EFFECTS OF TEACHER QUESTION TYPES AND SYNTACTIC STRUCTURES ON EFL CLASSROOM INTERACTION

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Abstract
One of the most common and prominent classroom activities is the act of teacher questioning. In classroom setting, teachers’ questions and students’ answers are considered a powerful teaching approach if they are used to challenge assumption, and lead to new wisdom and knowledge. Unfortunately, despite the great impact of the act of teacher questioning in facilitating the process of learning, it has a possibility to demotivate the learners if it is carried out incorrectly. Therefore, the research paper aims to clarify how EFL teachers can design questions that can expand students’ knowledge and promote creative thinking.

Keywords: Questioning, display, referential, syntactic structures, interactions

Introduction
Classroom discourse analysis is used as a research tool for investigating teaching practices and interactions among language learners and teachers. “The student-teacher discourse is also referred to as pedagogic discourse, and it is different in function and form from language used in other situations due to the distinct social roles of students, teachers and the activities they are engaged in” (Richards, 1992, p.52). One of the most common and prominent classroom aspects is the act of teacher questioning. Researchers have found that classroom teachers spend most of their instructional time conducting questioning sessions. In one study of reading groups, Gambrell (1986) concluded that teachers asked questions every forty three seconds. Furthermore, Brualdi (1998) pointed out that eighty percent of a teacher’s school day was taken up asking questions to students. As professional question askers, history recorded great teachers like the great Greek philosopher Socrates in terms of their skillful questioning act. Currently, questioning is the most ubiquitous phenomenon detected in classroom, as well as one of the most practical instructional devices used by most of the teachers (Cotton, 2003).

In classroom setting, Cotton (2003) claimed that teacher questions and student answers are considered a powerful teaching approach if they are used to expose contradictions, challenge assumption, and lead to new wisdom and knowledge. To vitalize the classroom questions, teachers should design questions which can expand students’ knowledge and promote creative thinking. A number of researchers (Brown and Wragg, 2001; Cotton, 2003; Richard, 1996; Morgan, 1991) state the following functions that teacher questioning serves in the classroom:
- asking questions helps teachers to follow up and elaborate on what a student has said.
students can openly express their ideas through answering teacher questions.

- asking questions enhances students’ interest and keep them actively involved.

- the act of questioning let students benefit from various explanations of the material by their peers.

- questioning is a good tool for evaluating student learning and reviewing the lesson as necessary.

- asking questions enables teachers to control class discipline and student behavior.

Additionally, Donald & Paul (1989) grouped the functions of teacher questioning into three main areas: diagnostic, instructional and motivational. As a diagnostic tool, classroom questions allow the teacher to find out what the students know and how they think about the topic, so teachers can evaluate the current states of students thinking. However, instructional function of classroom questions enables the teacher to encourage and support students learn new material and relate it with the old one. Regarding motivational functions, classroom questions can engage learners in the lesson and challenge their thinking. Moreover, teacher questions can draw students’ attention back to the lesson and provide a chance for some students to show off their distinction and challenge in front of their colleagues.

To apply the aforementioned functions of teacher questions in the teaching process, I think teachers should be provided with information on types of questions that can facilitate the learning process and maximize the classroom interaction. A close look at the above studies points out that the educators stress the importance of well-designed teacher questions in transferring factual knowledge and conceptual understanding to students. Unfortunately, despite the great impact of the act of teacher questioning in facilitating the process of learning, it has a possibility to demotivate learners if it is carried out incorrectly (Brualdi, 1998). So, the act of asking a good question is cognitively demanding and it inevitably requires sufficient pedagogical knowledge.

**Types of Questioning**

As far as teachers’ talk relates to questions, educators and researchers have suggested different categories and classifications for teacher questioning based on the type of response they ask for and the pedagogical purpose they serve. Barnes (1969) examined teacher questioning and classified the questions into four types. The first type contains questions concerning factual matters, that is, the questions beginning with “what”. The second type includes questions of inference beginning with “why” and “how”. The third type encompasses open questions which do not require any inference. And the last type has questions for communication, which could control the behavior of learners. Barns further classified the second type into closed questions and open questions. Questions are closed because there is only one existing answer, while to open questions there is more than one answer. As I see, a lot of overlap can be detected between these types since “how” and “why” questions can also be factual (ask about facts rather than opinion). For instance, how do you come to school? Why did you go to hospital? Additionally, a “what” question can be a question of inference rather than factual. For example, what would happen if you were the president of the USA?

Another well known classification is the one by Richards & Lockhart (1996). They classified the questions into three categories in terms of the purpose of questions in classrooms: procedural, convergent, and divergent. Procedural questions relate to classroom procedures, routines and classroom
management. They are used to ensure the smooth flow of the teaching process. Unlike procedural questions, convergent and divergent questions are designed to engage students in the content of the lesson, facilitate their comprehension, and promote classroom interaction. Convergent questions encourage similar student responses and short answers like yes/no or short statements. They require students to recall the previously taught material to answer the questions without getting involved in high level thinking skills. On the contrary, divergent questions are different from convergent questions. They encourage diverse long responses with higher-level thinking that require students to give their own answers and express themselves instead of just recalling previous lessons. Compared to the previous categories, I think these classifications of teacher questions are clearer and more practical to be used in heterogeneous classes, since the teacher has to differentiate questions to make students feel more successful and challenged. In other words, if the teacher divides his/her questions in each lesson into procedural, convergent and divergent types, every student in the class, regardless of their level, can participate and take part in the classroom interaction.

As communication is the utmost goal in language classrooms, Long & Sato’s (1983) two questioning types (display and referential) have become the most prominent category in the related contemporary studies. In display questions the answer is already known to the teacher and they are designed to elicit or display particular structures. For example, “what is the past tense of eat?” On the contrary, referential questions refer to the questions that teachers do not know the answers to, and require long syntactically complicated answers containing interpretation, elaboration, giving opinions and subjective information. For example, “why don’t students score full marks in writing essays?”

In related literature, much controversy can be easily detected among researchers about the role of display and referential questions in helping students acquire effectively the foreign language. In response to those who generalize that referential questions are more useful and display ones are useless, Gall (1984) stressed that both types are useful—and he claimed that the effectiveness of display and referential questions is determined by many factors such as teaching goals, content and students’ background and knowledge. For instance, in grammar classes, where students are supposed to master and memorize certain rules, display questions are workable and practical. Furthermore, low level students seem to perform better with display questions. In one of his school visits, Gall cited an example to show the importance of changing the question type and syntax in promoting class interaction. When the teacher asked a student about her achievements “talk about what you have done”, the student had no idea. Then the teacher changed the question syntax and type, “did you do music in school?” “What about drawing?” Therefore, the student got something to say. I absolutely agree with Gall’s claim because the students’ level and the objectives of the lesson should determine, to some extent, the type and syntax of questions which should be utilized.

David (2003) conducted a study in Nigerian secondary schools to investigate the distribution of display and referential questions and to explore their effects on ESL classroom interactions. The results of that study revealed that teachers used display questions more than referential ones and referential questions create less classroom interactions than the display ones. A similar study was conducted in Tehran universities by Shomoossi (2004) to study the teacher questioning in EFL classrooms. The results indicated that display questions were used more frequently than referential ones and not all referential questions could create enough teacher-student interactions. Smith and Higgins (2006)
agreed with Shomoossi’s claim by stating that the amount of student interaction and responses are not determined only by the types of questions asked but also by the way the teacher responds to student answers. Personally, I support such claims because professional teachers are supposed to exploit the answers of display questions by asking related follow up referential questions.

Other studies (Ellis, 1994; Zhou, 2002) concluded that the teacher’s overuse of display questions usually occurs in teacher-centered classrooms and results from their concentration on accuracy and form instead of meaning and communication. On the contrary, in student-centered language classrooms where communication is the ultimate goal, teachers tend to ask more referential questions.

Concerning question cognitive levels, Bloom’s taxonomy (1956) indicates that level of learning outcomes is determined by lower level questions (knowledge, comprehension and application) and higher level questions which encourage students to analyze, evaluate and synthesize. Through higher level questions learners are required to manipulate previously learned material or information to create an answer or provide logical reasoning to an answer. Commenting on Bloom’s taxonomy, Tarlinton (2003) claimed that higher level questions are more practical for encouraging students to think deeper and for stimulating them to seek information on their own, but lower level questions are appropriate for evaluating learners’ preparation or revising contents. Some research studies (Tisher, 1985; Willen, 1991) have shown that teachers spend most of their time asking low level cognitive questions which focus on factual information. It is widely believed that such questions limit students’ critical thinking and deep understanding of the subject matter. Conversely, Brualdi (1998) stated that high level cognitive questions which require students to utilize higher thinking and reasoning skills enable teachers to make sure whether or not a student has truly understood a concept. Personally, I think that low and high level questions are useful and practical in the teaching situations since the high level question are founded on low level ones. Additionally, the effect of teacher question on classroom interaction is not determined only by the question level but also by other related variables such as probing, and wait time, among others.

Based on the aforementioned categories and approaches of teacher questioning, teachers are required to sequence the act of questioning by asking questions that recall information at the beginning of the class, followed by questions requiring students to manipulate that information by comparing, classifying, or explaining, and then asking high level questions to make students use what they are learning to create inventive thought and powerful learning environment.

Syntactic Structures of Teacher Questions

To examine the role of teacher questions in second language classrooms in fostering language acquisition and class interaction, the syntactic structures of those questions should be investigated in addition to their types and functions since mastering structures facilitates the process of learning. Interestingly, many researchers like Celce Murcia & Freeman (1995) have claimed that language acquisition could be achieved through the integration of form (syntax), meanings (semantics) and use (pragmatics). In terms of syntax, question syntactic categories include wh questions, yes/no questions, or questions (alternative), tag, declarative and indirect questions. (Brock, 1986; Pica, 1986) examined the effects of teachers’ display/referential questions on students’ syntactic response. They found that inexperienced ESL teachers ask more yes/no questions and fewer wh- questions than experienced teachers. Consequently, learners’ responses were more than twice as syntactically complex in response to wh-questions as compared to yes/no questions.

Furthermore, Mikio (1989) pointed out that there is a tendency for a teacher to change a syntactic question type from wh- questions to yes/no ones when he/she feels that students encounter a difficulty in answering or understanding the wh-
questions being asked. Additionally, Mikio concluded that wh- questions are powerful because they trigger longer and more syntactically complex utterances than yes/no questions. Interestingly, teachers were recommended in that study to use a wide range of syntactic question types such as tag and indirect question to expose learners to a comprehensible input and increase class discussion. In my opinion, Mikio’s recommendation for teachers to diversify their questions syntactically is of great importance, because students may also learn inexpertly how to form correct grammatical questions.

To sum up, teachers’ questions are of little value and importance unless they have an impact on students’ interaction, learning and communication. Regardless of the question types and their syntactic features, the need for teachers to implement questioning strategies suiting students’ levels and subjects being taught should be highly stressed. As Sanders (1966, p.21) claimed that “practical questions should consider many possibilities of thought and are built around the different kinds of thinking. Good questions are not only for evaluating what has been studied in a narrow sense, but also for evaluative thinking and learning." However, researchers and educators should better look for the impact of teachers’ questions on classroom interaction and student learning behavior rather than their forms and types.

**Research Questions**

As seen in the above section, there are many categories and classifications for teachers’ questions. In this study, teacher questions will be examined in the light of Long & Sato’s classification (display and referential) in terms of their frequencies, syntactic structures, effects on student responses and classroom interaction. Specifically, the study aims to address the following questions:

1- Do teachers use display questions more than referential in the EFL classrooms in the UAE public secondary schools?

2- Do teachers’ referential questions create longer student utterances than display questions?

3- What are the most frequent syntactic structures attributed to teacher questions?

**Methodology**

**Subjects and Context**

All the teachers (a male and two females) who were involved in the present study are Arabs from different nationalities teaching in public secondary schools. All of them attended several teacher training courses in addition to their being university graduates. Their experience in teaching English as a foreign language ranges from 10-17 years. Although the sample of teachers and classes in which the lessons recorded is relatively small, the classes are quite representative to the secondary classes in the UAE public secondary schools in terms of size, textbooks and teaching approaches. Concerning students, their ages ranged from 16-18 years and all of them were national students. They have been studying English for more than ten years. In terms of classes, the class of teacher A consisted of 17 female students from the science section and the main objective of the lesson was to watch a video clip and read a passage about an ornithologist. But the class of teacher B consisted of 18 male students from the science section also and the objective of the lesson was to read a reading passage about agriculture in the Arab World for specific information. Finally, 21 female students were in the class of teacher C and the lesson was about “youth curfew programmes”. The length of the three classes was 30 minutes on average.

**Data Collection and Procedures**

As this study aims to give a detailed analysis of the teacher questioning in English language classes, the following research tools were used to collect the data:
Observation: three observations were carried out by the researcher in the three targeted classes to take notes about un-recordable things such as lesson objectives, context and learner participation.

Audiotapes: Three English language lessons were recorded in three secondary classes of three teachers in three different public secondary schools in the Eastern Coast of the UAE. Peachey (2008) pointed out that a recording in classrooms is objective and unbiased since it enables the researcher to be close to the observee without disturbing or distracting him/her too much. The recordings were carried out in relaxing and natural ways as the subjects (teachers) are close to the researcher. Before recording, the permission was obtained from the three school principals and the subjects were told that the recording was mainly for an analysis of class interaction in general and they were requested to conduct the lessons as usual. Importantly, the researcher didn’t inform the observed teachers about the specific objective of the observation to keep the teaching situation as real and natural as possible.

Then, the recordings were transcribed orthographically and careful analysis of the lessons was undertaken with special reference to the teachers’ questions and students’ responses and interaction. Teacher questions in the three classes were tallied and classified according to their types (display/referential) and syntactic structures, whereas the transcripts of students’ responses to the teacher questions were analyzed and the average length (the number of meaningful words) was calculated. For the purpose of this study, grammatical and phonological correctness in students’ responses was not considered when measuring the number of words. Rulon and McCreary (1986, p.186) defined a communication unit as “…a phrase, word or sentence that communicates semantic or pragmatic meaning regardless of grammaticality.” It is worth mentioning that few parts of teacher and student utterances were not transcribed because of being inaudible and unclear in addition to the repetitious questions and answers.

Results

The findings in this study pointed out that the total number of questions asked by the three teachers in the three classes was 105. The range of those questions was from 29 in class C to 46 in class A. Table 1 also shows the distribution of display and referential questions asked by the teachers in the three classes. It is noted that 62% of the total questions were display while only 38% were referential. The largest number of display and referential questions was asked in Class A.

Table 1: Distribution of teachers’ display and referential questions.

<table>
<thead>
<tr>
<th>Class</th>
<th>Display Questions</th>
<th>Referential Questions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>26</td>
<td>20</td>
<td>46</td>
</tr>
<tr>
<td>Class B</td>
<td>19</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>Class C</td>
<td>20</td>
<td>9</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>65 (62%)</td>
<td>40 (38%)</td>
<td>105</td>
</tr>
</tbody>
</table>
It is worth noting that class interaction represented by the length of students’ responses to the asked questions was measured by counting the number of words in students’ answers for each type of the questions. As seen in Table 2, the total number of words of students’ responses to display questions in three classes was 188 but 183 words to referential questions. With respect to the average length of students’ responses (calculated by dividing the total number of words by the total number of each type of teacher questions), referential questions scored higher average (4.5) than display ones (2.9). In other words, referential questions produced longer answers. Generally the average length of learners’ responses to both question types was quite low.

Table 2: Length of students’ responses to teachers’ display and referential questions.

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
<th>Total Words</th>
<th>Average Length of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>85</td>
<td>55</td>
<td>48</td>
<td>188</td>
<td>2.9</td>
</tr>
<tr>
<td>Referential</td>
<td>116</td>
<td>20</td>
<td>47</td>
<td>183</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Concerning the third research question which is about the syntactic structures of teacher questioning, figure 1 indicates that wh-question took the lion share (66%) of teacher questions; yes/no (23%) while others (tag, or questions, statements with rising/falling intonation) scored only 11% of teacher questions.

Figure 1: The percentages of teacher questions syntactic structures

In the discussion section, it will be seen how the results related to syntactic structures matches Celce’s (1999) assumption in this regard.
Discussion

It is not surprising to see the big number of questions asked by the three teachers since questioning is a key tool for instructing and evaluating in classrooms. This reflects the findings of some classroom interaction studies around the world and it is in consistent with Bruald’s (1986) and Gambrel’s (1986) claim about the big amount of teacher’s time taken up by asking questions. Concerning the teacher question types, the results revealed that display questions were the most common and frequently asked questions in the three classes (62%). This result concords with the findings of some studies which confirmed the overuse of display questions in EFL classes (Alomrani, 2006; Brook, 1986; Shomoossi, 2004). It is noted that display questions were used to warm up the class, review previous lessons and elicit factual information. For example, “what is the date today?”, “who is the man you see in the video clip?” in class A and “what is unit 2 about?”, where is banana grown?” in class B. Additionally, teachers’ desire to involve all the students in the interaction and the nature of the lessons (reading comprehension) might make teachers ask more display questions since they elicit short answers. Nunan et al (1996, p.92) state that “choice of questions should depend on the objective of the lesson and the size of the class.”

In this study, referential questions were asked to get students’ opinion or interpretation about the discussed topics. For example, “what do you like about Roger’s job? “what would you do if you were Roger?” in class A and “what is your advice for the Arab Countries?”, “Are you for or against Robert? why “in classes B and C respectively. Also, it was observed that high proficient learners could interact with teachers’ referential questions rather than average and low level students. Although the number of referential questions asked in the three classes was less than the display ones, longer student responses were elicited by referential questions (4.5 the average words per a referential question, but about 3 words per a display one). Increasing the amount of class interaction (learner output) is of great importance for EFL context where the target language is produced only in classrooms (Swain, 1983). It is worth mentioning that the longer responses elicited by referential questions in this study might be related to other factors such as the students high proficiency levels compared to their counterparts in literary sections, interesting topics (youth issues, agriculture in Arab world) and teacher techniques...etc. Alarmingly, some referential questions did not elicit any answer as seen in the transcript of class C, and sometimes they elicited only one or two words as in class B. Moreover, some display questions elicited long answers (more than six words) as seen in class B when the teacher asked about the things done by Arab governments to encourage agriculture. In many instances, as suggested by Smith (2006), the question asked does not determine the amount of student responses but the way the teacher raises the question and responds to the students answers. This point is illustrated in class C when the teacher elicited the longest response by asking a “why” question after a yes/no one about students attitudes toward youth curfew. Therefore, I think that both teacher question types are useful in EFL classrooms. It would be risky to generalize the idea that display questions are useless and they elicit only short answers or referential ones are useful for language learning and they produce long answers. Instead, their use should be determined by students’ levels, lesson objectives and student learning strategies.

Regarding syntactic structures of teacher questions, it can be inferred from the obtained data that wh questions were most frequently used (66%) in the three classes. This finding is unsurprising because classroom is the most important place for using wh questions and teachers utilize them to expand learners’ knowledge, activate and engage students in classroom sessions (Celce-Murcia, 1999). An analytical look at the three transcripts indicates that the long student answers in this study were produced by wh questions rather than yes/no ones.
The overuse of wh questions in L2 classes might affect positively students’ language ability by giving them grammatical structures that seek out new information and then lead to more communicative interaction. At the same time, the usefulness and simplicity of yes/no questions in instruction should not be ignored. It is easily observed that the three teachers used yes/no questions to elicit short answers, confirm information, engage the weak learners and to facilitate students’ comprehension and understanding when they failed to answer wh questions like what happened in class C. Strangely, the use of other questions like tag, alternative, statements with intonations, was very rare in the three classes. This might happen because they are difficult for students to respond to them. Celce-Murcia (1983, p.166) pointed out that most of those questions start with subject rather than wh or auxiliaries which students are more familiar to and “tag questions don’t necessarily have to be answered.”

Conclusion

The current study investigated the types of teacher questions and their impact on classroom interaction in three UAE public secondary schools. It was revealed that display questions are used more frequently than referential ones, and high frequencies of wh questions were found in the three investigated classes. The findings of this study suggest a need to take a careful look at the act of teacher questioning. To foster classroom interaction and enhance L2 learning, teachers in the UAE schools need to do the following:

- increase their knowledge about the different types of questions and their roles in classroom communication and interaction.

- tailor, design and balance their questions according to students’ levels, lesson objectives and learners strategies.

- maximize the use of referential questions where possible to enhance student communicative competence.

- use more follow up questions to help students particularly slow learners to produce more complex utterances.

- expose learners to more tag, alternative and indirect questions.

- resort to yes/no questions when students have difficulties in answering wh questions.

With respect to the study limitations, the small number of participants (three teachers) limits the findings generalizability, so it can be considered an initial study in this field. Furthermore, I have to admit that the proficiency level of the three investigated classes wasn’t controlled or judged precisely.

Finally, to get the whole picture and touch the core of teacher questioning, I recommend further qualitative and quantitative studies about the strategies used by teachers when asking questions such as repetitions, probing, wait time, and a further investigation is needed to examine the correlation between different wh words in teacher questions and the length of student utterances and syntactical complexity.

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