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THE EFFECT OF TEACHERS' QUESTIONING BEHAVIOR ON EFL CLASSROOM INTERACTION: A CLASSROOM RESEARCH STUDY

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Abstract

This qualitative-quantitative study is conducted as a classroom research. Focusing on two question types, display and referential, it explored recurring patterns of questioning behavior and their interactive effects were observed through non-participant observation. Forty reading comprehension classes in Tehran universities were observed by the investigator. The findings indicated that display questions were used by teachers more frequently than referential questions. Also, it was concluded that NOT all referential questions could create enough interaction. Further elaboration on the results may be found in the study report.

Introduction

Inadequacy of quantitative approaches to research led to the development of a separate field known as the qualitative approach to research. Such methods attempted to present the data from the perspective of the subjects on the observed groups so that the cultural and intellectual biases of the researcher would not distort the collection, presentation and analysis of the data (Alwright, 1988). It has increasingly been integrated into SLA research in recent years, its ultimate goal being to discover and to understand those phenomena from the perspective of participants in the activity. Long (1983) introduced non-participant observation (in contrast with participant observation introduced by Bailey, 1983) in which the investigator observes and records or takes notes of the observed activity, but without the control or guidance of a questionnaire or other instruments.

After the failure of several important methods comparison studies in the 1960's (e.g. Scherer and Werthimer, 1964; Smith, 1970) the influence of interaction analysis stimulated interest in foreign language classroom processes. A few years later, more careful observational studies gradually revealed which process variables were of interest.

Recently, there has been much research on teacher talk (e.g. Long and Sato, 1983). Issues such as the amount and type of teacher talk, speech modifications made by teachers, instructions and explanations, error correction and questions have been more or less the center of attention.

Questions

The Longman Dictionary of English language provides the following definition for a question: a command or interrogative expression used to elicit information or a response, or to test knowledge. Lynch (1991), however, criticizes the last aspect of it, i.e. to test knowledge.

In non-educational settings, people seldom ask questions to which they have already an answer. Although, there are a number of exceptions such as jokes (e.g. what's the difference between – and -?), quizzes (e.g. Which country will host the next Olympics?) and courtroom discourse (e.g. And what did the defendant say to you then?). Lynch characterizes a question as an utterance with a particular illocutionary force; and Quirk et al.

(1970 and 1985) define a question as a semantic class used to *seek* information on a specific subject (Lynch, 1991).

Long and Sato (1983) and Brock (1986) have investigated the role of questions in second language learning in the classroom environment. They have worked on the role of teacher's question types (especially display and referential questions) and their facilitating the learning. Van Lier (1988) believes that classroom questions of whatever sort are designed to get the learners to produce language. Brock contends that referential questions increase the amount of learner output; therefore, an increased use of referential questions by teachers may create discourse which can produce a flow of information from students to the teacher, and may create a more near-normal speech. However, it is believed that display questions require short or even one-word answers and hence are less likely to get learners to produce large amounts of speech.

Lynch quotes a number of researchers who investigated the balance between referential questions and display questions in the foreign language classroom. Long and Sato (1983) compared the questions occurring in informal NS-NNS conversation, and teacher-learner interaction in the second language classroom. Lynch (1991) summarizes their findings as follows:

Referential (information-seeking) questions which predominate in NS-NNS conversation outside classrooms (76% of all questions asked) made up a 14% of questions asked by teachers. This result suggests that, contrary to the recommendations of many writers on second language teaching methodologies, communicative use of the target language makes up only a minor part of typical classroom activities. "Is the clock on the wall?" and "Are you a student?" are still the staple diet, at least for beginners.

Further qualitative distinctions were made by Long and Sato (1983) who suggest that learner responses would differ not only quantitatively but also qualitatively, depending on the type of questions. Referential questions, which seek information unknown to the speaker, were thought more likely to elicit longer, more authentic responses than display questions, for which responses are predetermined by lesson content. This hypothesized effect of a process variable was tested both in a simulated classroom interaction (Brock, 1986) and in a natural classroom experiment (Long, 1983). The results suggested that referential questions elicited slightly longer and more student utterances.

The study reported here consists of two parts; in the first part which is more or less qualitative in nature, no predetermined line of search is followed; rather, the obtained data is investigated for recurring patterns of EFL teachers' questioning behavior. This aspect of the study will reveal generalizable patterns of teachers' use of questions in the observed EFL classrooms. However, the second part, which is of a quantitative nature, is concerned with clarifying two issues. The first issue concerns EFL teacher's questioning behavior, and the second concerns with the amount of interaction caused by teacher's questions.

Method

Focusing on the distribution of display and referential questions in EFL classrooms and their interactive effects, two hypotheses were shaped at the outset.

Hypothesis 1: There is no difference between the distribution of teachers' use of display and referential questions.

Hypothesis 2: Referential questions create more interaction in the classroom than display questions do.

The qualitative side needed no hypothesis to be made beforehand; it helped a number of patterns (of teacher's questioning behavior and EFL classroom interaction) emerge out of the study data, which will be presented later in this report.

Referential questions are those questions for which the answer is not already known by the

teacher. Such questions may require interpretations and judgments on the part of the "answerer". *Display questions* refer to those questions for which the questioner knows the answer beforehand; such questions are usually asked for comprehension checks, confirmation check, or clarification requests. *Interaction* is used in a general sense in this study, referring to any sort of interaction, student-student or teacher-student discussions, group discussions, and any type of classroom participation (Long and Sato, 1983).

The main assumption behind this study is that interaction in language classrooms will lead the learners to better learning, and will activate their competence (Malamah-Thomas, 1987). Brock (1986) also maintains that an increase in the amount of classroom interaction will help (foreign) language learners learn the target language easily and quickly. She believes that increased language output will improve language learning.

None of the already-invented and used schemes (e.g. Moskowitz, Flint system, Flanders' interaction Analysis Categories, etc.) completely suited the purpose of the study. Therefore, it was decided to carry out the observation in a way similar to partial ethnography.

Three EFL instructors from Allamah Tabatabaee University and two from Tehran University, Iran, were randomly selected for observation. The classes were observed as carefully as possible during a two-month period. The researcher carried out the observation personally, sitting in the classes from beginning to the end of each session, taking notes of teachers' questions, their number and functions (e.g. comprehension check, talk initiation, etc), listening to the discussions of the students, writing down the amount of student-student or teacher-student interactions, length of the learner's responses to different types of questions, and other noticeable patterns.

After data collection, the observed patterns were analyzed with reference to earlier studies, first, to find and reveal noticeable generalizations and patterns in teachers' questioning behavior and EFL classroom interaction and second, to verify the hypotheses. Descriptive and inferential statistics were used for data analysis.

There were no experimental subjects in the sense that we have in experimental research, neither control nor treatment groups. The subjects of the study were five non-native speaking (NNS) English instructors at Allamah Tabatabaee University and Tehran University, Tehran; three holding Master's and two PhDs ranging from 30 to 52 years of age. All, having experience in teaching EFL courses for several years, taught Reading Comprehension at upper-intermediate level with the same text-books (cited in the bibliography). Their only behavior to be observed was their use of questions. None of them knew about the focus of the study. However, they were informed about it after the data were collected.

Other participants in the study were Iranian students of English (Language and Literature or Translation) attending Reading Comprehension II and III at the above mentioned universities. The focus of the observation was not on a certain student; rather, their participations in teacher-fronted or group discussions were observed.

The only way to collect useful data was non-participant observation, the focus being on the teacher's use of questions and its effect on classroom interaction. The number of display and referential questions and their interactive results were all recorded. However, teachers and students were observed with no reference to their age, psychological traits or another sort of bias.

Findings

A. Quantitative Results

In order to find a distribution balance for teacher's display and referential questions, their corresponding numbers in each session were added up. It was found that the

observed teachers have used display questions 4.4 times more than the number of referential questions. In other words, out of a total of 1628 questions, 1335 have been display (about 82%) and only 293 referential (about 18%).

Also, using chi-square ($p < 0.05$, $df = 1$), the first hypothesis was rejected. That is, the observed chi-square was far greater than the corresponding critical chi-value (3.841). Statistically speaking, the number of DQs used by EFL teachers was significantly higher than the number of RQs they asked. In other words, the distribution of the two question types was absolutely different.

As for the second hypothesis, two groups of questions were randomly selected from among the obtained data for statistical analysis. The amount of time each question resulted in classroom interaction was measured (in minutes); then, they were added up; and a mean was calculated for each type (DQ-mean=0.625, RQ-mean= 2.833 minutes). Then using a t-test ($p < 0.05$, $df = 24$), the observed t-value (3.82) was noticed to be greater than the t-critical (1.71) (See Table 1).

Table 1. The amount of interaction caused by two question types

Question types	number	interaction mean	SD	t-observed
RQs	18	2.6825	1.465	3.82
DQs	8	0.626	1.001	

Comparing the two means, it was seen that the observed results were statistically significant. In other words, the second hypothesis of this study is to be confirmed. That is, the amount of classroom interaction caused by RQs is much greater than that caused by DQs; RQs cause more interaction than DQs.

Table-2. Referential questions

1. What kind of a diet is the best? (2 min)
2. What do you have to add? (1 min)
3. Do you feel mosquitoes are harmful or useful? (3 min)
4. Has a mosquito ever bit you? How did you feel then? (3 min)
5. Have you ever been close to death? (6 min)
6. Do you know how to defuse a mine? Have you been in the mine disposal unit? (4 min)
7. How important are proteins for health? (2 min)
8. What kind of food is rich in protein? (1 min)
9. Will you be stronger if you eat much protein? (3 min)
10. Do you think that healing and belief are related? Why? (5 min)
11. Do you believe that our workers should also have fun and games in their break intervals? (4 min)
12. Why do you think so? (3 mm)
13. Do you think that it is fair to deduct taxes from the wages of workers? why? (2 min)
14. What's your opinion on working for the same company all your life? (2 min)
15. Do you believe in vegetarianism? (3 min)
16. Are you married? (2 seconds)
17. Could you please tell us how you found your wife? How did you select her? (2 min)
18. What's your opinion about finding your spouse through ads? (4 min)

Table-3. Display Questions:

1. Where does the stress fall in "nutrition"? (Zero min)
2. What's the meaning of "current"? (Zero min)
3. Where do we use "guarantee" most? (Zero min)
4. What part of speech is "populated"? (Zero min)
5. What does this paragraph say? (1 min)
6. What's the opposite of "gloomy"? (Zero min)
7. Can anybody tell us a brief account of this unit? (3 min)
8. True or false? Why? (1 min)

The second hypothesis was statistically confirmed. However, the qualitative data, gathered through observation, implied that it is to be modified. An exemplary referential question from the study data is, "Have you ever been close to death? How did you survive then?" Such questions were found to cause more learner speech than display questions - such as "What is the opposite of "near"? - did. It is reasonable to accept that learners tend to speak and participate more when the expected answer is longer. While display questions are usually asked for comprehension checks, confirmation checks or clarification requests (Long and Sato 1983; Brock, 1986), referential questions are usually used to fill in the information gaps. Therefore, motivation and interest causes the interaction to be more lifelike (Long, 1981).

However, there can be found a number of referential questions which required a shorter answer and after them there was a period of silence or topic-change. Questions like the following did not help initiate a well-formed interaction:

- Where do you live?
 What's your father's job or name?
 What's the combination of your briefcase lock?
 What page is it?
 Do we have any exercises left?

Therefore, it is better to modify the second hypothesis as follows:

Most, not all, referential questions create more interaction in the classroom than display questions do.

B. Qualitative Findings

The study was not confined to answering the two research questions; rather, during the data collection procedure, a number of patterns of classroom interaction and questioning were explored, which will be presented now.

1. Teachers ask a number of questions - mostly referential - before they start to work directly on the Reading. These questions usually help the students warm up for the task, and get familiar with the topic of the reading. It is usually in this phase that some of the vocabulary (and idioms) are activated in the learner's mind and they experience their use in real contexts. This is in fact what is already known as advance organizers.

2. Teachers used a number of general questions which were not directly addressed to any of the students present in the classroom. Such questions as "What's a generation gap?", "Has anybody ever been to Japan?", "Any questions so far?" and so on, are of this kind. The interesting aspect of these questions is that learners responded to these questions in two contrasting ways: they either kept silent or gave a choral response. Examples:

a) *Teacher: Does anybody know about the American Immigration Permit?*

Class: (silence)

b) *Teacher: (After the reading is finished) Any questions here?*

Students: No, no. (a choral response)

3. Contrary to what is commonly thought about display questions, said to elicit short or even one-word answers (e.g. Brock, 1986), sometimes a display question may cause learners to give, say, a five-minute answer, though we may not consider it interaction due to its one-way nature.

4. Teachers usually paraphrase, rather than repeat, their questions whether the same person or another is asked. This can be considered as a pseudo-wait time, providing an opportunity for the student to think twice about the question. However, teachers usually do not give real wait time in the sense that they wait during a period of silence for the answer. (see also Richards and Nunan, 1990). This lack of wait time is often observable, mostly with display questions (to which teachers do expect a short answer at least). Observation also revealed that paraphrasing elicited longer responses than repeating did.

5. Almost all the questions asked by teachers while working on the exercises were display. Perhaps due to the accuracy-focused nature of grammar exercises, they don't seem to have led to interaction or speaking practice; on the contrary, short-answer questions testing comprehension seem inevitable. Therefore, the amount of interaction or speaking was observed to be reduced to the least during the session.

6. Not all teachers made equal use of display or referential questions. This seems to be a natural incidence since not all teachers think alike, or teach in the same way.

7. Two main functions of teachers' questioning behavior were observed to be turn allocation and talk initiation. Students who are less likely to participate are usually encouraged, or forced, to speak when *asked* to speak. Questions are also a means at teacher's disposal to distribute turns fairly among all the learners. Some students are less confident or shy but they can also participate when the teacher allots them a turn.

8. Most of the display questions asked by teachers concerned textual information, e.g. comprehension checks, summary of paragraphs, meaning of words, idioms, etc, position of stress and the right way of pronouncing certain word; while, most of the referential questions concerned personal information - such as age, marital status, family, future arrangements and opinions, e.g. on education, smoking, crimes, etc.

9. It seems that the use of display questions is not separable from Reading Comprehension classes, and the results indicated that the frequency of display questions, in general, is considerably higher than the frequency of referential questions.

This fact may be explained from two interrelated perspectives. First, this type of questions can contain small pieces of information to be quickly verified by asking. Secondly, where comprehension precedes production, it demands (that) teachers make sure that all students have comprehended the Reading, and this can not be done unless teachers make use of comprehension checks- usually display questions - to which a short and syntactically less complex answer is given. This pattern of questioning behavior in Reading Comprehension classes has the reduction of interaction as its outcome. Since it doesn't lead usually to more than one turn, negotiation of more than one chunk of meaning is impossible. Therefore, after the teacher shifts to another student or changes the topic, there remains nothing more than a one-turn communication of small pieces of information. And this is contrary to what Malamah-Thomas (1987) or Allwright and Bailey (1990) consider as interaction.

10. The observation analysis revealed that there is no real interaction in the observed classes. Interaction of two or more sides with a defined topic, tone, code, turn and task (see Allwright and Bailey, 1990) rarely happens in these classes. Such an interaction needs a considerable information gap (Pica and Doughty, 1986) to enhance it. An important ingredient is student-student interaction which is quite absent from the scene of EFL

Reading Comprehension classes. However, teacher-student interaction is observed in most cases.

Discussion

The study focused on what is going on in the classroom, specifically on teachers' questioning behavior - what kind of questions they ask, for what purposes, and so on. Through observation, it was found that display questions outnumbered referential ones. It was further observed that referential questions produced more classroom interaction. Seliger and Long (1983) quote Swain (1983), who argues that output may be an important factor in successful second language acquisition. She suggests that output creates the necessity for the learner to perform a syntactic analysis of the language. She further notes that comprehending the input or getting the message is possible without such an analysis. Producing one's own messages, on the other hand, may force the learner to pay attention to the means of expression to successfully convey his/her intended meaning. If it is true that such questions increase the amount of learner output, and if output leads to better learning, then questions can be an important tool in the language classroom, especially in those EFL contexts where the classroom provides the only opportunity to produce the target language.

There are a number of factors leading to the reduced amount of interaction. Repeated questions, low language proficiency, and limiting the class to the textbook were among the observed factors leading to the reduction of interaction. When a certain question is asked several times, students lose their interest in it. It becomes boring, and discourages any motivation to continue. Also, when teachers ask a low-proficiency learner a talk-initiating question, and s/he fails to respond, communication stops and the teacher is disappointed, turning to another learner in the hope of achieving communication. Furthermore, when the class-work is limited to a textbook, it was observed that negotiation of meaning is reduced to zero when doing the structural-formalistic exercises of the book. However, when there was, say, warm-up discussion at the outset of sessions, learners were more inclined to talk and initiate.

However, there are a number of factors enhancing the amount of interaction: interesting topics, teacher's attention, misunderstanding, information gap and humor. It was observed that there was more student participation when the topic interests them (e.g. topics such as marriage, religion, etc.). Also, in one interesting case it was observed that one of the students had got a wrong idea of the meaning of the word "food-shopper". He thought that the word equaled shopkeeper. There was real interaction for about several minutes. Then the student understood the meaning after a real challenge of his conception. This can also be considered as an example of interaction resulting from a considerable information gap. Moreover, teachers can increase the amount of interaction in their classes by applying two factors: humor and interest (attention). A learner will be more inclined to talk when s/he finds the teacher paying attention and interested in the answer. Also, when the teacher incorporates a piece of humor into the atmosphere of the classroom, students are encouraged to participate more than when it is a gloomy atmosphere with the teacher as the sole speaker.

It was inferred from the obtained data that display questions requiring short answers contained small pieces of information- e.g. on part of speech, word stress, intonation, antonyms and synonyms, word pronunciation and meaning, comprehension checks, etc. Brock (1986) and Long and Sato (1983) have reported that classroom interaction was characterized by the use of display questions. However, it seems that the use of display questions can encourage language learners, especially beginners, to get interested. It may also help teachers provide comprehensible input for learners. Referential questions, typical of content classrooms and high proficiency language classrooms, and usually requiring long

and syntactically complex answers contain, in fact, important points, e.g. interpretation, elaboration, giving opinions, etc

However, it would be dangerous to generalize that referential questions are more useful for language learning or display ones are useless. Each context requires an appropriate strategy for itself. Allwright and Bailey (1990) maintain that it is a dangerous oversimplification to suggest that verbal interaction in the classroom is just a case of "the more, the merrier". They add that "there may be times when teacher's desire to get students to interact verbally can be counterproductive. Rather, it is important for teachers to adjust their teaching style to learners' strategies".

Finally, it is suggested to study the findings if this study in an experimental research so that the results are scientifically verified.

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