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# Questions Posing Importance and Role in the Teaching Process

## Abstract

Questions posing is a powerful tool in all segments of the teaching process: in tuition, in instructions, as well as in the process of evaluation and assessment of students' achievements. Well formulated question greatly activate students' intellectual capacities regardless of their age i.e. their level of education. The higher level questions rouse the critical thinking, the problem solving activities, the independent information search, and the higher cognitive process development. They are more desirable than those which require a simple yes/no answer only, (though these also have significance in certain teaching situations).

The objective of this article is to point out the importance of posing questions when teaching which would certainly lead towards thinking process activation and development of the critical one but it also aims at highlighting the teacher's role when posing these questions and at analyzing the type of questions that are being most frequently posed in the process of teaching and assessment. We would also like to bring up the issue of training the students to ask questions when learning and being taught and when self-assessing as well as to analyze the type of questions they most frequently pose.

## **0. Introduction**

Questions posing is a powerful tool in all segments of the teaching process: in the process of teaching, studying, as in the process of evaluation, or evaluating students' achievements. Questions posing concerns the intellectual capacity of the students, independently of the age and the degree of education<sup>1</sup>, motivates and leads them to activation and development of the higher thinking processes. With the questions the students are engaged in a thinking process and the curiosity is stimulated. Only the teachers and the students that ask and seek the answers of their questions are learning.

The benefits of questions posing that motivate the critical thinking in the educational process are numerous, as for the teacher so for the students: the socialization of the students is mostly influenced on; the results from the studying are becoming greater; the students learn how to cooperate with each other, to respect one another, to mutually communicate, to analyze, to solve problems, to surpass the conflicts that they may encounter, to share the knowledge, to enlarge their self-confidence. The most important is that in the teaching process that is being realized by questions posing that activate the higher thinking processes the students learn how to study on their own, to follow their own studying and to evaluate their own achievements.

Under the influence of the contemporary educational processes in the world, Macedonia has systematically reformed the educational system so it can meet students' needs from all degrees of education- starting from the system for nine year education, as

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<sup>1</sup> Posing questions which develop critical thinking is important in the teaching process and the age of the student is not relevant. Teacher should enable his students to direct their thinking toward that type of questions and at the same time to develop their skill for posing this type of questions from their earliest school days

for the high education. The purpose of the reforms has given results: the student has become the central subject of the educational process, that is, a new technology for gaining knowledge is being implemented, according to the students' needs, their capabilities and ambitions, which mean that the educational system is going in the direction of the compatibility with the European and world standards. The students have become active bearers of the process for gaining the necessary capabilities that are relevant for their future profession and the teacher just a guide for the activities. The teacher and the student have become partners in the process of teaching, learning and evaluation. The tendencies of these changes are for the future academic citizen to become active bearer of the progress in the society, to be able to respond to the requirements that are being implied the labor market. As an imperative for that, the future academic citizen should implement the system of life long learning as a part of the philosophy of life, should ask himself, to self-evaluate and to search the answers of his questions- because that leads to success. The researches show that the employers highlight that the students lack skills and capabilities for fitting in the work place- and if they are asked to conduct a research, to solve problems to be leaders etc., than it is necessary for qualitative questions to be asked that will give the necessary information, will enable to fit easier in the work environment, to study more easier, etc. In this article we want to highlight the importance of the question in the curricula that lead to involving the thinking processes, and the development of the critical thought<sup>2</sup>, to put an accent on the role of the teacher in

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<sup>2</sup> We do not want to underestimate the importance of the close type questions which ask yes / no answers or of the questions that engage lower cognitive processes which, by all means, have their place in the teaching process. Simply, we want to stress the role of the open type questions and to analyze everyday teaching practice

questions posing, to analyze the types of questions that are being posed most frequently in the process of teaching and learning. Also, we want to refer to the capability of the students to pose questions in the process of learning and self-evaluation and to analyze the types of questions that they pose most frequently. In the article we offer successful and less successful examples of posing questions, that activate the thinking potentials of the students from our educational practice, techniques that can help the teacher to guide the students through the process of gaining skills to pose effective questions, as some practical advice for how the teacher can through questions, promote his educational practice and will gain the maximum from his students.

### **1. Questions that the teacher poses in the educational process during the teaching**

Posing questions in the educational process leads towards development of the person. Questions lead to thinking, well formulated and effective question is a challenge for thinking. The effect of posing qualitative questions in the curricula depends on the capability, creativity and the ability of the teacher. The teacher has to take into consideration that the questions in the curricula have to be related and adequate with the wanted purposes, that is, with the final results from the curricula. The teacher has to take into consideration the following: the questions have to be clearly and precisely stated; the question should be more of an open type; the questions should be posed in logical order; the students should be encouraged to pose questions.

Planning of teaching, of the curricula purposes and of the evaluation, that is, grading the students' achievements are common and tightly related components of the educational process and can not be taken into consideration separately. The teacher has to plan the final results that await from the process of teaching (what he expect from the

students to learn or what should they be able to do after the teaching), has to plan the questions that will serve him as a tool for the realization of his purposes, and has to plan the evaluation, that is, the evaluation of the students' achievements according to the goals that he plans to achieve and according to the concepts that he teaches. By posing questions information about the formative evaluation are gained.

The student also has to be acquainted with the purposes that the teacher wants to achieve, should know what the questions that the teacher poses are for and how they can be connected with the concepts that the teacher grades (evaluates). The cognitive processes that are being developed with the critical thinking are supposing, predicting, justification, defense, critic. The quality of the educational process to a great extent depends from the quality of the posed questions.

Further on, we state some types of questions that lead to raising the conscience for the problem, give direction and enable the development of the thinking activities with students<sup>3</sup>:

*Attention-focusing questions*: are for directing the attention towards processes, that without that direction can not be seen; *Comparison questions*: direct the attention towards the similarities and the differences of certain terms and enable their defining and grouping into certain categories; *Measuring and counting questions*: questions that give the quantitative shape of the research; *Action questions*: questions that lead to research; *Problem-posing questions*: require knowledge and experience from the students, on the contrary they would not make any sense; *Questions for determining the thoughts of the*

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<sup>3</sup> Harlen W. – Qualter A. (2004). *The teaching of science in primary school*, David Fulton publishers, London, p. 25 – 27.

*students about certain processes, events (in this case, the complex process about the cycle of the water in the nature) that are most frequently asked with practical handling (manipulating) with certain means, in examining or drawing certain processes and events; Questions that enable thinking: their purpose being the development of the ideas of the students, require for the students to think about the problem, to obtain the answers and to activate themselves in thought; Questions that lead to encouraging and development of the skills in the acts of watching, prediction, planning, interpretation, etc.*

### **1.1. When the teacher teaches new concept:**

It is important that the questions should not be based on trivial information and the content based on which the questions will be asked to be determined beforehand, and also, the purpose of every question should be determined. The questions should be related to the material that the teacher teaches or with the main concepts. It is very important to be planned where in the unit the question will be asked, to determine their purpose, that is, what does he want to achieve with them. That is why the teacher should be acquainted with the different levels of questions, for the cognitive degree that they are suitable for and when it is the most appropriate for them to be used. The questions from lower degree of the cognitive processes show the preparation of the student and the understanding. The questions from higher degree encourage the critical thinking, the solving of problems and encourage the students to seek information on their own. A great degree from the questions should develop the cognitive skills of understanding, application, analyze, and synthesis. The open questions can lead to many possible answers that the teacher can not foresee, and that is why he should predict all of the possible answers to them before teaching. The open questions are directed towards the understanding of the students, and



also to implement that what they do not know so much in a less familiar context. These questions do not seek simple answer. They require complex thinking and more than simply memorizing facts.

The teacher has to ask qualitative and effective questions in all of the phases of the class: in activating the already acquired knowledge, in creating the knowledge (teaching of new concepts) as in evaluating. Our researches show that, unfortunately, this component does not have the needed attention pointed towards it: the teachers very rarely plan a curriculum that is guided by questions; the questions that are being asked engage thinking processes on the level of understanding and knowledge, without beforehand preparation of the teacher and without having the wanted purpose in mind. For the teacher to can perform its task qualitatively, he has to be able to pose questions and in that way to teach his students. Posing effective and questions with sense is a skill that can be learned.

Our researches and years long practice show that the teacher improvises more, than he prepares beforehand. The questions that are being most frequently posed are related to the concepts that the teacher has been teaching the class before, and most frequently they do not have any deep connection with the new concept that he will teach and is related to the cognitive processes of memorizing and understanding. For example: If the teacher has been teaching about the concept of *Literature/ Planets* on the last class, and on the next he should teach about the *Complex sentence*, it is pointless in the introductory class to pose questions that would have something to do with the concept of *Literature*. Also, if the teacher has been teaching about the *Parts of the simple sentence / Atmosphere and its climate characteristics*, and in the next class, he should teach about

the *Complex sentence/ Structure of the atmosphere*, he will engage the critical potentials of the students very little by asking the questions: *What did we learn during the last class? What did we learn about: the simple sentence / atmosphere and its climate characteristics?* If the teacher works with the whole class-that one question, if it is formulated in the right way will affect, if not on everyone, at least on the greater number of students to join the discussion.

**Macedonian language / Geography:**

*What did we learn during the last class* - the question is not effective, does not require any mental activity from the students. The student can see the answer in the notebook, which is basically the title of the concept that was taught the previous class.

*What have we learned about the simple sentence/ atmosphere and its climate characteristics?* - questions from this type are often used. This type of question do not show that the teacher is capable to get the maximum from his students and to pose effective questions. First of all, the question can have many sub-questions included in it, it is too complex and the student can find himself in a situation where he doesn't know what to answer, because all that the teacher has taught is what it is supposed to be taught about the simple sentence / atmosphere and its climate characteristics. Second, the answer of the student may not please the teacher, the student can answer partly or to see only one aspect from the simple sentence / atmosphere and its climate characteristics, that according to him, may be important, but actually his answer not to be essential neither for the concept simple sentence / atmosphere and its climate characteristics, nor for the new concept that needs to be taught. The question being posed this way actually requires from one student, in a way to retell the whole lecture from the previous class. There is not any

connection with the purpose that he wants to achieve (acquiring of the concept complex sentence / structure of the atmosphere) neither with the new concept. Third, the remaining part of the students remains passive.

Posing this type of questions has its weaknesses because only 3-4 students participate, the answer with certain will be partial, everyone can answer only what have learned without regards if it is of great importance for the simple sentence / atmosphere and its climate characteristics and without regards if the answer is connected to the new concept. Also, rarely it is considered if the cognitive processes are developed by asking questions from this type.

Instead questions from this kind, the teacher has to think and to plan the questions that he will pose. It is for the best that the question to be directly to be connected with the new concept, to not be comprised of many sub-questions and to be of such a kind that it will activate previous knowledge or will make them think how can they use the previous knowledge for learning the new concepts. The teacher can think of only one question that will be in relation with the new concept. For example:

**Macedonian language / Geography:**

*What did we learn about the simple sentence in relation to the verb / atmosphere and its climate characteristics in relation to the air layer* - the questions is very concrete and asks for the student to know the answer for the student to know the answer for the content of the simple sentence - but not yet enough to be a challenge for the thinking capacities of the student. It will be more appropriate, after the purpose will be introduced and the students are explained why the new concept is important a question from this to be asked: *What do you understand by the term complex sentence, taking the verb into*

*consideration / What do you understand by the term structure of atmosphere taking into consideration the air layer and its significance on Earth?* In that way the teacher focuses their attention, engages their thinking processes, and in the same time directs their thinking- that is, helps them that the true answer must be somewhere between the explanations for the verb. Or: *The complex sentence has one verb - a) Yes / b) no - Why do you think so / Air layer has great importance on Earth - a) yes / b) no - Why do you think so?*

It is also true that in this way the teacher can get partly accurate and even inaccurate answers, but the accent in the article is to analyze the questions that motivate the critical thinking. It is also true that with the given question in this way only several students can be activated. But, when the teacher gets the answer, he can ask the other students that agree with that student to raise their hands and in that way to take into account which students have understood the essence, that is, so he can evaluate the knowledge and the thinking of the students.

In the main part of the class the teacher teaches the new concept, that is, he creates meaning. Irrelevant of the way the new concept is being taught (which forms and methods he will use for the class for teaching the new concepts) it is inevitable that he will pose questions. The questions about the teaching of the new concept are not effective and do not lead towards the critical thinking if they are of this type: Is there anything unclear? Or: Does anyone want to ask anything?

Usually if the teacher teaches new concepts, taking into account the time that he has on his hands in the class, a smaller number of questions are being posed, unless some technique is being used by which the teacher will dedicate the whole class to posing

questions. It is preferable that the teacher is posing questions from the former type, but to make it more concrete, to put content in the questions. **Macedonian language / Geography:** *Is there anything unclear about the structure of the complex sentence / the importance of ozonosphere?*

In the final part of the class the teacher most often with several questions evaluates of what the students have learned during the classes. Again, most often, there are 2-3 questions, that are previously not thought through, questions that just fulfill the time till the class finishes, most often only for simply memorizing of the data: *How many verbs are there in the complex sentence? Let's see what have we learned about the complex sentence / structure of atmosphere.* In this case it is the best to be acted as in the first part, and of course that the question will be different. **Macedonian language / Geography:** *The most important thing that I have learned about the complex sentence in relation to the structure / about the importance of the ozonosphere?*

### **1.1.2. When he works in groups in class while teaching**

Because of the limited time that he has in one school hour, it is most logical that the teacher will work in groups (if he chooses that kind of work) in the main part of the class<sup>4</sup>, although this doesn't has to be a rule. Also, if the teacher has decided about the group work, which means that he has decided to realize the new concept through individual work of the students in group, although this too doesn't have to be a rule. Our explanation is related to the work in groups while the teacher teaches a new concept.

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<sup>4</sup> We do not elaborate the complex issues about the group work (dividing the students into group, assesment of the achievement in the group, assesment of the individual effects on group success etc.)

Every group member must individually contribute and to know that the success of the whole group depends on his individual contribution - to has his share in the critical contribution to the posed questions. For example, in 4 groups of 4 people can be asked 4 main questions that will be connected with the new concept - the students in the group will collaborate, will exchange thoughts, etc. The students may get a text in which they will have to find the answers of the questions, not given explicitly, but the answers will have to come to after the text will be read and it will be logically thought over (the text should be shorter). Through the answers the teacher evaluates their achievements.

**Macedonian language / Geography:** *Find out what is the characteristic of the complex sentence in accordance to the verb and give examples! / Classify the maps according to their type; Think: we say complex sentence and we are saying a part of the sentence - try to differentiate their meaning and give examples! / Define the scale and draw a plan in a certain scale; What is the role of the conjunction in the complex sentence and give examples! Explain: Maps through history stressing the Gauss-Kruger projection; What is the role of the comma in the complex sentences and give examples / Mark the object using the cartographic signs.*

### **1.1.3. When working in pairs while he teaches**

The pair work can happen in any part of the class. Our explanation is related to the work in pairs in one part of the main part of the class. The teacher can pose a question on which every pair will answer after previously having discussed and information will be exchanged, and after that the answers will be compared and with more questions the required answer will be reached.

### **1.1.4. When he teaches through models of questions**

The teacher can decide the new concept to be taught in a way that he will implement new types of questions during the class. This also can take place before the subject is introduced, before the teaching, during the teaching and after the teaching or after they will read the material. The students (individually, in groups or in pairs) get a short text and a list with model questions. The students should read the text carefully and on their own according to the given list and to pose questions and to answer them.

The teacher can offer model of self asking, but only at the beginning and they can be a tool for the way to the independent thinking of the students and the independent posing questions. The researches show that the students most often ask questions with the help of the question words, and that is the lowest level of the cognitive processes. The teacher, of course, must start with them, but further on, has to favor the other types of questions. Models of questions:

1. Questions with the question tags: *Who, When, How, What and Why, Why and Where?*
2. Questions for thinking: *What have I learned about? What should I remember? How is this related to what I already know?* The questions for thinking can lead to different answers of the students, because not all the students think the same. Yet, the received answers must be a result of thinking, and the answer has to be sustained with an argument, that is the answer has to have sense, that is, that it can be checked. This is the so-called analytical way of thinking.

**Macedonian language / Geography:** *What kind of relation has the complex sentence with what I already know about the simple sentence? / What is the connection*

*between the structure of the atmosphere and the concepts I have already learned about the atmosphere and its climate characteristics?*

3. Questions about the debate / discussion: *What will happen if? What kind of conclusion can I come to from all of this?* With the help of these questions the thinking processes of the student are being activated. Numerous answers can be reached and all of them can be reliable, and the creativity of the students comes to terms.

**Macedonian language / Geography:** *What could happen if there aren't any complex sentences / What could happen if there is no atmosphere?*

4. Question for metacognition: directed towards self evaluation, so he/she can be conscience for his/hers own process of learning, to encourage the self conscience. For example: *How can I use the order after which this author arranged the text so I can know more? With what I have difficulty understanding? Why is that hard?*

**Macedonian language / Geography:** *How can the organization of the text help me for better memorizing?*

#### **1.1.5. When the teacher asks the students to write an essay**

When writing an essay, the teachers most often pose the question like the title of the essay, without taking an account for the effect of the question and the quality of the essay that depends from the question. They ask only for the essay to be written, without explaining to the students the title to the students and what they expect, without being told what should be the structure like of that essay (taken into account that there are different essay organization models), without the students being told what kind of essay they should write, what is the essay supposed to be about and how they will be evaluated. For example, the teacher tells the students to write an essay on the topic of *Anna*



*Karenina / Atmosphere* and that is it. Or, the teacher gives an essay on the topic of Complex sentence / *Structure of the atmosphere*. There are none commentaries, nor a list for evaluation of that essay.

The teacher has to plan the writing of the essay. He can talk to the students and to see what are they interested in, and they can formulate the topic together. The teacher has to have a List for analytical evaluation for the writing and beforehand to inform the students with it (we do not submit a List for evaluation, because we put the accent on the type of question). The theme of the essay, if it is formulated like a question, although it can be formulated as a sentence by highlighting that on what the students should focus on while writing, should be formulated in a way that it will lead to research action conducted by the students, the students should research, and not just to download an already made essay from the internet. Preferable are the questions with double choice, that is, the questions for taking an attitude or for them to be asked to state arguments contributing the positive or negative point of view that they represent. It should not be mentioned that the written is valid under the presumption that the students have developed the ability for writing an essay, which is for its organizational structure, as with that to get acquainted with the types of essays.

**Macedonian language / Geography :**

*The divorce through centuries with an accent on the character of Anna Karenina/ The importance of respecting the norms of the standard language - Is it important to respect the norms of the standard language? / Rotation of Earth stressing the consequences resulted by that rotation.*

There are a lot of other teaching situations that can be analyzed from the posing questions point of view: posing questions for an interview, posing questions when preparing test for the students, teaching students how to pose questions in everyday life etc. There are still too many questions to be discussed but because of the limit given here we do not go into details. We are certain that everything we mentioned above gives a clear picture about the relevance of questions posing in the teaching process and that this issue should not be neglected if the teachers want to achieve the best from his students.

### **Conclusion:**

Posing questions is a moving force of the thought and lades to growing. Contemporary teaching practice shows that the design of questions which contribute to critical thinking development has been given insufficient attention and the possibilities of this tool have been used inadequately. It is prior that the teacher is trained for posing efficient and point making questions in order to stimulate the thinking process with students, before giving feedback about the quality of the students' questions.

As a conclusion we could say that neither teachers nor students are enabled enough to pose questions which develop critical thinking. Posing questions is a skill which takes time to be achieved. Teacher should do his best to gain this skill, to pass it to his student in order to contribute to the teaching process and the success of his students.

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