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QUESTIONING IN CLASSROOMS

В статті розглядаються системи опису рівнів та типів запитань, що викладачі використовують на заняттях. Надається розроблена автором таблиця для аналізування різних видів запитань.

The article investigates systems for describing the different levels and types of questions that teachers use in their classrooms. The instrument for analyzing questioning in classrooms is given in the article.

Questioning is essential for good communication and it lies at the heart of good, interactive teaching. Questions are supposed to be at the appropriate level, of the appropriate type, and above all, worded properly.

Research indicates that in most classrooms someone is talking most of the time. Very often it is the teacher who talks and the students who listen. One way to switch from teacher-centered instruction to student-centered one is through the use of questions. A skill in questioning is becoming a vital component of effective teaching. A considerable attention has been paid to the importance of questioning in the teaching process in the past decade. Such investigators as Nikolaeva, Redko, Dillion, Allen, Moore, Brown, Griffin, Wilen made a great contribution to the issue of teacher's questioning skills.

The purpose of this article is to investigate different levels and types of questions that teachers use in their classrooms. The research data were collected through self-reflection, observation of colleagues' classes, and participation in a variety of different speech situations.

Questions can be categorized as narrow or broad (Moore). Narrow questions usually require only factual recall or specific, correct information. Broad questions usually require that students go beyond the simple memory and use the thinking process to formulate an answer. Both kinds of questions can be used in the learning process, but teachers traditionally rely too heavily on narrow questions at the expense of broad, thought-provoking ones.

Effective teachers should adapt the level of questions to their teaching objectives (Brown, Dillion, Moore). If specific information learning is the objective, then narrow questions are needed. If developing students' thinking process is the objective, then broader questions are appropriate. Since thinking can take place at several levels of sophistication, the teacher's ability to classify and ask questions at these levels is important.

There are many classification systems for describing different levels of questions. We will focus out attention on two alternative systems that we think can benefit many school teachers and university instructors. The first system classifies questions as convergent or divergent**.**

Convergent questions are those that allow only one right answer**. Divergent questions** allow many right responses. Questions about concrete facts (who, what, when, and where questions) which have been learned and committed to memory are convergent, while questions that deal with opinions, hypotheses, and evaluations are divergent.

Examples of convergent questions:

Who is the President of Russia?

Based on the definition of war, can you name any countries that are now engaged in war?

Is this statement true or false?

Where is China situated?

*Examples of divergent questions***:**

What do you think would be a good title for this story?

Who do you consider the greatest playwright that ever lived?

Can you give an example of the use of this word in a sentence?

Divergent questions should be used frequently because they encourage broader responses and involve students in the learning process. They make students

think. However, convergent questions are equally important because they deal with the background information needed to answer divergent questions. In the English language classroom it is generally desirable to start with convergent questions and move toward divergent questions.

The second system categorizes questions according to the mental operation involved in answering them. In the late 1950s Guilford published his Structure of the Intellect, a model that classified all mental operations into five major groups: cognitive, memory, convergent thinking, divergent thinking, and evaluative thinking. Based on this model and six levels of Bloom's taxonomy, the Mental Operation System for classifying questions was developed by Moore.

The Mental Operation System is a four-category system that combines four of Bloom's categories into two categories. In addition, the system combines the cognitive and memory categories of the Guilford model into a single factual category. The four categories of questions that make up Moore's Mental Operation model are factual, empirical, productive, and evaluative.

Factual questions test student's memory. Answering a factual question requires a simple recall of information through the mental processes of recognition and rote memory. Students simply recall information, or recall and translate information. Factual questions are the narrowest of questions.

Examples of factual questions:

Who invented the radio?

What did you do and see at the picture gallery yesterday?

Could you please define the word curricular?

Which park in the city is the largest?

Empirical questions require that students integrate or analyze remembered or given information and supply a predictable answer. The question may call for a lot of thinking, but once thought out, the answer is usually a single and correct response. That is, information must be applied correctly to arrive at a single answer, or the logical evidence of analysis must lead to a single valid conclusion. Empirical questions are also often narrow questions.

Examples of empirical questions:

What is the most economical source of energy?

Which of the two forms of government that we have discussed is the most

democratic?

Productive questions do not have a single correct answer. They are open-ended, and it is usually impossible to predict what the answer will be. They call for students to use their imagination, to think creatively, and to produce something unique. Productive questions are broad and require that students go beyond the simple recall of information. However, students need to have the basic related information in order to answer the question.

Examples of productive questions:

What changes would we see in the society's attitude if we were to elect a woman president?

What are some possible solutions to problem of unemployment?

What do you think was the author's intent in writing this article?

Evaluative questions require that students make judgments or put a value on something. Like productive questions, they are often open-ended. However, they are often more difficult to answer than productive questions since they require the use of some internal or external criteria. In other words, some criteria must be established for making the judgment. The answers to evaluative questions can often be confined to a limited number of choices. It is often a good practice to follow an evaluative question with an empirical or productive question asking for the reason behind the stated judgment or value.

Examples of evaluative questions:

Do you think the author of the novel developed the main character sufficiently?

What is the best automobile made today?

Who do you think was the greatest Ukrainian of the 19^{th} century?

The Mental Operation System for classifying questions gives teachers the needed framework for improving their questioning skill. Teachers should be asking questions at all levels of the system instead of at only the factual level, as many teachers tend to do. It is very important that teachers ask more productive and evaluative questions than it is a common practice. These questions give students the opportunity to think.

Effective teachers are also supposed to ask the right type of questions; that is they must adapt the type of question to their lesson's objectives. For example, they

want to ask questions to determine the level of their students' learning, to increase their involvement and interaction, to clarify understanding, or to stimulate their awareness. All these purposes call for different types of questions. We will look at three types – focusing, prompting, and probing.

Focusing questions which may be factual, empirical, productive or evaluative, are used to focus student attention on the day's lesson or on the material being discussed. They can be used to see what students have learned, to arouse student's interest at the beginning of the lesson, or to check understanding at the close of the lesson.

Examples of focusing questions:

How could we test the hypothesis presented in the text?

What do you suppose would happen if I were to test the new equipment?

Do you think any country can assume the role of world peacekeeper nowadays?

Prompting questions use clues and hints to help students to answer questions or to assist them in correcting a wrong response. Very often a prompting question is a rewording of the original question with clues or hints included. The example below (a sequence of questions and responses) shows the use of prompting questions in order to correct students' response:

- Can you give me a noun?
- Take.
- What is a noun?
- A thing, a place, a person.
- Is 'take' a place, or a person, or a thing?
- No.
- Good. Can you give me another example?

The use of prompting questions is supposed to give students a sense of success when they finally answer correctly. Students' success acts as reinforce to them, which results in even greater participation.

Probing questions are used to make students think more thoroughly about the initial response. These questions are used to develop clarification, develop critical thinking, or refocus a response. Very often students give answers that are not well thought out or are only half-answers. Such answers should be followed up with probing questions to force students to think more thoroughly and to firm up the response.

Examples of probing question:

What do you mean by that?

Would you rephrase that?

Could you explain more fully?

Could you elaborate on that point?

Sometimes teachers want students justify their answer that is to develop students' critical thinking. This can be also accomplished through the use of probing questions, as in the examples below:

Why do you say that?

What are the reasons for that statement?

What are you assuming?

The author of the article has constructed an instrument to analyze questioning in her own EL classrooms and in an observational setting. The author has used constructed instrument to reflect on three classes of her own and analyze five classes of her colleagues. The instrument and the results of the observation are presented below.

Convergent/Divergent Questions	**My own classroom**	**Observational setting**
Narrow/Convergent	+ + + +	+ + + + + + + +
Broad/Divergent	+ + + + + + + +	+ + + + + +
Mental Operation Questions		
Factual	+ +	+ + + + + + +
Empirical	+ + + +	+ + +
Productive	+ + +	+ + + + + + +
Evaluative	+ + + + +	+ + +
Types of Questions		
Focusing	+ + + +	+ +
Prompting	+ +	+ + + + + + + +
Probing	+ + +	+ + +

We don't have enough data to analyze the experience and draw conclusions regarding the author's and her colleagues' questioning proficiency. It's our aim to continue using the constructed instrument to analyze classrooms questions. We will

focus our attention on the following: What levels of questions are used more often? What types of questions are used most frequently? What questions improve the quality of student responses? How many questions does a teacher ask in an hour? What questions encourage students to participate in discussion? What questions are particularly useful for stimulating discussions? What questions are helpful in determining what students have learned? Do teachers have/devise questioning scripts?

To sum up, the classification systems and three types of questions that are presented and discussed in this article are only examples of many systems and one of the many types that can effectively be used in the classroom. By using these or another systems and types of questioning school teachers and university instructors can significantly improve the quality of their questions and the quality of classroom interaction and learning. Out task is to practice and modify our questioning behavior in order to improve students' learning and the social-emotional climate of our classroom. That's why we are going to continue to study such a popular area of classroom research as teacher's questioning.

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