Teachers' Questions and Questioning Techniques in Classroom Interaction

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Abstract: Teachers' questions and questioning techniques play an important role in classroom interaction, especially in the 21st century in which learners and the development of their thinking skills become the center of the teaching and learning process. This study aims to investigate teachers' questions types and questioning techniques in classroom interaction at the Department of English, Faculty of Languages and Translation, University of Aden. The research methodology was quantitative approach design. Classroom observation checklist (structured observation) was used to collect numerical data. The population of this study was 10 of teachers at the Department of English, Faculty of Languages and Translation, University of Aden. The simple frequency count method was used for analyzing data. The findings of the study revealed that convergent question is the type of teacher's question that was used in classroom interaction. It got the highest percentages (100%) while procedural question was used (80%) and divergent question was used (40%). Using positive promoting technique got the highest percentage (90%). Using wait time technique, using positive reinforcement technique and avoiding negative reinforcers technique were used (70%) while avoiding teachers' favoritism technique was used (50%).

Key Words: teachers' questions types, questioning techniques, classroom interaction.

Introduction

Questioning plays a vital role in teaching-learning process as a whole and in classroom interaction in particular due to creating a meaningful and an effective educational context. In this study, "classroom interaction" was used to refer to asking or giving questions from teachers to students in classroom discussion.
Classroom questioning helps teachers to achieve the intended learning outcomes. Therefore, there are different types of questions that teachers use in classroom interaction: procedural, convergent and divergent questions (Richards and Lockhart, 1996, p. 186). Teachers' procedural questions focus on checking students' understanding or their assignments. Convergent questions focus on students' lower thinking level whereas divergent questions focus on higher-thinking level.

Furthermore, the success of English language teaching and learning in the classroom refers to the application of questioning strategies by teachers (Nashruddin and Ningtyas 2020, p.5). Questioning behaviors are the strategies/techniques that teachers use as a crucial part of classroom interaction to affect students' learning process positively by engaging them and eliciting a deep level thinking (Gattis 2002, p. 41). In addition, teachers' should behave positively in such a way that the students enjoy learning and responding by providing them positive reinforcement from the questions being asked as well as for the responses elicited (Vijayan, et.al. 2016, p.208). Nevertheless, inappropriate teachers' behaviors may take place in a classroom interaction. These behaviors or idiosyncrasies include "repeating the question, repeating all students' responses, answering the question yourself, not allowing a student to complete a long response, not attending to the responding students and always selecting the same student respondents" (Orlich, et. al. 2010, p. 241). That is to say that teacher's classroom management style is considered a crucial issue in creating an effective classroom interaction.

**Statement of the problem**

As a head of English society at different secondary schools, the researcher observed that there was a poor classroom interaction between teachers and students in classroom because the students were passive. This problem occurred because some teachers did not use appropriate questions as well as questioning techniques for creating an affective classroom interaction. Hao Yang (2017) asserted, "some teachers do not use right strategies and their questions lacking effectiveness" (p. 158). In addition, Nashruddin and Ningtyas (2020) pointed out that the open-closed questions and knowledge questions were used dominantly by the teachers while synthesis and evaluation questions were used only a few times by teachers in classroom interaction (p.158). However, Zaenudin (2015) legitimated that the material and teaching approach play a crucial role in the discrepancy of using types of questions. Also, the use of authentic material and
classroom discussion technique facilitates the teachers to use referential questions. Accordingly, an effective classroom interaction could be taken place (p. 111). As a result, the researcher thought it significant to investigate this issue and found out the types of questions and questioning techniques that teachers use in classroom interaction in the academic setting at Faculty of Languages and Translation, University of Aden.

Objectives of the study

The study aimed to:

1. To investigate the types of questions teachers use in classroom interaction.
2. To investigate the questioning techniques teachers use in classroom interaction.

Research Questions

In the present study, the following research questions are addressed:

1. What types of questions do teachers use in classroom interaction?
2. What are the questioning techniques that teachers use in classroom interaction?

Significance of the study

The value of this study can be embraced through two dimensions. First, the study becomes more important for teachers to give them a good background on the different types of questions that teachers use in classroom interaction. Secondly, teacher's questioning skill is one of the important skills a teacher should master in classroom interaction since it develops students' critical thinking skills. Consequently, the study sheds light on questioning techniques for creating an effective classroom interaction. Moreover, this study is significant because it is the first attempt made within the context of the Department of English at Faculty of Languages and Translation / University of Aden. Therefore, the study may draw attention to both education faculties and teacher preparation program on classroom questions and questioning strategies and focusing on this issue.

Scope and Limitation of the study

This study is limited to 10 teachers of the members teaching staff at the Department of English, Faculty of Languages and Translation, University of Aden.
Research Methodology

An explicit research design paves the way for carrying out the study and informs the researcher where to go, what to do and how to get there. The research methodology was quantitative approach design.

Participants

The population of this study was 10 teachers of the members teaching staff at the Department of English, Faculty of Languages and Translation, University of Aden.

Sampling

Simple random sampling (randomization) was employed to give equal chances to all the participants of the study. To achieve this, the researcher depended on the attendance sheet by which (10) teachers were selected randomly.

Data collection procedure

Observation is one of the valuable data collection procedure researchers can use to gain live data from live situation and accordingly, it provides evidence of what happens in the classrooms (Borg 2006 and Cohen, et al. 2007, p. 396). The appropriate procedure for the purpose of the study is classroom observation. Quantitative approach was used to collect numerical data. Accordingly, an observation checklist was designed (structured observation) in which the researcher only observed and did not take part in the classroom interaction (non-participant observation). The observation checklist was prepared to observe types of questions and questioning techniques that teachers use in classroom interaction in the light of previous studies. Consequently, the evidence of validity of the observation checklist was based on adapting: 1) the classification of teachers' questions of Richards and Lockhart (1996) and 2) the classroom questioning techniques by Orlinch, et al. (2010). Regarding the reliability of the observation checklist, inter-rater reliability was employed to measure the degree of agreement and disagreement of the researcher and the other one (PhD holder) by using Cooper Harris, Hedges L.V (1994, p. 147) formula.

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\text{Agreement rate} = \frac{\text{Number of observation agreed upon}}{100}
\]
Total number of observations

A strong positive agreement was found (91.66%) between the two observers.

Data Analysis

Data analysis is considered as a process of changing the unorganized and hardly readable data to organize meaningful and easily readable one. In the case of this study, quantitative data analysis was implemented to the observation data. The simple frequency count method was used for analyzing data included:

1) Coding the observation checklist sheets (1-10).
2) Classifying teachers' questions into three types: procedural, convergent and divergent questions and classifying the questioning techniques into five techniques: using wait time, using positive reinforcement, avoiding negative reinforcers, using positive promoting and avoiding teacher's favoritism.
3) Calculating frequencies and
4) Reporting percentages. Each item in classroom observation checklist was ticked by "yes" or "no". The two codes (Yes / No) were calculated to be found firstly in percentage weights. Finally, percentages were presented in bar graphs.

Literature Review

Teachers' Questions

Teachers' questions is the principle way that helps in controlling the classroom interaction. Teachers need to design environments and interact with learners to foster inventive, creative, critical learners (Hao Yang 2020, p.159). Question is defined as any interrogative sentence which is uttered by the speaker in order to get information from the hearer (Erlinda & Dewi, 2014 cited in Paramartha et al. 2018, p.8). From a comprehensive angle, Seime (2002) defined question in classroom as any statement intended to evoke a verbal response (p.10). Regarding the types of teachers' classroom questions, Nshruddin and Nigtyas (2020) pointed out teachers' questions that were used in classroom interaction were the open-closed questions and knowledge questions which were used dominantly by the teacher while synthesis and evaluation questions were used only a few times (p.158). Similarly, Sujariati et. al. (2016) asserted that the
open/closed questions and display questions were the dominant. While, the recall and referential questions, it used only a few times by teacher (p.107).

Besides, a question is one of the most important tools in guiding and extending students' learning (Sujariati, Rahman and Mahmud, 2016, P. 108). Yuliawati, Mahmud and Mulianti (2016) cited in Paramartha et al. (2018) asserted that teachers' classroom questions play a crucial role in developing students' critical thinking skills (p.9).

Moreover, for Richards and Lokhart (1996), teachers' questions are classified in three main types: procedural, convergent and divergent (pp. 186-187). Procedural questions focus on the context of learning. Astrid et. al. (2019) pointed out that the procedural questions can be used in the beginning of the lessons and after explaining the materials (p.97). Accordingly, these types of questions, teachers may use to check students understanding or assignments. Convergent questions is one of the questions that teachers design to engage students in teaching and learning process. It can also be used tp promote students thinking and participating in classroom interaction. It focuses on central topic. Therefore, students' responses are often in short answers. In other words, convergent questions focus on engaging students in lower-level thinking such as recalling and remembering what the students previously have learnt. Divergent questions, on the other hand, focus on engage the students in higher-level thinking in such a way students require to analyze, synthesize and evaluate rather than recalling or remembering what they have learnt before.

**Questioning Techniques**

Questioning plays a vital role in creating a more effective learning atmosphere in academic setting. The term "questioning techniques" was first proposed by Richard (1992) referring to different procedures teachers use in classroom interaction by asking different types of questions to meet the objectives of the curriculum (Ziyaeemehr 2016, p. 429). Asking and giving questions from teachers to students or from students to teachers, in fact, reflects a good communication between them in classroom interaction that is considered as the heart of communication (Brown 2000, p.165). That is to say, the use of questions is one of the most effective means of initiating communication in language classroom (Ma 2008, pp. 92-100). In addition, Fakeye (2007) reported that teachers questioning behaviors had a significant influence
in developing and guiding the thought processes of students and the quality of students' responses (pp.127-131). Some of previous studies indicated that questioning strategies are essential to the growth of critical thinking skills, creative thinking skills and higher level thinking skills (Daniels (1997), Gallagher (1985), Letzter (1982), Parker (1989), Pollack (1988), and Schwartz (1996) cited in (Astrid et. al. 2019, p.92).

Teacher's Questioning skill is one of the important skills a teacher should master in classroom interaction since it encourages students' thinking (Harvey and Goudvis 2007 and Marzano 2007 cited in Aprian and Marchelina 2018, p. 40). With the same vein, (Yang 2016) stated that questioning can draw the attention of students and motivate their interests in class and widen their thoughts (p.158). In addition, Nashruddin and Ningtyas (2020) pointed out that questioning skill is a very important skill that should be mastered by teachers since it creates more meaningful learning situation as well as it can stimulate students to be more involved in language learning process (pp.5-6).

For getting a good questioning skill, a teacher needs to conduct some appropriate questioning techniques in the classroom interaction. Orlich et.al. (2010) printed out that there are a number of different questioning techniques that can be used for effective classroom interaction (pp.227-233). These techniques are:

**Using Questioning positively**

Questioning should enhance student enjoyment for learning and responding. So, teacher's questions should be used positively in such a way that the students should receive positive reinforcement from the questions being asked as well as for the responses elicited. That is, teachers' questions should never be used for punitive purposes (Orlich et.al. 2010, p. 227).

**Framing Questions and Using Wait Times**

Asking a question should pass through three steps: ask the question, pause and then call on a students. Wait time techniques is one of the important questioning skill teachers should master in classroom interaction. It means "the length of time the teacher waits after asking the question before calling on a student to answer it, or giving the answer" Richards and Lockharts
(1996, p. 188). In addition, using false starts, uncertain pauses and ineffective transitions should be avoided in framing questions (Orlich et.al. 2010, p.227).

Using Positive Prompting Technique

Prompting skill is a principal skill that a teacher needs to use when the students can not answer the questions I such a way a teacher wants them to, or they can not answer at all. Teacher's role, when this happens, focuses on prompting the student in a positive manner (Orlinch et.al. 2010, p. 229) as follows:

- By clarifying the question.
- By eliciting a fuller response.
- By providing positive reinforcement to complete an incomplete response or revise an incorrect one.

Handling Incorrect Responses

One of the problem teachers may face in questioning is handling students' incorrect responses. As mentioned earlier, teachers may use prompting skill when students' responses are partially correct or stated incorrectly. In this case, trecaher's task is to reinforce the positive aspect of a student's response while ignoring the negative one and conducting appropriate questioning behaviors (Orlich et.al. 2010, p. 230) as follows:

- Avoiding negative reinforcers such as 'no', 'you are way off' or ' that is incorrect'
- Rephrasing the question
- and leading to correct response with set of convergent questions.

Data Analysis, Interpretation and Discussion of the Results

This part presents and discusses the results of the data analysis for each of the research questions that were answered by conducting classroom observation. The results were presented according to the order of the study's questions respectively:
Teachers' Questions in Classroom Interaction

Research Question 1

1. What types of questions do teachers use in classroom interaction?

Item (1): Teacher asks students to check students' understanding or assignments.

Figure (1): Procedural Questions

Figure (1) above, reveals that 8 (80%) of the teachers ask students to check their understanding or assessments. Yang (2010) cited in Paramartha (2018) found that closed and display questions have negative correlation which means those types of questions elicit short responses (p.9). A possible explanation for this finding seems to be that teachers think that checking students' understanding of what they have learnt or checking students' assignments seem to be a good feedback they need for assessing students' progress. In addition, Paramartha et. al (2018) contended that procedural questions were used for four purposes: 1) to attract students' activeness, 2) to know students' progress, 3) to check students’ understanding and 4) to make the students focus (p.12).

Item (2): Teacher asks students to engage them in lower-level thinking.
Figure (2): Convergent Questions

Figure (2) above, shows that all the teachers (100%) asked students to engage them in lower-level thinking in classroom interaction. This type of question is called convergent question that focuses on recalling and remembering what the students have learnt previously. Therefore, students' responses are often in short answers such as yes\no or short statement. It appears that teachers think that asking convergent questions promote students to participate effectively in classroom interaction. In addition Willen (1987) pointed out that adapting question on student ability level enhance understanding and reduce anxiety since students have ability to answer the question easily (p.10).

Item (3): Teacher asks students engage them in higher-level thinking.

Figure (3): Divergent Questions

Regarding divergent questions, figure (3), above, shows that 4 (40%) of the teachers ask students to engage them in higher-level thinking. In this type of questions, students'
responses are not short answer. It requires students to analyze, synthesize and evaluate what they have learnt previously. One possible explanation might due to the nature of the course. Some courses help teachers to use divergent questions for classroom interaction effectively such as cultural world course and professional ethics course and so on. Zaenudin (2015) pointed out that the material and teaching approach play a crucial role in the discrepancy of using types of questions. Also, he added that the use of authentic material and classroom discussion technique facilitates the teachers to use referential questions [divergent questions]. Accordingly, more interaction happened and more comprehensible inputs could be provided (p. 111). Al Raqqad (2018) emphasized that there is a close relationship between the higher-level questions and student's ability to support an answer with logically reasoned evidence (p.85). However, classroom observation indicates that there were only 4 out of 10 teachers who used divergent questions.

Classroom Questioning Techniques

Research Question 2

What are the questioning techniques that teachers use in classroom interaction?

Item (4): Asking a question passes three steps: ask a question, pause and call on a student.

![Figure (4): Using Wait Time Technique](image)

As it is clear from figure (4), above, the classroom observation demonstrates that the majority of teachers 7 (70%) did not use this questioning technique: ask a question, pause and call on students in classroom interaction. One possible explanation for this finding seems to be
that teachers' use of two types of questions in classroom interaction: procedural questions (80%) and convergent questions (100%). These types of questions are often in short answers; accordingly, students do not need a time to answer. However, giving students to think when responding not only encourage students to participate in classroom interaction but also encourage their higher-level thinking. Moreover, there is a psychological rational in using this techniques that when a teacher asks a question and follow it with a short pause, all students will attend to communication (Orlinch, et al. 2010, p. 227). However, Yang (2017) asserted that the length of waiting time depends on the degree of questions’ difficulty and on different students (p. 162). In addition, Döş et al. (2016) contended that wait time technique can be used by teachers in classroom interaction for these reasons: students' individual differences, giving an opportunity to think, concentrating on an opinion, overcoming anxiety, getting to the right answer (p. 2071).

Item (5): students receive positive reinforcement from the questions being asked.

Figure (5): using positive reinforcement

Regarding teachers' use of positive reinforcement from the questions being asked, figure (5) above displays that more than half of the teachers 7 (70%) provided students with positive reinforcement after answering questions. Vijayan, et al. (2016) pointed out, "if a teacher has high expectations for all of their student’s then positive encouragement, feedback and praise will come naturally and the students will often respect you for it and have an appreciation of learning and want to please you" (p.213). Consequently, one can deduce that giving the students positive reinforcement from the question being asked will enjoy learning and responding. On the
other hand, asking questions to punish a student is turning a positive learning situation into a negative one.

Item (6): Teacher avoids using the negative reinforcers such as "no" or "that's incorrect".

As it is illustrated in figure (6) above, that more than half of the teachers 7 (70%) avoided using negative reinforcers such as 'no' or 'that's incorrect' in classroom interaction. This might be attributed to that teachers did not have a good background on classroom questioning techniques. Orlinch et.al. (2010) asserted that negative reinforcers should be avoided in classroom interaction because they may reduce student's desire to participate in a verbal classroom interaction especially with students whose first language is not English (p.231).

Item (7): Teacher prompts student's answer by eliciting a fuller or additional response.
Figure (7): using positive promoting technique

Figure (7) above, shows that the majority of the teachers 9 (90%) promoted student's answer by eliciting a fuller or additional response. Kipper and Rüütmann (2010) contended that there are three types of prompts: redirecting, refocusing and hinting or suggesting (p.40). Regarding the advantages of using positive promoting technique, Dann et al. (1995) cited in Orlinch et.al. (2010) pointed out that promoting student's answer positively help a teacher to verify whether a student comprehends the material (p.229). In addition, providing a positive reinforcement will encourage a student to complete an incomplete response or revise an incorrect one (Orlinch et.al. 2010, p. 229).

Item (8): Teacher gives the students equal chance in answering questions (Teacher's favoritism).

Figure (8): avoiding teacher's favoritism

Figure (8), above, shows that half of the teachers 5(50%) gave students equal chance in answering questions. Two possible interpretations for this result seems to be that firstly teacher might not want to embarrass students who did not have a desire to participate in classroom interaction (shy students). Secondly, based on classroom observation, it was observed that teachers called on students who were quick to response because the majority of teachers (70%) did not use wait time questioning technique: ask a question, pause (wait time) and call on a student. Yang (2017) pointed out, "successful classroom communication means that every student takes part in it and has equal opportunities to answer different questions (p.161)". Orlinch et.al. (2010) mentioned some strategies to motivate students to participate in classroom interaction (p.236) as follow:
1. Asking questions that will be likely to answer successfully.
2. Determining why some students remain quiet.
3. Making questioning as a game to select respondents randomly.
4. Asking shy students to summarize their responses for the next class period.

Conclusions

The conclusions of the study will be presented sequentially according to research questions. The first research question was *what types of questions do teachers use in classroom interaction?*. The results obtained from classroom observation revealed that convergent question is the type of teacher's question that was used in classroom interaction. It got the highest percentages (100%) while procedural question was used (80%) and divergent question was used (40%). The second question was *what are the questioning techniques that teachers use in classroom interaction?*. The results obtained from classroom observation revealed that using positive promoting technique got the highest percentage (90%). Using wait time technique, using positive reinforcement technique and avoiding negative reinforcers technique were used (70%) while avoiding teachers' faviortism technique was used (50%).

Implications of the findings

As a small-scale research, the study suggests some implications for English language teachers as follows:

1. Teachers should prepare well-planned questions that engage students in active interaction during classroom participation.
2. Teachers should use a variety of questions in the classroom interaction. In other words, teachers should integrate all types of questions as much as possible in teaching-learning context in order to arouse curiosity and interest to the lesson.
3. The finding of the study revealed that convergent questions got the highest percentages (100%) while procedural question was used (80%) and divergent question was used (40%). On this basis, teachers should take more consideration on the use of divergent question in the classroom interaction because this type of questions enhance students improving their higher-level thinking skills.
4. Teachers should put in their consideration the importance of the use of wait time technique in creating an effective classroom interaction.
5. Students should have equal opportunities to answer different questions for achieving a successful classroom communication. Accordingly, teachers should avoid favoritism in classroom interaction.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. It is recommended that in classroom interaction, teachers should focus on the development of students' thinking skills by using both the lower-level questions (convergent questions) and higher-level questions (divergent questions) in balance according to students' levels.
2. It is recommended that in classroom interaction, teachers should use classroom questioning techniques for creating a more effective learning atmosphere in academic setting.
3. It is recommended that Faculty of languages and translation administration should execute remedial workshop on teachers' questions types and questioning techniques in classroom interaction.

Suggestions for Further Research

Further studies should be carried on issues like:

1. Teachers' behaviors in classroom interaction.
2. The role of nature of the course book on teacher's choice of questions types in classroom interaction.

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