

# QUESTIONS AND DIALOGUE IN UNIVERSITY TEACHING

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## FLIPPED CLASSROOM

Most teaching at universities is lecturing where the teacher attempts to transfer knowledge to the students. This is not new and questioning the effect of this teaching model is not new either. However, the pressure has increased over the last ten years due to the development of information and communication technologies. In the near future, presentations of standard knowledge in common university disciplines will probably be available in cyberspace and this knowledge will be presented in a fully professional manner. Students' experience using communication technologies means downloading and taking in knowledge when it is needed and not necessarily when it is scheduled to happen in the classroom. In other words the traditional lecture will probably very soon be an outdated method in university teaching. Classrooms will be used for something else. This puts the flipped classroom on the agenda.

The flipped classroom is a method of teaching in which the students engage in directed studies at home before class and then classes are used to create an interactive learning experience. The "flip" refers to the idea that the more or less passive knowledge transferring (i.e. the traditional lecture) takes place before class and classes are then used for questions, group discussions, problem solving etc. By using video recorded lectures, spoken Power Points, online quizzes and online close-ended assignments as homework, the students will be prepared and able to actively engage in discussions in class.

Flipped classroom will be a flop and an empty shell if no changes in the perception of university teaching amongst professors and students occur. First of all it must be acknowledged the central point of setting up teaching is framing the student's adoption and application of the content, not the teacher's presentation of the content. Then the dialogue, the discussions amongst the students, and the discussion between students and teacher will not be activities only appearing as tools for understanding in a factual transfer setting, rather, they will be the main scientific and pedagogical challenge for the teacher. It is imperative that students realize that they have to capture the planned (and needed) basic knowledge before class if they intend to participate in the classroom activities.

Also, teachers have to acknowledge that formulating questions and structuring dialogue in many ways are much more complicated and demanding compared to lecturing about given content. Indeed, the preparation of a designed dialogue and questions will be significant for the quality of teaching. This article describes the basic tools for handling this process.

## THE PURPOSE OF QUESTIONS

To frame a functioning dialogue it is necessary to have a clear purpose with the questions you formulate and a clear structure for the process.

**ALTERNATION:** It is not very ambitious only to wake students' attention by stopping the flow of speech. A very well-known advice for presenters is: Don't speak for more than 20 minutes. But even if the purpose is legitimate, you should not as a teacher expect a large effect from this. The students will have an idea of the purpose of you asking for quietness and may not be willing to put too much effort into acting as entertainers in a break, which have no didactical purpose. In that respect, alternation questions can be of all of the following types:

**RECALL QUESTIONS:** You can use these to prompt students to remember relevant facts, concepts or procedures. The purpose is basically to realize if the teaching has succeeded. You use the questions to assess if it is possible to continue the teaching without repeating or deepening themes from past sessions. The students have the opportunity to find out if they have got it right. – Did the student understand it right? Do they recall key learnings from last session? These are questions the knowledge transforming teacher, often formulate. It can be nice to check that the students did not misunderstand crucial parts of the teaching. Clickers are a suited technology for this purpose. An example of an activity using clickers:

### WHICH SCHEIN CONCEPTS WOULD YOU USE IF YOU WERE TO CLASSIFY THE CANTINA ASSORTMENT OF A COMPANY?

- A. Artifacts
- B. Values
- C. Basic Assumptions

**CONCEPTUAL UNDERSTANDING QUESTIONS:** An element of control is also present here, but students are not only challenged to remember and repeat learnings, rather they must be able to explain the meaning of a concept. To ask for the difference or a comparison between two concepts is a productive way to provoke an explanation. The understanding of concepts is fundamental in the command of a subject. That is why it is so important to ask the students to explain concepts in their own words. It is normally advisable to get more than one answer. The answers can be supplements for each other and misunderstandings can be clarified. One example could be: What is the difference between insolvency and bankruptcy? Asking the students for examples can be another way to test the students' understanding. When a student comes up with an example – good or bad – you can ask other students to comment on the example, why it is good or bad, or ask them for other examples.

**QUESTIONS CONCERNING SKILLS AND APPLICATION OF THEORY:** The purpose is to ask the students to apply theory and methods on real problems. You could say that here the class is set up as a training room, allowing students to get familiarized with given procedures, calculations etc. Questions can be quite simple, for example asking for a calculation, or you can have prepared a series of questions leading the students through a procedure. [Please keep in mind that] in some scientific traditions answers to questions are classified as right or wrong while in other areas of science answers are treated as good or bad. In combination with conceptual understanding questions you can lean on the practical dimensions to make a concept more explicit and clear for the students. An example could be: According to Edgar Schein, which elements do we have to examine if we shall explain the values of a company? Then you can continue to ask how each element manifests itself in a certain company.

**ANALYTICAL QUESTIONS/EVALUATION:** The students have to build their answers to these questions on an understanding and an analysis of a problem. The answers will seldom be right or wrong,

but the students' answers and their arguments can have different qualities. The challenge for the students is to build up their answers scientifically with academic values like documentation and systematism. Questions help preparing discussions between the students and the teacher conducts the process here and now by drawing on differences in the student's contributions. Here it is very important to incorporate the answers from the students, and not only ask the prepared questions without relating them to the statements from the students. The questions can be structured in different ways. It can be done by going from simplicity to complexity and vice versa. Why is inequality an important issue for Piketty? Next question could be: What is Piketty's understanding of the consequences of inequality for capitalism?

**ATTITUDE QUESTIONS:** Attitudes regarding a wide range of questions often are on the agenda in university classrooms. Attitudes can be built on common sense or on a scientific basis. At universities it is important to train students to argue for their attitudes in scientific terms. In many ways attitude questions are challenging students on the same level as analytical questions. An example of an attitude question could be: Do you agree with Piketty in his assumption on inequality?

## STAGES IN DIALOGUE

Quality in class dialogue requires preparation, for the students and for the teachers. We have divided the preparation process into three stages: 1. Acquisition of knowledge, 2. Adaptation of knowledge and 3. Application of knowledge. Through the three stages there is a distinctive progression. In the adaptation stage and in the application stage the students can be motivated for acquiring more knowledge. The function and then quality of teaching in classroom (the 3rd stage) depends very much on the work being done by the students in stages 1 and 2. If students are not prepared for the application stage, if they think they will benefit much more from reading after class or immediately before exam, they are not only wrong, but they also inhibit the process.

The teacher has to prepare all three stages and the students have to prepare for the application stage in the first to stages. The teacher plans the structure for all three stages.

## ACQUIREMENT OF KNOWLEDGE

The students will acquire knowledge by reading the curriculum. The reading can be supplied by different materials, e.g. video presentations and spoken PowerPoints. The acquirement of knowledge normally takes place individually but it can also take place in study groups. To guide the students in their reading you can formulate questions focusing on certain passages or elements in the text. For example: What three levels are in Schein's cultural theory? What does Schein mean with cognitive stability?

## ADAPTATION OF KNOWLEDGE

In many ways this is the most important stage in the process, but at the same time a rather ignored stage in the pedagogical theory and in the pedagogical practice as well. Only the case teaching method pays much attention to this stage in theory as well as in practice, using the term group preparation. At this stage students are working with the knowledge acquired and they transfer the knowledge from an outside coming information to an inside meaning. Here they take ownership of the knowledge. Maybe you can compare this stage to a computer downloading a programme. Before it is downloaded it is available, but it is not useable.

This stage can take place in the classroom or outside, it can be worked out individually or in groups. Appropriate use of teaching methods and of learning technologies depends very much on the didactical context: Which subject? Which content? Are there any learning objectives formulated? How are they formulated? How is the teaching related to other activities (ex. project work)? In the following some of the useful techniques are mentioned:

**INDIVIDUAL TESTS:** The purpose is for each student to make it clear if the acquirement stage has been successfully accomplished, and by observing how many of the students who have completed the test with a positive outcome the teacher can decide if s/

he should continue the process or s/he needs to come up with some supplementary material for (some of) the students.

**ASSIGNMENTS:** To train certain skills and procedures, e.g. calculation or classification (ex. which paragraphs can be applied/is offended by a described occurrence?).

**CLICKER SESSION:** Probably the second most applied learning technology in university teaching, only surpassed by Power Point presentations. Clickers are mainly used for control (did the students understand?) but they can also be used for many other purposes (the following examples is inspired by Sof Thrane's presentation at ETPP, CBS 020215). In the beginning of a session clickers can be used to indicate if the students find the subject of today interesting and/or relevant. Clickers can also be used for starting a discussion or registering attitudes, for example: Does this course have too much theory? Do you need some more practical examples? Using clickers you can measure your students' preferences when it comes to different actions regarding a described example or a case. By combining questions you can make demographic comparisons. Finally clickers can be used for an evaluation of the teaching here and now.

**PAIR UP DISCUSSIONS:** Is increasingly becoming a very used technique. It is very simple and has a huge effect. You simply ask the students to discuss a question for 2 – 5 minutes with their neighbor. With this method you give all students opportunity to work with a question before it is raised in plenum.

**WRITTEN DIALOGUE:** Here you can use tools for collaborative working like Google Docs or Viki. You can use these tools inside or outside the classroom. There are many ways to use these tools, and they have different advances and weaknesses. You can for example use Google Docs in the following ways: The class is divided into groups. Each group is working with their own question. The students can in Google Docs work in the PowerPoint function writing their answers in the part which is reserved for the manuscript of the presenter. Taking departure in that text they can produce headlines for a PowerPoint presentation in class. In this way you train the students in written and spoken communication and a lot of knowledge will be produced, which can be used in a following class discussion.

## TECHNIQUES TO HANDLE DIALOGUE

Questioning in university teaching practice is usually carried out as normal polite daily communication. The teacher faces the speaking student, and is normally satisfied with an answer to the question. But a high quality class dialogue or discussion will need to cross the frames for good behavior. Instead of focusing on the speaking student, the teacher has to walk away from her/him and turn his focus to the other students. So in terms of normal conversation, the teacher has to act impolite. In the classroom everybody is a participant, and in principle everybody is involved all of the time, also while another student is answering or formulating a question. To complete an answer to a question in a classroom it is often necessary to ask other students for comments (agreements/disagreements).

Normally it will be a good idea to wait until more than one student has marked he or she will answer a question. It means that not only the quickest and brightest student can manage to think and formulate an answer. When the teacher has got an answer to his/her question s/he has several opportunities. S/he can ask for deepening answers, he can ask for arguments, examples or disagreements. He can of course ask the same student again, but in many cases it will be more productive to ask other students. The teacher may also sharpen the discussion by for example saying: I'm not sure I agree here, under which circumstances are you right? Or: Do you all agree in that?



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