pairs: Pair A were two freshman female students (Tada and Tanaka) who joined the project together while pair B were a junior female (Tanimoto) and a senior male student (Kimura) who did not know each other. The students had varying amounts of exposure to teaching methods (active learning, teacher-centered instruction etc.) and experience in actual teaching. For the two first-year students, this was their first experience in planning and teaching a lesson, while the fourth-year student had completed all classes plus his teaching practicum and was close to graduation. The final decision of pairing was based on sensitivity to the possibility that the freshmen might be intimidated by the upperclassmen, since the project involved creativity and extensive interactions. This is an especially a salient issue in Japan, where in junior - senior (*senpai-kôhai*) relationships, the juniors are not to directly contradict or question the seniors' ideas, which can limit open collaboration (Rohlen, 1991). Having said this, we cannot exclude the possibility that there were also age and gender related issues in the power dynamics of the upperclassmen pair that influenced the nature of their activities and subsequently its outcomes.

### Study Design

Since most prior research focused on how the framework is applied in mathematics and science lessons (Ahn et al., 2015 & 2018; Moses & Cobb, 2001), we chose English as a foreign language, as it is arguably the most difficult subject for Japanese students and teachers alike. The instructors (from here on referred to as leaders) were faculty members from the Kobe University (first author) and California State University (second author). The first author (Caucasian) is originally from Finland and is fluent in both English and Japanese. The second author (Asian) is a native speaker of Japanese and is fluent in English. Three online synchronous sessions were organized to prepare the PSTs to learn Moses' framework, develop a lesson plan using the framework, followed by on-line teaching sessions for elementary students and an exit interview. Each of these sessions lasted for two hours and was conducted using a mix of the two languages. The schedule and content for the meetings included the following:

**First Meeting.** Two instructors modelled an English lesson on *complement* (see Appendix A) for about 30 minutes using Moses' framework. They invited the PSTs to actively participate in the lesson and explicated each step of the framework after the lesson. This was done to prepare the PSTs to practice creating their own lesson by applying the framework. The process included pairing the PSTs to identify a difficult English grammar concept for upper elementary levels and develop an appropriate theme of the lesson and an idea for the common activity (step 1).

**Second Meeting.** This session focused on providing formative feedback to improve the lesson plans each pair submitted after the first meeting. Pair A created a culturally appropriate lesson on *pronouns*, following each step of Moses' framework while Pair B struggled to find an appropriate cultural theme, concept, and guiding question. The instructors as well as the peer PSTs gave extensive input to improve their lesson plans. After the second meeting, both pairs submitted their revised lesson plans addressing the feedback. Pair B ultimately decided *object pronouns* as the target concept for their lesson with a Valentine's Day theme.

**Final Meeting.** The pairs conducted a mock Zoom lesson in front of the whole group, including the instructors. After the lesson, each pair received another round of extensive constructive feedback from both the instructors and the other pair to improve the upcoming teaching session with elementary students.

**Online Teaching Sessions via Zoom for the Elementary Students.** The final lessons were taught on Zoom. Immediately after the lesson, the participating elementary students were briefly interviewed about their experience.

**Interview and Reflection Sessions.** One day after the online teaching session, the instructors asked the PSTs about their experience of learning the student-centered pedagogical model as well as planning and teaching the online lesson using questions that prompted reflection. Time was provided for further discussion and to address issues raised by the PSTs in this session.

### **Data and Analysis**

To answer our research question, we used the PSTs' lesson plans and written reflections, and the researcher memo of the meetings and group interviews done after the lesson. The researchers' notes containing observations from the meetings and the teaching session were used both to complement the PST data and for triangulation purposes. All of the meetings and the interview session were conducted in English and in Japanese respectively. The data were analyzed in its original language and later translated into English for the purposes of publication.

Following the principles of case study, the first stage of our qualitative content analysis was reading through the data to get a sense of the content. This was done separately by the first and second authors. Next, we conducted a detailed analysis in which the lesson plans and PSTs' reflections were read against the framework. We looked at the PST data specific mentions about different steps of the framework and how they described their learning experience connected to it. These were then linked to the prior research on the Moses' framework, active student-centered learning, and the Japanese culture and society. The tentative results of the analysis and interpretations were discussed between the authors. As a result, the following categories were created: (1) modeling teaching, (2) formative feedback, and (3) scaffolding steps.

### **Limitations**

As a small-scale case study, there are some inherent limitations. First, the number of participants and settings was limited in the current case study. For greater validity, further research with a larger sample size would add to the knowledge base about potential benefits of this framework. Secondly, under the normal circumstance, the study would be conducted in a face-to-face setting. However, due to the pandemic, many schools and classes were shut down,

disabling face-to-face interactions. As such, there is a need to examine the effectiveness of Moses' framework in face-to-face settings, other subjects such as science or Language Arts, and other universities or educational contexts in Japan.

## Results

Three salient themes emerged from this study related to the PSTs' learning to apply the student-centered framework. In this section, we will present the findings by connecting the lesson content with the PSTs' reflective comments and relevant research literature.

### Modeling Teaching

To prepare for teaching an English lesson, the PSTs watched a model lesson by two experienced presenters who created a lesson by following each step of the expanded version of Moses' framework (See Appendix A). Following the model lesson, the presenters explicated how they came up with the Step 0 skit to set the stage (contextualize), a common physical activity for Step 1, students expressing their experience through visual and verbal means in Step 2 and 3, the presenters connecting the students' verbal expressions to the academic vocabulary in Step 4, students expressing their understanding of the academic vocabulary and concept in Step 5, and ending with an exit skit to bring closure to the lesson by using/manipulating the academic vocabulary (See Figure 1 in the Editorial in this issue). Seeing and hearing how the experienced presenters used each step when planning and teaching the concept of *complement* enabled the participants to picture an active, student-centered lesson that they would be creating for the upcoming session.

In the survey, all PSTs mentioned that one of the most impactful aspects of their learning occurred through the modeling and explanation of the framework. Kimura stated this as follows: "The most impactful moment was the first session. I thought, 'what kind of lesson is that?' At the same time, this was a precious moment to be able to image the lesson when I teach." Another PST, Tada, shared that during the initial session, the model lesson "shocked" her:

In Japanese education, we already know the content of today's lesson, but I was surprised that this model lesson was not the same. I felt my perspective was stretched, thinking that this type of learning is possible. Also, the use of the lesson time by the presenters was like drama or performance, which made me think that planning a lesson could be a creative activity. I had honestly thought it would be bothersome to create a lesson. However, having gone through the model lesson made me feel excited that I could create a fun lesson that I like.

Tanimoto, one of the PSTs, compared the active learning lesson to the standard direct instruction used in Japan's universities this way:

I heard that active learning was adopted from overseas, but I don't feel it is mainstreamed in Japan. Regarding university lessons, instructors tend to speak in front of the class in one direction and even if there is interaction, there is some group work. [direct translation]

Modeling is a critical aspect in teacher education in which teacher educators explicitly model for their students (Loughran & Berry, 2005). Teacher educators are to “continually model aspects of teaching, learning, and what it means to be a professional pedagogue...Modelling is more than making useful tricks explicit to student teachers but connecting exemplary behavior with theory in and through practice” (Loughran & Menter, 2019, p.224). In addition, in the Japanese cultural context, established patterns of conduct, or *kata* in Japanese, play an important role in education and societal life where many things are taught via model examples (*tehon*). In traditional arts, the aim is to try and copy the teacher perfectly, but students soon realize that this is impossible and, in the process, discover that the difference in the process and output is their unique approach (Toby, 2007). Thus, the PSTs’ responses point to the critical importance of modelling for novice teachers: It gave them a clear guideline or yardstick against which to measure or plan their own lessons while exercising creativity and discovering who they are as teachers.

### **Formative Feedback**

Another salient theme emerging from the final reflections was formative feedback. Unlike summative feedback given at the end of teaching, formative feedback refers to on-going feedback to improve practice (Shute, 2014). As they engaged in planning the lesson and practicing teaching, these novice teachers received extensive and continuous feedback from the leaders to improve their lessons. In particular, all of the feedback was intentionally shared publicly in the presence of all the PSTs to learn from one another’s feedback. This open, communal approach to sharing feedback resulted in more time to hear about and make sense of what to improve on. Additionally, during the session, the leaders encouraged peer feedback for the PSTs to think critically about one another’s work in a professional manner. Fluckiger, Vigil, Pasco, and Danielson (2010) support this notion of engaging students as partners when providing formative feedback, which enhances student learning.

One of the PSTs, Kimura, noted that he appreciated that the leaders “grappled together with them” on how to improve their lesson. He added that the initial feedback enabled him to gain a different perspective, which resulted in an improved lesson. Tanimoto similarly stressed the benefit of formative feedback from her peers and instructors as follows:

During the process of lesson planning, what we struggled the most was coming up with ideas and getting rid of pre-existing stereotypes. My partner and I as a pair came up with the idea. If it was one person, we would not have been able to create [the lesson]. Also, we were able to further supplement [the lesson] with the feedback we received from the instructors and the other pair.

Another PST, Tada, shared her positive experience from the feedback sessions as follows:

The instructors gave us a lot of compliments, followed by suggestions for improvement. I was able to take in the feedback feeling delighted. Also, I was happy that even though we couldn’t address all the feedback this time, we will apply [the feedback] in future [teaching]... It was my first time planning a lesson, but I had never thought it would be this fun. It was so fun that the ideas kept on flowing. My partner and I supplemented one another’s ideas and difficulty with crafts [to make props], which made me feel this is how I want to work as a teacher.

In fact, the amount of formative feedback provided to each pair differed. The freshman pair identified the grammar concept (*gerund*) easily and matched it with an appropriate cultural theme of *Setsubun*, a common ritual at the beginning of February (at the time of this research project) where beans are thrown at demon characters (*oni*) to ward off ill-luck, and *Daruma-san*, modelled after *Bodhidharma*, but has since become a popular talisman for good luck in Japan. Both are familiar to even young children in Japan. To the instructors' pleasant surprise, they required minimal input on their guiding question, displaying creativity and flexibility. On the other hand, the upperclassmen pair struggled with their lesson plan to identify an English grammar concept, theme, and the guiding question. After receiving the initial feedback on their lesson plan, the pair exchanged several e-mails with the instructors to finalize their plan. When they presented the mock lesson in front of the whole group, the instructors spent more time providing verbal feedback to this pair than the other pair to improve their teaching. Many of the instructors' comments as well as the pair's reflections focused on ways of making the activities easier for the pupils to grasp the concept. For example, the pair received formative feedback on how to scaffold the learning by using the use of animation in their PowerPoint slides in Step 4 or a finding better wording for the guiding questions in Steps 2 and 3 (Researcher diary, February 2022).

As these PSTs' reflections and observations showed, while the amount of feedback varied, continuous formative feedback was critical in improving their lesson plans and, subsequently, actual teaching. In a classic piece by Hattie and Timperley (2007) on the importance of feedback, the authors asserted that "feedback combined with effective instruction can be very powerful in enhancing learning... and is one of the most powerful influences on learning" (p.104). Rakoczy et al. (2019) furthermore indicated the perceived usefulness, self-efficacy, and interest generated by formative feedback. Thus, the extensive time spent on providing formative feedback prior to the teaching session helped the PSTs' learning to create a student-centered lesson plan as well as teaching.

### **Scaffolding Steps**

The final and perhaps the most prominent theme emerging from this case study was scaffolding steps. Scaffolding is defined as "a process of 'setting up' the situation to make the child's entry easy and successful and then gradually pulling back and handing the role to the child as he becomes skilled enough to make it" (Bruner, 1983, p.60). This notion is grounded in sociocultural or social constructivist theory (Vygotsky, 1978) in which students are assisted in their learning by teachers, parents, and others, including peers through social interactions with the goal of becoming more self-directed, independent learners. By the very nature of Moses' framework that provides incremental step-by-step scaffolding through different means, this finding is not surprising. Here we use scaffolding to refer to operating on the zone of proximal development on a more general and conceptual level on one hand and the concrete means of incremental support on the other hand (see earlier sections on Formative Feedback and Modeling Teaching for details). The use of the Moses' framework as such can be seen as the teacher's intent of scaffolding. Beginning with watching a model student-centered lesson and lesson plan, hearing the experts' explanations of each step of the pedagogical framework and how each step was applied in the model lesson, and receiving continuous nurturing feedback to improve their lesson, the PSTs were guided to participate as apprentices (Rogoff, 1995) as they learned the craft of teaching. Not only did the scaffolding steps of Moses' framework work for the PSTs' own learning, but they were also able to observe scaffolding in action during the actual lesson in



how the elementary students they taught benefitted from the way the lessons were structured around the framework. During the group interview, many PSTs mentioned this as a motivating and insightful experience (Researcher memo, February 2022).

When asked which steps of Moses' framework were most beneficial for elementary students in understanding the concept, the responses varied among the four PSTs. Essentially, every step was mentioned as important. For example, Tanimoto and Tada both stated that Steps 1 and 5 were most helpful. Tanimoto explained the reasons as follows:

In Step 1, the activity is set and the students can experience the activity, which is the purpose of active learning. Also, I think the content of the activity and its image leave a strong impression on the students since it's connected to all the steps that helps [the students] understand the concept. After beginning to understand in Step 1, students receive the input on the concept in Step 4, ending in expressing their thinking through a gesture in Step 5.

Similarly, Tada explained her reasons as follows:

Step 1 activity is engaging and leaves a lasting impression that leads to students' memory. This provides a smooth transition for the students to learn the concept (Step 4) or express their learning (Step 5) in later steps. In Step 5, the students own the concept by creating their own gestures as the final output.

On the other hand, Tanaka thought that Steps 3 and 4 were most helpful for students. She stressed that the time to reflect in Step 3 based on the activity experienced in Step 1 enables the students to imagine how these steps connect to Step 4. She felt that as students go up in grade levels, they will be convinced more of Steps 3 and 4. In particular, unlike active learning as a general concept, Tanaka appreciated that there was a clear framework to plan the lesson rather than having no framework. This was echoed by Tada who said the framework helped her thinking and conversations with her partner in applying each scaffolding step.

Finally, Kimura emphasized that while all the steps were important, Step 0 was the most beneficial. He explained the benefit of Step 0 as follows:

In Japan, based on all of the education I had received, Step 0 was non-existent. As a result of teachers acting and setting the stage, children become active and immersed in a world view. I think these are what motivate students to learn. In today's experience, because we had Step 0, the students became relaxed and were able to enjoy the lesson.

Step 0 was added to Moses' original framework as part of the extended framework to provide further scaffolding by setting the stage for Step 1 activity (see the Editorial in this issue). In Step 0, with the background music related to the theme, teachers act and dress up as the thematic characters of their choice. Teachers use everyday words related to the target academic vocabulary to set up the situation. This contextualization is intended to help the learner anticipate what is to come.

In addition, Kimura mentioned that Step 1 was equally beneficial. He said the fact that the actual game the students experienced in Step 1 enabled the students' acquisition and memory of the concept. He felt that this active learning could strengthen even those students with some

conceptual prior knowledge to be stronger learners and better understand and remember the concept.

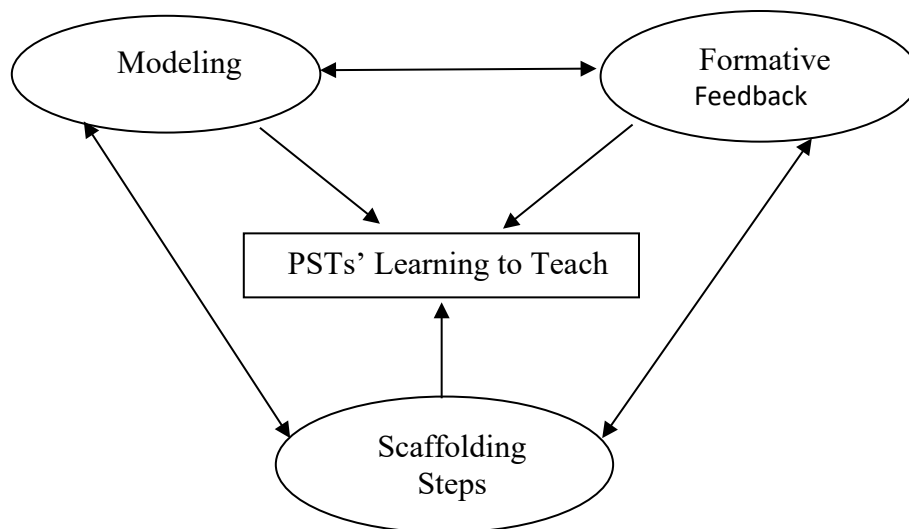
As these reflections show, each step served its purpose to scaffold student learning incrementally. Furthermore, these reflections point to the critical nature of experience-based learning, as the framework promotes active student participation through a common physical experience. In fact, Moses acknowledges that his framework is a version of experiential learning: “It starts with where the children are, experiences that they share. We get them to reflect on these drawing on their common culture, then to form abstract conceptualization out of their reflection, and then to apply the abstraction back on their experience” (Moses & Cobb, 2001, p.119). The scaffolding steps grounded in experiential learning are what make this framework a uniquely active, student-centered pedagogical approach.

### Discussion

In this article, we have examined Japanese pre-service teachers’ experience of learning Moses’ framework through a case study. The results revealed modeling, formative feedback, and scaffolding steps as interrelated themes being the most impactful aspects of pre-service teacher learning to teach using the framework. Figure 1 shows the relationships among these three themes influencing PSTs’ learning.

**Figure 1.**  
*Conceptual Diagram of the Findings*

#### Factors Impacting PSTs’ Learning to Apply Moses’ Framework



While modeling, formative feedback and scaffolding steps all had their separate impact on the pre-service teachers’ learning, the data also hinted at how they were mutually supportive. Having a lesson modeled by the instructors enhanced formative feedback as both the pre-service teachers and instructors shared a clear image. The modeling by the instructors acted as a point of comparison for making concrete suggestions for improvement. Furthermore, the process of modeling as such represents a form of scaffolding, easing the pre-service teachers into the

learning process. Similarly, the formative feedback served as a form of scaffolding for the pre-service teachers, as the instructors could adjust their guidance to the learners' zone of proximal development.

The findings indicate that Moses' framework provides a concrete tool for teachers to use when they wish to move away from traditional teacher-centered lessons. It presents an active learning method that is clearly defined and structured, overcoming several shortcomings identified by Asanuma (2015) and Matsushita (2017) on the use of active learning in Japan. At the same time, it has a strong affinity with many aims of Japan's current Course of Study (Monbukagakushô, 2017) as well as the socio-cultural tendency to appreciate fixed patterns of conduct and avoid uncertainty (Hofstede, Hofstede, & Minkov, 2010). While there may be a risk of applying the framework mechanically without deep reflection, our concern is minimal, considering the experiential nature of this framework that invites creativity and imagination. Furthermore, even in the apprenticeship style model used in traditional arts and crafts, where copying step-by-step the master's work is done extensively and the use *kata* can be seen as prohibitive of creativity, as we all know, the result is different from individual to individual. This is connected to the Japanese concept of *shû, ha, ri* (observance, breaking away, detachment/liberation) in the master-apprentice relationship in *sado* (tea ceremony), *budo* (martial arts), and *geido* (performing arts) where breaking away after learning the basic pattern ultimately leads to deeper and personal understanding and style of one's craft (DeCoker, 1998). This gradual process can be seen as scaffolded instruction.

In addition, the framework suits well with Japan's emphasis on group-oriented learning, nurturing autonomy and self-directedness (*shutaisei*), and holistic and multimodal approach to learning (Sato, 2004). The pre-service teachers especially appreciated an element of surprise to draw students' interest to the lesson. In particular, Step 0 (skit) and Step 1 (physical activity) are uncommon and not frequently used in Japanese classrooms whereas Step 5 (symbolic presentation) can be seen as connected to Japanese culture. Hand gestures are often used even when learning or explaining Chinese characters (*kanji*) used for writing, which themselves are a way of compressing and combining images and ideas into a representative form (Taylor & Taylor, 1995).


One of the challenges of using Moses' framework is for the teacher to thoughtfully create a guiding question that anticipates student responses, using everyday language concerning the target academic vocabulary/concept. For example, in the *complement* lesson (see Appendix A), as the students finished the Step 1 activity to transition to Step 2 drawing time, the instructors asked students the guiding question "What was your goal in putting the puzzle pieces together?" This question guided the students in Steps 2 and 3 to elicit everyday phrases such as "to complete the puzzle," which ultimately connected to the meaning of *complement*, which is to *complete* a grammatical construction. Once the students experienced the concept of *complete*, learning the concept of *complement* became less taxing even for students with little or no prior knowledge of *complement*. In Step 4, the instructors continued with breaking down the academic vocabulary of *complement* by connecting it to words the students already knew such as "Complement sounds like 'comple-te'" with the heavy emphasis on the root word "comple-." These aspects of the framework were not explicitly included in Moses' original work but later extended by the second author of this article due to the high English learner populations in California and around the globe (see the Editorial in this issue).

Another challenge emerging from this case study is letting go of pre-conceived ideas of active learning and lesson planning, since the order of the lesson in the Moses framework is

reversed compared to traditional lessons, which typically start with a teacher introducing the academic vocabulary/concept (Step 4), followed by activities and practice (Step 1 and 3). The more experience in planning traditional lessons, the more difficult it can be to *unlearn* this old habit of mind. It is difficult to let go of deeply ingrained notions of what planning and implementing a lesson entail and make space for new ideas and methods (McWilliam, 2008). This phenomenon was observed among our participants in which the freshmen displayed more open-minded, flexible mindset in implementing the method compared to the upper classmen. Moses' framework draws attention to this critical aspect of teaching to challenge the traditionally accepted lecture method that starts with Step 4, which potentially excludes students without prior knowledge from legitimate full participation. Beginning a lesson with Step 1 grants equal access and an entry point to all students. This is at the heart of student-centered pedagogy to put students at the center of teaching for them to own their learning (Ahn et al., 2018).

In closing, this case study illuminates strong potential of Moses' framework as a pedagogical framework to teach today's diverse populations across different cultural contexts and academic disciplines. With appropriate guidance, this model enables teachers to teach abstract, difficult concepts that encourages students to participate actively in co-constructing knowledge with their peers and teachers. It challenges the fundamental assumptions instructors expect of their students: Students are expected on their own to possess and attain knowledge x, y, and z in the course. Rather, in this experientially based approach, students who come from various backgrounds and prior knowledge rightfully participate in a community of learners through a *common* physical experience set up by the teacher, gaining equal access to learning. There is no assumption if the students have prior knowledge/experience since the prior knowledge/experience is *built* in Step 1 activity, followed by expressing their understanding through verbal and non-verbal expressions with their peers. Bob Moses truly created an emancipating pedagogical model to teach diverse populations that can be applied to other cultural contexts for the ultimate goal of students claiming ownership of their learning. This case study strengthens the legacy Moses left with us to carry on his passion to impact diverse populations in the U.S. and ultimately in other parts of the world.

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## Appendix A

### Lesson Plan on “Complement”

**Lesson taught on January 15 (Sat) U.S. time & 16 (Sun) Japan time via Zoom**

**Things to bring (for participants):** scissors, Christmas tree picture/puzzle, glue, construction paper, cookie, milk or similar drink

**Things to bring (for presenters):** cookie dough, cookie, vocabulary visuals, bell

**Prior to the meeting:** Kristin will finalize the Christmas tree picture (pdf – instruction included) to be shared with the participants in Japan immediately after the meeting

**Step 0:** 30 second skit with the jingle bell music, Christmas tree virtual background, and Christmas costume/hat to set the stage for “complement.”

Kristin: Merry Christmas, Dr. Ahn!

Ahn: Merry Christmas, Kristin! What do you have in your hand?

Kristin: Oh, I have some cookie dough!

Ahn: Oh, can I eat it?

Kristin: No, not yet! First, we have to put the cookie.....

Ahn: Oh, so I need to wait until you finish baking the cookie?

Kristin: Yes! When they are finished baking, they will be ready to eat!

Ahn: O.k.! I’ll wait until it is complete!

#### Step 1:

**Part 1:** Common physical activity (small group) – Kristin will give instructions. Each pair will cut the penguin picture in 50 puzzle pieces and put them together with the glue for 3 minutes (5 min). Each pair will complete the picture collaboratively by putting the top & bottom half together. Kristin will be with the older pair and Ahn will be with the freshman pair.

**Part 2:** Kristin will lead the discussion. Come back together as a big group - each pair shows the results. Here, we will make comments such as “Wow! You finished most of the puzzle pieces together so quickly!” “What is missing from the picture?” (3-4 min)

**Step 2:** Kristin will prepare a large green construction paper with the guiding question on and show it before they break out. Ahn will type it in on chat. Kristin will show the question before Step 2, 3, & 4. In small groups, draw/express on the question: “What was your goal in putting the puzzle pieces together? What were you trying to do?” They will share what they drew with their partners (3-4 min)

**Step 3:** In small groups, discuss the same guiding question verbally. Show the guiding question. We want them to elicit “complete, finish, whole, missing” etc. We will monitor and listen to their responses, which we will connect to Step 4 (3 min)



**Step 4:** Ahn will facilitate this portion. Come back together as a big group. Kristin will show the guiding question. Have each pair show their drawing & what they discussed on the guiding question. Connect what the groups said to the feature talk “complement.” Show a vocabulary word on ppt by breaking it down, connecting to students’ prior knowledge in Japanese. Kristin will break it down in English by connecting to “complete.” Ahn will give an example of 補語 using a 3-D visual. (8-10 min with examples)

**Step 5:** Kristin will facilitate this portion. In small groups, come up with a gesture to symbolize “complement.” Come together in big groups to share and do the motions together. After this, give 1 minute for each pair to teach partners what “complement” means (3-4 min)

**Step 6 exit skit:** Ahn says “Now we understand what ‘hogo’ means, let’s celebrate and have a party! Let’s stand up and dance! Kristin on Music on for 7-8 seconds. Everyone dances. Ahn asks, “So Kristin, can we eat the cookies now?” Kristin will show the completed Christmas tree cookie this time and say, “Now the Christmas cookie is complete and we need a nice Christmas drink to COMPLEMENT the cookies and COMPLETE the treat! How about some milk?”

Total: 26- 30 minutes