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Scaffolding in an Elementary-level Japanese Language Classroom Question-Answer Interactions

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Abstract

This study examined how Japanese instructors utilize scaffolding strategies during classroom teaching. By closely investigating the question-answer interaction that occurred in an elementary-level Japanese class through Conversation Analysis (CA), this study categorized four types of scaffolding strategies utilized by the Japanese instructors: partial answer, asking further questions, gestures, and giving more information. Findings also uncovered how Japanese teachers utilized these specific scaffolding tactics when students encountered difficulties in the language classroom. Then, this study discussed a more generalized frame of scaffolding strategies in question-answer interaction in the Japanese language classroom. Finally, the conclusion indicated the pedagogical implication of scaffolding strategies in Japanese language teacher education.

Keywords: Japanese language teaching; scaffolding; classroom discourse; Conversation Analysis

Introduction

Question-answer interaction among teachers and students has been regarded as one of the most common interactive activities in classroom teaching (Coulthard, 1992). As a significant dimension of classroom interaction, teachers' questions have received much attention in both L1 and L2 classroom studies (Tsui, 2001). However, unlike daily conversations, conversations occurring in the institutional context are generally considered more remarkable.

The interactions between instructors and students in the classroom may be presented through various language patterns corresponding to curricular requirements (Cazden, 2001; Wells, 2002). According to this perspective, classroom verbal expression is curriculum-oriented and restricted by certain norms (Liu, 2008). Therefore, in classroom teaching, participants exhibit a preference for classroom discourse to be organized as a triadic exchange, which does not widely exist in daily conversation. This triadic exchange involves 1) initiation by the teacher, which usually refers to "do questioning," 2) responses by students and 3) teacher's feedback or evaluation (Coulthard, 1992; Takagi et al., 2016). This sequence is normally referred as "initiation-response-evaluation" (IRE) or "question-answer-comment sequences" (QAC) by in the field of conversation analysis (Markee & Kasper, 2004; Takagi et al., 2016).

Furthermore, traditional teacher-fronted teaching shows an unequal power in the classroom because teachers prioritize deciding topics of conversation during language teaching (Garton, 2012; Greenleaf & Freedman, 1993; Walsh, 2006). In other words, teachers are the ones who always control the pace of the class and decide what and when to ask, including the QAC sequences that "are initiated and closed down by teachers" (Markee & Kasper, 2004, p. 492). This illustrates teachers' privileges to decide when to start a conversation, the direction during the conversation, and the timing of closing the conversation. Thus, when problems occur within the sequences, such as students not

understanding the question or not knowing the answer, teachers have the power to determine the next step. Instead of moving forward directly to the "evaluation" part to give some feedback immediately, teachers usually choose to exercise their power, pushing the conversation forward by sharing some cues to help students answer the question in such cases. Providing sufficient support is called scaffolding, which exists widely in classroom teaching.

In the study I conducted on this topic, I primarily analyzed question-answer interactions in the institutional context through the method of conversation analysis (CA). Data were collected in an elementary-level Japanese language classroom at a public university in the southwestern United States. All the conversations containing question-answer interactions were selected. However, not all of them will be analyzed in detail in this study. Instructional scaffolding, which is provision of support when students have difficulty answering a question, was analyzed.

Previous research

The literature review below examines two categories of research: research on question-answer interactions in the institutional context and research on instructional scaffolding. I began by reviewing how previous scholars examined question-answer interactions in classroom teaching and how they define IRE/QAC sequence. Then, I briefly go over the scaffolding theory of Vygotsky (1978) and his notion of zone of proximal development (ZPD).

Question-answer interactions in the institutional context

Question-answer interactions in the classroom usually involve a pattern of triadic exchange. Previous scholars generally refer this sequence as initiation-response-evaluation (IRE), initiation-response-feedback (IRF), or question-answer-comment (QAC) sequence (Coulthard, 1992; Takagi et al., 2016). According to Takagi et.al. (2016), this kind of sequence initiated by questions raised by instructors does not change based on the questioner's knowledge because these questions are "known-answer questions." This is an extraordinarily different from natural daily conversation.

Furthermore, Markee (2000) points out that teacher-fronted classroom teaching is an unequal power speech exchange system because teachers have privileged rights to assign topics and turn to learners and evaluate the quality of students' contributions to the emerging interaction in classroom teaching. That is to say, teachers have superior power to determine whether, when, or how to start and end a new conversation. Therefore, the question-answer pattern in the institutional context is quite different from daily conversations and is worth researching because of its uniqueness.

Instructional scaffolding

Scaffolding theory was proposed by Vygotsky (1978) along with the concept of zone of proximal development (ZPD). Vygotsky (1978) suggests that at least two developmental levels exist during the learning progress: the actual developmental level (the first level), referring the level of development that has already been established or completed, and the Zone of Proximal Development (ZPD), which is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

Instructional scaffolding generally refers to the support offered during the learning process in order to help students achieve their learning goals—that is, to help learners

break through the fence between their actual developmental level and the ZPD level. Through scaffolding, "a social construct which is interrelated to ZPD (Zone of Proximal Development), in a classroom, teachers, as well as non-novice learners, can help novice individuals to internalize language dialogically or to perform a task/skill independently" (Shooshtari & Mir, 2014). Thus, the learners can obtain or achieve new understandings through the support delivered by more capable individuals. In other words, the support provided by teachers or a more qualified student in the Japanese classroom during the progress of solving problems constitutes as scaffolding in this study.

Scaffolding facilitates students' ability to build on their prior knowledge and internalize new information. The activities provided in instructional scaffolding are just beyond the level of what the learner can do alone (Olson & Pratt, 2000). The more capable other provides the scaffolds so that the learner can accomplish (with assistance) the tasks they could otherwise not complete, thus helping the learner through the ZPD (Bransford et.al., 2000).

Scaffolding has been extensively studied in classroom discourse, primarily in the context of teaching English as a second language. Research about scaffolding in Japanese language teaching in an English-speaking environment is scarce. Therefore, the present study was intended to address this gap in the literature review and examine the phenomenon of question-answer sequences that widely exists in the Japanese-as-a-foreign-language classroom. The present study addresses two research questions: 1) What is the distribution of scaffolding strategies that instructors implement in the Japanese-as-a-foreign-language classroom? 2) How do the instructors use specific questions as a scaffolding strategy when students have difficulty answering their questions?

Data and method

Data collection

The data for this study comprises approximately four hours of recordings of four entry-level Japanese classes taught by two native female Japanese instructors. Inori is an experienced instructor with more than ten years of teaching experience, while Yumi is a novice teacher with less than three years of teaching experience. The class size is around twenty students. All recordings come from the author's data, with the participants' consent. The excerpts presented below have anonymized the participants' names and other identifiers. The information is listed detailed in table 1.

Instructor	Gender	Experience	Class Size	Week
Inori	Female	Experienced	20	14th
Inori	Female	Experienced	22	10th
Yumi	Female	Novice	20	12th
Yumi	Female	Novice	22	14th

Table 1: Details of collected data

Method

This study explores question-answer interactions in institutional settings by using the methodology of conversation analysis. In general, conversation analysis has been used in classroom research, for example, in order to conceptualize teaching and learning as constituted in social interaction (Lee 2007; Hellerman & Pekarek Doehler, 2010). In addition, in the field of second language acquisition in classrooms, using Conversational Analysis is a growing field of interest (Hellerman & Pekarek Doehler, 2010) and is widely

applied. Furthermore, according to Takagi et.al. (2016), the most important advantage of using conversation analysis in second language classrooms is that the CA approach allows researchers to easily observe learning progress among learners in an educational interaction (p. 317). These studies have shown that CA is an appropriate approach that allows for observation of the interaction happening in the Japanese language classroom.

Analysis

In this section, I examined the distribution of the instructional scaffolding strategies implemented by Japanese instructors and the representative cases of IRE sequences that occurred in the Japanese language classroom. Furthermore, when the sequences were broken because of students not knowing the answer, I closely examined how instructors offered instructional scaffolding.

Four major types of scaffolding strategies were observed: giving a partial answer (i.e., the first syllable of the word), asking further questions that lead to the final answer, gesturing (i.e., pointing to a specific object) and giving more information (i.e., regular/irregular, tense/aspect). The overall distribution of these scaffolding strategy types is presented in Table 2.

Strategy Type	Percentage
Partial answer	39% (*n* = 18)
Further question	28% (*n* = 13)
Nonverbal (gesture, eye contact, etc.)	20% (*n* = 9)
Information	13% (*n* = 6)
Total	*100% (n = 46)*

Table 2: The distribution of strategies of instructional scaffolding

Excerpt 1 demonstrates how the instructor gives a partial answer to the students as a scaffolding strategy. In this excerpt, students in an elementary-level Japanese language class were learning numbers in Japanese. The instructor had the students practiced pronouncing numbers in Japanese by asking them for their phone number.

Excerpt 1 [Telephone Number]
(T = teacher, C = the whole class,)

01 T: sumimasen
Excuse me.
02 C: hai
Yes.
03 T: sumisu san no denwa bangoo wa(.) nan desu ka↑
What is your (Smith's) phone number?
04 (2.0)
05 →T: watashi [no:: ((pointing herself))=
Mine.
06 C: [watashi no denwa bangoo wa ((answers vary))
My phone number is.
07 T: ha:i ii desu ne
Yes. Good.

In line 03, the teacher initiated a question as "*sumisu san no denwa bangoo wa nan desu ka* (What is your (Smith's) phone number?)", but got no response. The silence lasted for 2 seconds (line 04). This silence showed that students had difficulty answering this question, which means the initiation-response sequence was broken. So the teacher

began to scaffold, gave the first word of the answer "*watashi no* (my)" as a hint to students as well as a gesture (pointing herself) in line 05. The effects showed immediately, and students answered the question correctly in line 6. Thus, the teacher gave positive feedback to the students in line 07, and the IRE sequence was completed.

In excerpt 2, the teacher used three types of scaffolding strategies (further question, gesture, and information). In excerpt 2, students in an elementary-level Japanese language class were practicing reading sentences containing new *kanji*. The teacher let students practice by themselves for around one minute and then asked Jordan (pseudonym) to read individually. However, Jordan encountered some difficulties.

Excerpt 2 [Reading kanji "Kyoo"]
(T= teacher, J = Jordan, S= multiple students, C= the whole class)

01	T:	jya:: (.) ichiban wakaru hito imasu ka↑ ichiban wakaru hito (.)
		Ok. Does anyone know the first one? The one who knows the first.
02		(0.7)
03		jya(.) jyoodan san (.) doo desu ka ↑
		Then, how about Jordan-san?
04		ichiban onegai shimasu
		First one, please.
05		(0.8) ((looking at Jordan)) huhu=
		Haha
06	J:	=uh watashi [wa] (.) um…
		Uh I am um…
07	T:	[un]
		Yep.
08	(2.0)	((T sorting some materials))
09	T:	((looking at the screen))
10		jya (.) kore muzukashii desu ne=
		This one is difficult, right?
11		=kore (.) wakaru hito imasu ka (.)
		Anyone knows it?
12	T:	((underlying the kanji by mouse on the screen))
13	(1.7)	
14	T:	koko wakaru hito↑
		Here, anyone knows?
15	(1.5)	
16	→ T:	kore wa ne: (.) chotto irregular nan desu kedo
		This is, a little irregular though.
17	→ (1.7)	
18	T:	((looking at the class)) s-today desu ne
		It's today, right?
19	(0.5)	
20	T:	today wa nihongo de nan to ii masu ka=
		How to say "today" in Japanese?
21	S:	kyo[o::
		Kyoo.
22	T:	[kyoo (.) ((underlying the kanji by mouse on the screen))
23		soo desu ne:kore wa kyoo to ii masu ne(.) hai
		Kyoo. Right. This one is pronounced Kyoo. Yes.
24	T:	minasan (.) yutte mimashoo
		Everyone, let's try to say together
25	T:	watashi wa kyoo (.) gakkoo ni ikimasu
		I go to school today.
26	C:	watashi wa kyoo (.) gakkoo ni ikimasu
		I go to school today.

First, the teacher initiated the question to the whole class in line 01. Then, she asked Jordan (line 03) if he could read the sentence (line 04) after a short pause in line 02. According to Hayashi (2010), "when a question is brought to completion, the person addressed by the questioner is expected to take a turn and respond" (p. 2697). In this situation, Jordan was called on by the teacher to take the turn and finish the question-answer interaction. In addition, as background information, Jordan is one of the advanced students in the Japanese class. This action demonstrated the teacher's intention to ask for some support from Jordan, one of the "capable peers," (Vygotsky, 1978, p. 86), to give the whole class an example. Therefore, this action could be recognized as a scaffolding strategy for the entire class.

At first, Jordan didn't reply immediately. So, the teacher laughed and looked at him again to remind him to start reading the sentence (line 05). Then, in line 06, Jordan responded by beginning to read, and in line 07 the teacher encouraged him to continue while he was reading. However, Jordan paused soon after starting reading when he encountered a word written in *kanji* that he didn't know (line 06). However, the teacher overlooked the situation until the silence lasted for 2 seconds because she was sorting some materials (line 08). At this point, a problem occurred, and the initiation-response sequence was broken.

After the two-second silence, the teacher realized that a problem was occurring, so she looked at the screen to identify which word Jordan had a problem with (line 09). After clarifying the issue, the teacher first gave an evaluation of Jordan's pause by explaining that "*jya kore muzukashii desu ne* (This one is difficult, right?)" in line 10. Right after that (line 11), she started to scaffold with initiating a second question, "*kore wakaru hito imasu ka* (Anyone knows it?)." This action was taken to seek someone else who could answer the question. However, no students responded to her question (line 13). After rephrasing and initiating the question again (line 14) by underlining the word and pointing out the particular difficulty, the teacher tried to scaffold more specifically for her students to solve this problem. After a one-second silence again (line 15), she first gave a hint on form-scale by telling students (line 16) that the pronunciation of this kanji is "*chotto irregular nan desu kedo* (a little irregular though)", but the silence in line 17 showed that the students still didn't understand. Afterward, she indicated the word in the meaning scale by telling students that the kanji means "today" in English in line 18. But still, no students responded (line 19). Therefore, she tried again in line 20, initiating for the fourth time, with a much more narrowed down question by using the structure that had been taught to the class: "*today wa nihongo de nan to ii masu ka* (What is "today" in Japanese?)." This question was connected with students' prior knowledge, so students responded immediately with "*kyoo*" (line 21). Thus, the initiation-response sequence was repaired, so the teacher moved to the "evaluation" step by rapidly giving students positive feedback for their responses. She repeated the answer by pointing to the corresponding kanji (line 22). Ultimately, the IRE sequence was completed in line 23 when the teacher gave students her positive feedback. After that, from line 24 to 26, the teacher and students return to the originally scheduled curriculum-oriented activity—reading sentences containing new kanji—after finally overcoming the difficulty.

Discussion

The analysis above is from the perspective of sequences in institutional conversations, illustrating how the teacher implements specific instructional scaffolding strategies when the IRE sequences are broken. Additionally, the words that the teacher chose to use during

the conversation also reflect scaffolding strategies, as well as the direction of the conversation determined by the instructor.

Firstly, the token "*jya*" and the derivation "*jya::"* appear in line 01, line 03 and line 10. According to Okamoto and Yoshino (1997), the discourse marker "*jya*" implicates "the intention of closure to the conversation" (p. 57). Therefore, the teacher used the tokens "*jya*" and "*jya::*" to close the former conversation and move to the next turn as a beginning of a new conversation. For example, in line 01, the teacher used "*jya::*" to ask all the students to stop the self-practicing activity, follow the instruction, and answer the teacher's question. When no students responded to her (line 02), the teacher said "*jya*" again as the closure to the conversation between her and the whole class and started a conversation with Jordan by asking him to read the sentence in line 03. In addition, after realizing that Jordan was encountering a problem, the teacher said "*jya kore muzukashii desu ne*" to close the conversation between her and Jordan, and began a new conversation with the whole class again by asking "*kore wakaru hito imasu ka* (Anyone knows it?)" (line 11). The "*jya*" in line 10 also announced that the teacher was going to scaffold to help the students to overcome this difficulty.

Furthermore, there are two "*kore* (this)" in line 11 referring to the sentence Jordan could continue to read. However, in line 14, the teacher clarified the difficulty more specifically by underlying the exact word and referring to it as "*koko wakaru hito* (Here, anyone knows?)." This action can also be regarded as a strategy of instructional scaffolding for the students because it narrowed down the problem from a sentence to a specific word.

Scaffolding strategies used in Japanese language classroom

The main goal of the present study was to investigate different types of instructional scaffolding strategies and to explore how teachers use particular questions to scaffold within the IRE sequence. There were two main findings in the study. First, four major types of scaffolding strategies were observed: 1) partial answer, 2) asking further questions, 3) gestures, and 4) giving more information. These four types include verbal and non-verbal scaffolding, indicating that scaffolding strategies vary and could be both verbal and non-verbal.

Secondly, instructional scaffolding often involves gradually narrowing down the range of the teacher's initial question until it can connect to the students' actual developmental level, in other words, students' prior knowledge, no matter what strategies are implemented. For example, in excerpt 2, the teacher's utterance was specified from "*ichiban wakaru hito imasu ka*" as referring to the first sentence, to "*koko wakaru hito*" as referring to the particular kanji word with a gesture pointing out where exactly the difficulty is. When she gave more information about the word, the range narrowed down from a broader form scale (irregular) to a more specific meaning scale (today). Furthermore, the teacher's question narrowed down from a relatively broad one "*kore wakaru hito imasu ka*" to a very particular question "*today wa nihongo de nan to ii masu ka* (What is "today" in Japanese?)," which is related to the knowledge that had been introduced to the students previously. Based on the above analysis of scaffolding in the teacher-student conversations, one can see the teacher employed the scaffolding strategies in question-answer sequences as presented in figure 1.

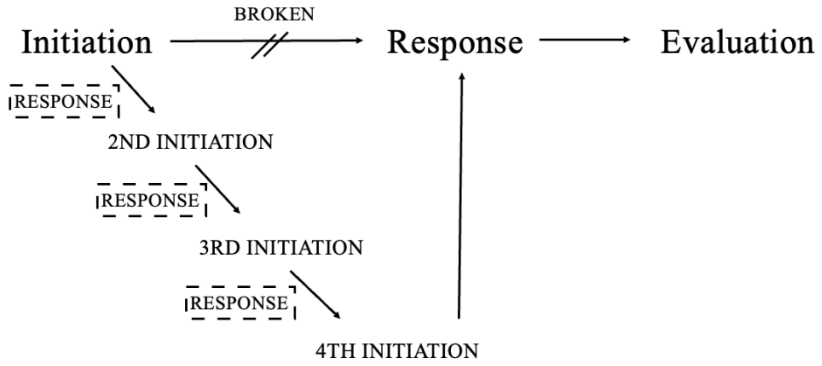


Figure 1: Scaffolding strategies in question-answer interaction

Conclusion

This study closely examined question-answer interaction in four elementary-level Japanese language classes. The findings indicate that Japanese language teachers in this study mainly utilized four types of strategies for scaffolding—giving a partial answer, asking further questions that lead to the final answer, using gestures, and giving more information. The findings also demonstrate that the common function of instructional scaffolding strategies is to narrow down the range of the teacher's initial question to the student's prior knowledge so that they can break through from the actual developmental level to the zone of proximal development level. In addition, although Giacumo et al. (2013) have previously recommended employing both facilitation responses, including instructors' guidance and feedback, as one of the crucial forms of scaffolding, this research provides a more specific framework of efficient scaffolding tactics for teacher-student interactions in a foreign language classroom. These strategies could contribute to part of Japanese language teacher education as an educational resource in the future.

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