

## Exploratory Feedback and Student Interaction

Zena Abu Shakra  
Arab Open University / Lebanon Branch

**Abstract** *A number of studies investigating language learning have largely concentrated on scaffolded instruction. Within the field of second language acquisition, such studies are based on an approach to understanding language and discourse as a scaffolding device which serves a psychological function in its role as mediator for the development of all higher mental functions. This study investigates how exploratory feedback as an element of scaffolded instruction is realized during writing instruction for a remedial class of English. The analysis of spoken discourse during the writing lessons is used to provide a linguistic understanding of exploratory feedback as well as to demonstrate the type of student interaction that ensues as a result. Findings suggest not only ways in which instructor feedback to student response may assume an exploratory nature, but also the impact which such feedback has on student involvement in classroom discourse. The theoretical implications of this are then discussed.*

### 1. Introduction

A number of studies investigating sociocultural theory have largely concentrated on scaffolding. Such studies in the field of second language acquisition are based on an approach to understanding language and discourse as a scaffolding device which serves a psychological function in its role as a mediator for the development of higher mental functions. Foley (1991) holds that scaffolding a learning task allows the novice to internalize outside knowledge thus gaining conscious control over a certain function or concept so that it may become a tool of conscious control. Essentially, scaffolding instructional tasks fits in well with the Edwards and Mercer (1987) concept of successful education as one that involves the handover of competence from teacher to learner so that the learner acquires not only knowledge but also the capacity for self-regulation.

Wood, Bruner, and Ross (1976) identify several scaffolding functions present in the tutoring process with a consideration of how such finding relate to a theory of instruction. To them, "scaffolding consists essentially of the adult 'controlling' those elements of the task that are initially beyond the learner's capacity, thus permitting him to concentrate on and complete only those elements that are within his range of competence" (Wood et al., 1976 p.90). Along similar lines, Rogoff and Gardner (1984) view scaffolding as a subtle

process involving successive attempts by the expert to transfer responsibility of the joint task to the novice based on the level of the novice's readiness for this increased responsibility. Mercer (1998) identifies several dimensions for distinguishing an interactive scaffolded approach to instruction from more formal didactic approaches. Of particular interest are those dimensions related to the feedback which the teacher provides students whereby questions on the part of the teacher are not as much a way of assessing student learning as they are a way of finding out what a student has done and the reasons why this has been done thus compelling the student to start thinking about how to complete the task at hand. To that extent, the teacher would make students accountable for their answers by asking 'why' questions as well as eliciting from students strategies for solving problems. In the event where students make mistakes, the teacher draws on these errors to go back and reteach a part of a lesson through what he calls 'retreat and rebuild' sequences. All such characteristics of teacher feedback would place instruction according to Mercer (1998) closer to the interactive scaffolded end.

## 2. The Study

### 2.1. Objectives

This study deals with one of the various elements of scaffolded instruction namely exploratory feedback. It investigates how such feedback may be realized in scaffolded instruction from a linguistic point of view as well as the type of student interaction it creates. By providing a linguistic understanding of this vital element of scaffolded instruction, this paper will present exploratory feedback as a more concrete concept by demonstrating the type of student interaction that ensues in the context of a particular ESL classroom.

The following objectives are explored in the context of a particular ESL lesson:

1. describe how teacher feedback during scaffolded instruction may assume an exploratory nature from a linguistic perspective.
2. demonstrate the type of student interaction that ensues from such exploratory feedback.

### 2.2. Background

Participants in this study were all secondary school students attending a remedial English class consisting of no more than 10 students. Data was collected on 3 whole group writing lessons which were essentially teacher-led classroom instructional activities whereby as the teacher, I presented a 15 minute lesson on writing. Such short lessons on writing abide by Atwell's (1987) idea of a mini-lesson presented at the beginning of a lesson on writing with the intent for students to apply the lesson to their writing during the remaining part of the lesson.

All three writing lessons were previously taught to another group of students prior to the application of scaffolding. For the purpose of this research, those same 3 lessons were formatted to include elements that characterize scaffolded instruction. Despite this similarity, whole group lessons taught prior to scaffolding and those which applied scaffolding differed in the way instructional aims were met through the activities and roles involved. To demonstrate this, I will use as an example of one of those 3 lessons, a writing lesson on essays of comparison and contrast. The lesson, previously taught to one group of students prior to the application of scaffolding, was also taught with the implementation of scaffolding for this research. In both cases, the instructional objectives for the lesson were identical. Students were to:

- Understand the difference between comparison and contrast.
- Recognize that essays of comparison and contrast which lack a purpose in the thesis statement will leave the reader perplexed with the ‘so-what’ problem.
- Avoid the ‘so-what’ problem in an essay of comparison and contrast by selecting one of three purposes in their thesis statement: show how two seemingly similar things are actually different; show how two seemingly different things are actually similar; or show that one thing is better than the other.

In the lesson which did not embody scaffolding, instruction was very direct and explicit highly regulated by me as the teacher. The lesson was essentially broken down into the three objectives above so that I first started by explaining the difference between comparison and contrast then giving an example. Next, I explained the importance of having a thesis statement with a certain purpose for comparison and contrast. I presented students with examples of essays that lacked such a purpose and leave the reader with the question of ‘so-what’. Finally, I explained each of the three purposes that could be part of the thesis statement of a comparison and contrast essay. Examples of three different thesis statements each having one of the three purposes were given. Following this lesson, students were to then apply what they had been taught by beginning the task of writing a comparison and contrast essay which included one of the three purposes as thesis statement. Throughout this process, instruction was highly monologic with even questions which I asked being mainly rhetorical. Students did not interact in the lesson other than taking notes. This was done so as to keep the lesson short giving students time to apply what they have learned during the 15 minutes to their writing during the rest of the class period during which they could also ask any individual questions they may have on their own specific essays. Hence, any interaction on the part of students whether in the form of questions or comments took place following the lesson as they were applying what they had been taught to their own individual essays.

The main pretext behind the use of this highly teacher regulated instructional technique was related to its relatively predictable and stable nature

in withstanding the test of time as well as the somewhat satisfactory outcomes previously achieved in terms of the language development of pupils. More importantly, I had felt that it was less time consuming given that students also needed time during the lesson to apply what they have learned and demonstrate understanding. Using this monologic approach allowed additional time for further explanation or reteaching a concept which a student may be facing difficulty with understanding.

The 3 lessons which embodied scaffolding as part of this research had the same identical instructional objectives. However, they surpassed all the boundaries of the previous lesson by conforming less to a traditional mode of direct instruction towards a more scaffolded approach. As such, instruction was less explicit and more interactive in nature because students were involved in the discourse during the explanation of the lesson through their comments, questions, or responses to my questions. Needless to say, this scaffolded lesson was simplified into the following four parts each of which was explored with the students using a dialogic approach:

1. *Introduction.* This involved focusing the students in on the lesson by identifying the definition of comparison and contrast as well as how the two processes differ.
2. *Problem.* From there, the relation to writing essays was made by having students recognize the ‘so-what’ problem associated with not having an explicit purpose when writing comparison and contrast essays.
3. *Solution.* Ways of avoiding the problem were then discussed in terms of making part of the thesis statement one of various purposes which may be used to convert a list of comparisons and contrasts into an essay.
4. *Presentation of teacher rules.* After the three purposes were realized as being part of the thesis statement, they were then checked against rules presented to students by means of an overhead projector, which included a summary of the lesson in terms of the three purposes inherent in the thesis statement of comparison and contrast essays.

### 2.3. Procedures

Audio recording of 3 lessons and transcription for spoken discourse analysis was used to collect data on three writing lessons formatted to include elements that characterize scaffolded instruction. I made use of Burton’s (1981) model for analyzing spoken discourse. I found the model to be suitable for several reasons. First, since it’s directly derived from the Sinclair and Coulthard model, Burton’s model does not present a significant shift from the former. Hence, it has the same added benefits as those found in the Sinclair and Coulthard model which is specifically tailored to apply to the context of the classroom with the boundaries that this context imposes on discourse events. For instance, as with Sinclair and Coulthard (1975), the scheme set forth by Burton (1981) for coding spoken discourse in classrooms is essentially hierarchical whereby Lessons are

considered the largest units of discourse. In turn, Lessons consist of Transactions which embody Exchanges related to certain topics of discourse. Exchanges consist of Moves which formulate individual turns. Finally, Moves are composed of Speech Acts, the smallest units of discourse. It is particularly at the level of Speech Acts that Burton's scheme represents few modifications of the Sinclair and Coulthard scheme. Indeed she holds that, "Wherever it was possible, I tried to restrict my coding at act rank to the 22 acts listed in Sinclair and Coulthard, 1975 p.40-41" (Burton 1981, p. 65).

The Burton model, however, has some added benefits. First, although the Burton model is specifically formulated for casual conversation (Eggins & Slade, 1997), the model is still general enough to apply to other types of discourse. In that respect, Burton (1981) claims that the modifications she offers to the work of Sinclair and Coulthard (1975) are based on the principle that "data should be analyzed according to a model sufficiently general and powerful to handle all types of talk. And it is the analysis which should be compared to see whether or not they display similar stylistic choices from the underlying linguistic structural options available for all talk" (Burton 1981, p. 63.) Hence, the analysis of discourse during the scaffolding process would not be imposed by a coding system that will impose on it the structure of a classroom context.

Another added benefit that the Burton model has is at the level of Moves. Burton expands on the original Initiation, Response, and Feedback pattern to include Opening, Challenging, Supporting, Bound-Opening, Re-Opening, Framing and Focusing moves. Briefly stated, Opening moves carry topics which are in essence new in relation to the preceding discourse; Challenging moves hold the progress of a topic; and Supporting moves help facilitate the topic of discourse by keeping the interaction focused. While Bound-Opening moves reintroduce the topic after a Supporting move, Re-Opening moves reintroduce the topic after a Challenging move. Finally, Focusing and Framing moves serve to mark the boundaries of transaction by occurring before a topic and acting to capture attention.

### 3. Discussion

The analysis of discourse in all three lessons revealed that exploration as an element of scaffolded instruction was present throughout each of the lessons. More specifically, exploration seemed to not only involve prompting and guided assistance at the stage of eliciting responses from students, but extended as well to the type of feedback which I provided in relation to student response whereby my feedback to student response assumed a relatively exploratory nature.

Prior to discussing how my feedback to student response assumed an exploratory nature, it should be noted that Rogoff and Gardner (1984) consider the provision of feedback on the part of the expert during scaffolded instruction to be a very subtle process because it appears as the appropriate level of scaffolding is being established in order to ensure the novice is taking responsibility for the completion of a task. Also in relation to the feedback

which the expert provides during the scaffolding process, Wood et al (1976) hold that intervention on the part of the expert only takes place upon the detection of difficulty on the part of the novice. Hence, a teacher would only interfere when the need arises

### 3.1. Exploratory feedback to student response

Excerpt 1 taken from the lesson will be used to demonstrate how my feedback to student response assumed an exploratory nature and how this in turn impacted student interaction throughout all three lessons.

#### *Excerpt 1:*

43. T S acct Make a choice./  
m OK/  
con choose one over the other/  
BO el or why else would you do it?/  
p Think about it: if you're showing that two things are  
similar, why would that be important?/  
p Why would that be something you'd want to do?
44. S S rep To see which is better.
45. T S acct To see which is better.
46. SM S rep To see in what way they are different.
47. T S acct Yeah./  
s Two things that everybody thinks are similar, you've got  
to show are different./  
O el What else could we do then? /  
p You either find which is better or....?
48. SS S rep Differences.
49. T C p Which what? In what case...you are proving that they're  
different.
50. SS S rep What are the bad points.
51. T S m Well/  
i that's related to the first point./  
ms I'll put this down./  
s You can have one of three purposes. One would be  
which is better./

- m OK/  
el 2 would be what?
52. S S rep Worse.
54. T S I Same thing, which is better and worse./  
p What else?
53. S S rep You're making a choice.
54. T S I Same thing./  
com You're making a choice; deciding which is better or  
p worse./  
What else can you do?  
sum Sara/  
You said it a minute ago.
57. SM C rep Me?
- 58. T S acct Yes.**
57. SM S rep Um, find the differences; in what way they are  
different.
- 60. T S acct OK./**  
p You can find the differences but....
- 61.S S rep They're similar**
62. T S acct They're the same./  
con So, if you have two things that are similar you try to  
show that they're different./  
el Take two twins for instance.
63. SM S rep They're the same.
64. T S acct OK. They're the same./  
C p But...
65. S S rep There are some ways that they're alike but they're also  
different
66. T S acct **They're also different. /**  
**BO el Obviously, what would #3 be? /**

- p If #2 is we are choosing two things that are similar and we are trying to find differences, what would #3 be?/

A glance at my feedback to student replies in the excerpt above actually fits in with what Edwards and Mercer (1998) refer to as reconstructive recaps which involve paraphrasing student response in order to confirm that response by making it more explicit. For instance, at the level of speech acts, Excerpt 1 shows that my use of *accepts* as speech acts which according to Burton (1981) function to indicate that the speaker had understood a previous utterance, often reconstructed a student response making it more acceptable in form. At turns (44, 46, 64, and 66), this reconstruction was in the form of simply repeating the exact student response to make it more explicit. At turn (48), however, my *accept* was followed by a paraphrase which established student (SM)'s reply as the second purpose inherent in comparison and contrast essays. That paraphrase appeared in the form of a *starter*, a speech act which according to Burton (1981) introduces an imitation. Similarly, at (62), my use of *accept* paraphrased the student's reply establishing it more firmly as one of the purposes of comparison and contrast essays

In general, my feedback to student responses was more a way of guiding and shaping their learning rather than evaluating or assessing it. It appeared that my use of *accept* as a speech act was mostly followed by a *prompt* or *elicitation*. Of the 8 cases of *accept* I used in the excerpt, only 2 cases appeared where an *accept* was not followed by an *elicit* or *prompt*. This relates to what Mercer (1998) identified as spiral IRF exchanges whereby the teacher's feedback to student responses is more a way of revealing the students' line of thought that led to a response and allowing students to reflect on the learning at hand more than it is a method for assessment. More specifically, Mercer (1998) identifies feedback in a spiral IRF as having two functions. The first relates to discovering what a student has done and the reason why it was done. This function is most clearly shown in the *elicits* and *prompts* that followed the *accepts* I made at turns (44), (60) and (64) of the excerpt. At (44), I accept student (N)'s reply that one reason that comparison is done is to make a choice. I followed this *accept* with an *elicit* and two *prompts*, however, that probed into the reply to find out why the student thinks that making a choice is important. Similarly, at turns (60) and (64), I followed my acceptance of (SM)'s replies with *accepts* followed in both cases by *prompts* that start with 'but' as a way of probing to find out more about the reply.

The other function of feedback in spiral IRFs identified by Mercer (1998) relates to making the student ponder about the problem at hand. Once again, this function is reflected in turn (48) where I first accept the reply made by student (SM), then use a *starter* to establish the first purpose for writing comparison and contrast essays, finally ending the turn with an *elicit* and *prompt* which made the student think about what the second purpose of comparison and contrast essays may be. Similarly, at turn (66), I accept student (SM)'s reply then add an *elicit*



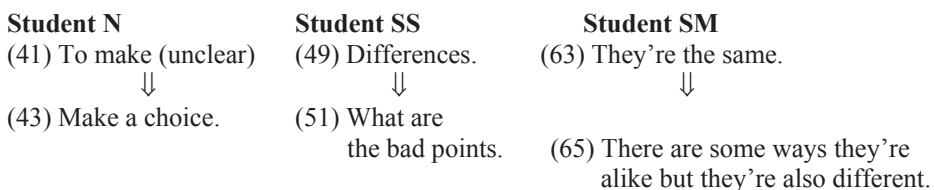
and *prompt* to foster thought about the third purpose inherent in comparison and contrast essays.

Even when students gave an incorrect or incomplete response, my feedback was still exploratory in the sense that I persisted with not evaluating that answer. Instead, I offered a review of what had previously been discussed so as to prompt the student into a more complete response. For instance, at turn (64) in Excerpt 1, the *prompt* I use in the form of an open-ended ‘but’ was meant to elicit from students the third purpose inherent in comparison and contrast essays. When student (SM)’s reply at (65) simply restated the second purpose for such essays, my feedback came in the form of a *bound-opening move* which according to Burton (1981) functions to reintroduce a topic after a *supporting move*. Hence, rather than attempting to evaluate the answer, my feedback at (66) was exploratory in that it contained a *bound-opening move* which reviewed the second writing purpose then prompted students through the original *elicit* about the third purpose for writing the essays. Mercer (1998) identifies the presence of such scaffolding in a teacher’s feedback as retreat and rebuild sequences where errors are used to review and reformulate previous learning.

A similar case appeared after I attempted at (60) to prompt students to arrive at the second writing purpose only to have student (S) give an incomplete reply at (61) which simply completed my *prompt*. My feedback to this at (62) included a *conclusion*, a speech act which according to Burton (1981) clarifies preceding discourse. Hence, I seemed to draw on the repetition of previous knowledge upon detection of difficulty in learning. For Rogoff and Gardner (1984), reintroducing previous learning upon the presence of error represents a reappearance in redundancy during the scaffolding process.

### 3.2. Exploratory feedback and student interaction

It seems that such exploratory feedback gave students a certain view of their role in the interaction. This is displayed through the graphic below, which shows how in the third transaction from which Excerpt 1 was taken, exploratory feedback allowed 3 students to expand on their original reply:



The graphic above shows that rather than subsuming their role to that of being passive receivers of input from the teacher, such feedback purported the students to view themselves as participants in the interactional process. Thus, they seem

to have not viewed their involvement in the discourse as a contribution in the form of a reply that simply ended after I assessed it through feedback. Instead, feedback that was of a prompting exploratory nature made them elaborate and expand on that reply through further involvement.

Indeed, despite the brevity of the third transaction shown in this lesson, there was a relatively high participation of different students whereby 7 of the 14 students in class participated in the discourse, a pattern that is echoed in most of the transactions of all three lessons. The assumption can be made that when students view themselves as participants in the discourse, this may create more intrinsic motivation to listen because each student would feel more obligated to participate which may in turn subsequently increase the potential for turn-taking.

By propelling students to view themselves as participants in the discourse, such exploratory feedback may help in the creation of a shared understanding between the teacher and students whereby students come to achieve the teacher's perspective of a lesson in what may lead to intersubjective understanding. Excerpt 2 below will be used to show how there were few student elicitations that requested a clarification of understanding in the third transaction of the same lesson.

*Excerpt 2:*

- |     |    |         |                   |  |
|-----|----|---------|-------------------|--|
| 60. | T  | S       | acct<br>p         | OK./<br>You can find the differences but....   |
| 61. | S  | S       | rep               | They're similar  |
| 62. | T  | S       | acct<br>con<br>el | They're the same./<br>So, if you have two things that are similar you try to show that they're different./<br>Take two twins for instance.                                   |
| 63. | SM | S       | rep               | They're the same.  |
| 64. | T  | S<br>C  | acct<br>p         | OK. They're the same./<br>But...   |
| 65. | S  | S       | rep               | There are some ways that they're alike but they're also different  |
| 66. | T  | S<br>BO | acct<br>el<br>p   | They're also different./<br>Obviously, what would #3 be? /<br>If #2 is we are choosing two things that are similar and we are trying to find differences, what would #3 be?/ |

In this excerpt, it seems that the fact that incomplete replies were followed by prompting on my part did not give students the chance to realize on the spot that their reply needed amendment. Rather, the prompting allowed them after a few turns to notice how their reply had been incomplete, but only after they had arrived at a more complete reply. At turn (61), for example, when student (S) gave an incomplete reply, my feedback at turn (62) did not directly inform him that it was not complete. As a result, he probably did not feel the need to make *elicits* in order to ask me questions. In the process, however, he was introduced to a more complete reply arrived by student (SM) at (65) after I reviewed previous learning through the *conclusion* I made at (62) and prompting at (64). Indeed, Donato and Adair (1992) hold that rather than simply reporting the answer, scaffolding involves learners in searching for the answer. This process helps pupils achieve the teacher's perspective of a task.

#### 4. Conclusion

The present research has pointed towards how exploratory feedback as an element of scaffolded instruction may be realized in a lesson and the type of student interaction that it creates. I tried to describe how exploratory feedback may be linguistically delivered in order to describe the type of interaction which accompanies it during a lesson. Although a caveat is in order in relation to the generalizability of findings from such a particularized study, this research has contributed to the field of socio-cultural theory in several respects.

First, the current literature on scaffolded instruction appears to be quite general in reporting on the effects of scaffolding on student learning and interaction where most studies appear to discuss scaffolding as a general concept without delineating the type of interaction which may accompany any of its specific elements as that of exploratory feedback. In that respect, this study has helped present the exploratory feedback that takes place during scaffolded instruction as a more concrete concept with a specification of the type of student interaction it may create in a classroom.

This study has also contributed to the field of applied linguistics through the choice of research methodology. With the analysis of spoken discourse as the main research method, this study has attempted to link the exploratory feedback that occurs during scaffolded instruction and student interaction to applied linguistics.

One obvious next step in this research process is to conduct further research on how other elements of scaffolded instruction impact student interactional style in a classroom just as was done with exploratory feedback. This can be applied to whole group lessons and more individualized tutoring instruction in order to compare and contrast scaffolding across different types of instructional settings. Of particular interest for further research would be an investigation of how student interaction in a classroom might in turn affect the process of scaffolded instruction being carried out.

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