Scaffolding in Second Language Learning and Instruction

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Abstract: In a study of the triadic interaction among pairs of advanced second language learners engaged in a complex language task, it was found that the scaffolding provided by the researcher was determinant in keeping the participants on task and encouraging language production, thus facilitating both language development and comprehension.

This paper reports on the ways in which the researcher-teacher intervened in the interaction of pairs of advanced English language learners as they worked together in an effort to decipher the meaning of a series of puns contained in comic strips. The task was designed to engage the learners with language that was humorous and ambiguous since, to become truly proficient, learners must be able to interpret these aspects of language that are often present in actual use by native speakers (Cook 2000; Lakoff 1987; Wittgenstein, 2002).

Theoretical Framework

The design of the study was based on the tenets of sociocultural theory (SCT), which has gained many advocates (Lantolf 2000; Swain 1997) within the field of second language acquisition. The premise that learning occurs in the discursive practices of individuals has been observed in the interactions among language learners, and between learners and teachers in instructional settings (Brooks, Donato & McGlone 1997; DeGuerrero & Villamil, 2000; Kaplan & Lucas 2001; Ohta 2001; Platt & Brooks 1994; Swain 1997). Learners co-construct language and knowledge about language through the process of collaborative dialogue (Swain, 1997). Because they are active builders of knowledge, the learning achieved through the dialogic process tends to be more lasting than that gained through teacher-directed activity (Basturkmen, Loewen, & Ellis 2002). This is not to say, however, that the teacher has no role to play. The current study indicates that the instructor offers crucial assistance, first, in the selection of the task and, second, through the assistance given during the conversations.

Van Lier (2002) highlighted the importance of task selection in second language learning with his concept of triadic interaction (see Figure 1). According to this model, language emerges when learners work "side by side with a joint focus of activity" (p. 147). The object of attention provides a context for meaning making and becomes the "third interlocutor" (p. 148) in triadic interaction. Therefore, the nature of the task is of consequence since it determines the quality of the interaction between the learners. In accordance with SCT, the task should be challenging and motivating, just a little more difficult than the learner is able to do on his/her own.
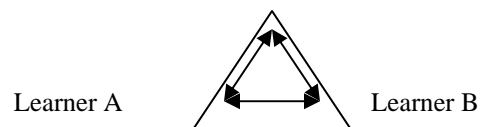

Learner A   Learner B

Figure 1: *Model of Triadic Interaction*

When the task is a little beyond the current capabilities of the learners in instructional settings, the teacher guides them to understanding through scaffolding, a term adopted in SCT to indicate the support offered only until the learners are able to complete the task on their own. Once they are capable of accomplishing the task without help, the support is removed, as scaffolds are removed when construction of a building is completed.

The Study

The participants were advanced English language learners at an intensive English institute on a southeastern university campus. Most were learning English to pursue undergraduate or graduate studies in the United States, but some were interested in enhancing their employment opportunities or job performance. The researcher asked the pairs of learners to read the comic strips one-by-one and to work together to come to an understanding of the double meaning inherent in the puns. Further instructions were for the participants to indicate if they understood the comic after reading it. If they both understood, they were directed to explain the double meaning to the researcher. If one understood and the other did not, the one who understood was to explain the ambiguity to the other. If neither understood, they were to try to work out the meaning together.

The conversations were digital video recorded and subsequently transcribed. For analysis, the researcher organized the data into separate structural maps, with each map containing the conversation related to each pun. There were five pairs of participants discussing eight puns, so there was a total of 40 maps, which were denominated pun-related dialogues (PRDs). The PRD was a complete sequence of interaction regarding each pun.

Results

Through coding for understanding in the opening and closing of each of the PRDs, the researcher determined that comprehension increased from 28.75% at the beginning of the dialogues to 77.5% at the closing, and further to 91.25% in individual follow-up interviews the day after the original conversations.

The task difficulty highlighted the scaffolding role of the teacher-researcher. When both participants understood the pun at the opening of the PRD, the intervention was minimal. As participant comprehension decreased, more guidance was required, as shown in Table 1.

Table 1

Number of Total and Researcher Turns per PRD

Comprehension at opening of PRD	Number of PRDs	Average number of turns	Range of total turns	Average number of researcher turns	Range of researcher turns
Both understood	7	15.3	10 – 24	2.0	1 – 4
One understood	9	25.5	12 – 39	5.4	1 – 13
Neither understood	24	30.3	9 – 63	5.8	0 – 1

The interventions of the researcher were few and limited in the 7 PRDs in which both participants understood the double meaning of the pun at the opening of the dialogue. There were two types of comment: a) asking that the participants explicitly state the double meaning and b) expressing approval. Excerpt 1 demonstrates these interventions (see Table 2). The participants,

Trina and Kyeung, laughed when they read a single frame Dennis the Menace cartoon in which Dennis is sitting on his grandfather's lap in a rocking chair and remarks to his mother: "Look Mom! We're a rock group."

Table 2

Excerpt 1

Turn	Participant	Transcript
8	Trina	It's funny because it's trying…uh, like they're sitting in a rock chair…and it says 'Look, Mom. We're a rock group', so it like double meaning, like, they're sitting in a rock chair and he's trying to tell his mom that they're in a…rock group, just…uh…
9	Kyeung	So rock group means the music rock group, so it's kinda, you know…it's not real rock group, but they're sitting on the rock chairs, so they say they're a rock group, yeah…
10	Trina	That's the main…I guess.
11	Researcher	OK. So where is the, the…two meanings are…in the, in the…
12	Trina	One they are sitting in the rock chair…
13	Kyeung	…rock chair…
14	Trina	…and the other is that…Dennis, like thinking…we're in a, like, a rock band…like a…
15	Researcher	Uh, uh…
16	Trina	…the rocking chair makes sound…band…
17	Researcher	OK. So it's in the rock. Good.

In Turns 8 and 9, Trina and Kyeung constructed the explanation together. When Trina got stuck in Turn 8, Kyeung took over. They obviously understood that the ambiguity lay in the double meaning of the word "rock". The researcher comment in Turn 11 asked for an explicit rendering of the ambiguity, while in Turns 15 and 17, the intervention was in the form of encouragement and approval.

Table 3

Excerpt 2

Turn	Participant	Transcript
2	Marguerite	Ah. OK. The father…
3	Lenora	Grandfather.
4	Marguerite	The grandfather and the grandchild…
5	Lenora	…son, yeah…
6	Marguerite	…are on rocking chairs.
7	Lenora	Ah, yes.
8	Marguerite	You see?
9	Lenora	Mm,mm.
10	Marguerite	And they are a rock group.
11	Lenora	Yeah. Because of that they are on rocking chairs.
12	Marguerite	Mm,mm. Is that it?
13	Researcher	Yeah. And what is…?
14	Lenora	The second meaning is…rock is, uh…something hard.
15	Marguerite	Rock is like, uh…music group.
16	Lenora	Something strong.
17	Marguerite	The singing group of rock.
18	Researcher	What do you think it is here?

In the PRDs in which only one of the participants understood the pun at the opening of the dialogue, the researcher sometimes became more directive in her comments. While there were instances when she simply asked for the double meaning, as above, there were also times when she directed the discussion because she thought it was getting off track, as seen in Excerpt 2 (see Table 3). Lenora and Marguerite were discussing the same Dennis the Menace cartoon.

Here the researcher (Turn 13) answered Marguerite's question in Turn 12. The intervention was an affirmation and a request for the double meaning. When Lenora referred in Turns 14 and 16 to a third meaning of rock, the researcher intervened further (Turn 18) in an attempt to get them back to Marguerite's meaning expressed in Turns 15 and 17.

The researcher was most active when neither of the participants understood the pun. At times, the researcher actually regulated or led the interaction, as exemplified in Excerpt 3 (see Table 4). Carolina and Hyun Ja were trying to find the ambiguity in another Dennis the Menace single frame cartoon in which Dennis and his friend Joey are watching a man walk away from a truck that says "Acme Plumbing: 24 Hour Service". Dennis tells Joey: "He says he's a drain surgeon".

Table 4

Excerpt 3

Turn	Participant	Transcript
1	Carolina	Do you understand?
2	Hyun Ja	I just know one meaning, yeah.
3	Carolina	He's, he's…plumb…
4	Hyun Ja	Yeah, plumber, yeah.
5	Carolina	…so he fix the plumbing…
6	Hyun Ja	…pipes, right…
7	Carolina	So he's the drain surgeon…like the doctor that…
8	Hyun Ja	Medical doctor.
9	Carolina	It's like the doctor of the plumbing…something like that.
10	Researcher	Uh, uh. That's the doctor. Where's the double meaning there?
11	Carolina	That he fix the plumb…and…I don't know…Ah, drain.
12	Hyun Ja	His car is advertising…they can…uh…fix plumbing for 24 hours…like emergency in hospital.
13	Researcher	Like a hospital is open 24 hours. Does drain remind you of something?
14	Carolina	Brain? Kind of brain surgeon
15	Hyun Ja	Ah-h-h…Yeah…brain…drain.

In Turn 10, the researcher asked for the double meaning, as she had in Excerpts 1 and 2. Carolina appeared to begin to see the source of the ambiguity in Turn 11. However, when Hyun Ja seemed to be leading the conversation in another direction in Turn 12, the researcher intervened to direct the conversation in Turn 13, which prompted immediate recognition on the part of both participants that the ambiguity lay in the phonological connection between "brain" and "drain".

Discussion

The low rate of comprehension on the first reading of the comic strips indicates that the task was challenging for the learners, a little beyond their current understanding. At the same time, the participants were motivated to accomplish the task since they were eager to take part in the study and found the comic strips of interest, as noted by one participant: "It's better with

cartoons, because you laugh, you learn, you get the point quicker. Have they tried to teach with cartoons?" (Lucas, 2004, p. 107).

　　While the task was an effective third interlocutor in the triadic interaction, the scaffolding of the researcher-teacher provided a fourth element that contributed to the increase in understanding. The interventions during the PRDs regulated the conversation and gave encouragement. The regulation most frequently took the form of asking for the double meaning. This was a way both of ascertaining that the participants actually understood the ambiguity and obliging them to produce the language to express their comprehension. It was therefore a way of promoting language use. Sometimes the regulation directed the conversation when the researcher felt that the participants were getting off track, as seen in Excerpt 3. The participants thus arrived at understandings they may otherwise have been unable to achieve.

　　The affirmations of understanding may have played a role in the increase in comprehension the day after the conversations. As noted above, while the comprehension rate was 77.5% at the closing of the PRDs, during follow-up interviews it was 91.25%. One reason may have been that the participants continued to discuss the comic strips in the interim. The process of internalization, as posited by Vygotsky (1978), through which external activity is "reconstructed and begins to occur internally" (p. 178), was certainly a factor. Both the posterior discussions and the internalization may have been influenced by the comments of the researcher that affirmed the appropriateness of the interpretations offered by the participants during the collaborative dialogue. Through this confirmation of their understanding, the participants were able to have confidence in the correctness of their understanding.

　　The importance of the scaffolding role of the teacher-researcher suggests a modification of the model of triadic interaction. In instructional settings, the triadic interaction among students is most efficient when mediated by the interventions of the instructor, as illustrated in Figure 2.
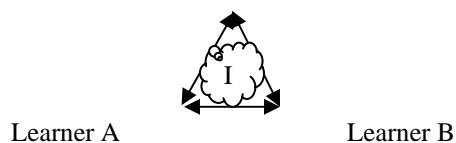

Learner A　　　　　　　　　Learner B

Figure 2: *Mediated Triadic Interaction*

　　Among the implications of the dynamics of mediated triadic interaction for the second language classroom is that the instructor must be vigilant when students are engaged in group work. Intervention is important to keep the learners on task. Another inference drawn from the data is that encouragement by the teacher both motivates the learners to continue and affirms their contributions, thus building confidence. Teachers do not cause learning to occur (Larsen-Freeman, 1997), but they have a crucial role, first, in developing a curriculum and selecting tasks that motivate learners to co-construct knowledge, and second, in guiding and motivating their students during the realization of the task.

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