



---

## ACTIVE TEACHING IN LARGE CLASSES

---

Prof. Dr. Nasir Selimi

[n.selimi@seeu.edu.mk](mailto:n.selimi@seeu.edu.mk)

DOI: 10.2478/seeur-2013-0014

### Abstract

Successful implementation of teaching and learning in the classrooms (lecture halls) with large numbers of students has always been and remains one of the constant concerns of teachers. Recently, this has become more challenging because it is generally required that teaching should be developed according to new methodologies. The main hypothesis of this research paper is to give a modest contribution to researching and defining the possibilities for increasing the efficiency of teaching and learning in the realization of lectures in classrooms with large numbers of students. The objectives of this research paper will be focused on: more persuasive transfer of knowledge to students, motivation of students in their critical thinking, and engaging students in problem solving. One of the main objectives is to research teaching methodology through which not only will the objectives of acquisition of new scientific knowledge be reached, but also improvement in teaching and a more rational and relaxing environment.

**Keywords:** *learning, active teaching, teaching methods, teacher, lectures*

## Introduction

Similar to other social fields, teaching is a dynamic process and constantly changing. The teacher of the twenty-first century differs in many aspects for better from the teacher of yesterday. This is not only a result of the possible use of modern technology, but also of change and progress in many other areas, such as new methods that are used in teaching and learning, competition amongst schools, especially the opening and operation of private education institutions and greater awareness and demands from students. All these encourage the teacher to constantly progress with teaching by increasing professional and methodological knowledge. Every lesson should be evaluated as a new engagement and challenge in order to achieve the maximum performance of the primary purpose of teaching.

In the not so distant past, the realization of the teaching and learning process was mostly focused on the perspective of teaching, and the importance of learning was very small, although some elements of learning have always been present in the process. However, the emphasis on teaching in the educational process has not given proper results. The concentration only on teaching and not on learning has impacted negatively on improving the level of excellence in students' independent learning at all levels of education.

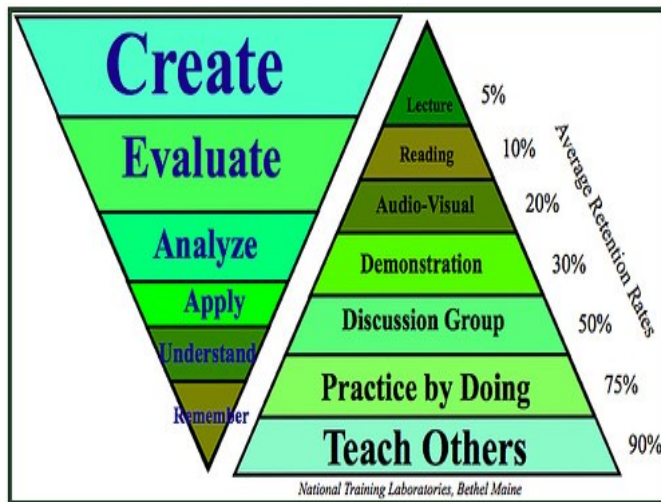
Recent studies have affirmed that learning plays an important role in the learning process and even that nowadays has the primary role. It is not accidental that today the success or failure of the educational process relies mainly on learning, because it is useless if the teaching is perfect, and its product, learning, a failure. If students do not learn the lesson, it follows that the work and commitment of teachers has been of very little use. Nowadays, it is most important to embed a love of learning in students, not just to realize a transfer of knowledge. Given this, researchers have developed a number of methods and approaches to be used in the implementation of the learning process, each in their own way aiming to achieve maximum results.



Lectures focus on delivery of information, Bologna Teaching Pictures

One influential scholar in this area is R. Dreikurs, who in 1972 came to the conclusion that learning as classical memorizing of lectures, when one speaks and others listen, presents the weakest form, manner and method of learning. In the so-called "learning pyramid" the best source and method of learning is the so called "learn by teaching others". This is an active learning method by which people in general retain 90%. Then follows the method of so-called "practice by doing" which indicates that the rate of memorizing learning is up to 70%, and the following 'discussion group' with 50%, "demonstration" with 30%, the use of audio-visual tools with 20%, reading 10% and finally lecturing which has only a 5%. rate of remembering. This is exemplified in the following picture.

Fig . no. 1, Learning from listening to learning



Source: (R. Dreikurs, 1972 )

Also, it should be emphasized that with the learning process which is realized in the form of lecturing, that is, traditional forms where we have only teaching, the expected results are not satisfactory even in the part of concentration and attendance at lectures. No matter to what level the teacher is committed for his/her work and how much s/he tries to be interesting and attractive, the learning outcome is not maximized. This is because the concentration of listeners in the beginning is high, but after only 15 - 20 minutes falls significantly, while at the end of the lecture it reaches the lowest point of concentration (Stewart and Rutherford 1978). The success of attempts to improve this situation, such as by raising and lowering the tone and rhythm, or creating a relaxing atmosphere, is modest.

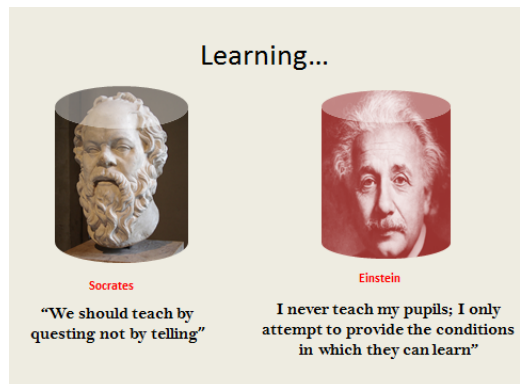
## Literature Review

### *Implementation of active methods during the learning process and student benefits*

Having in mind the above mentioned facts and the main goals of teaching, the teacher should consider changing the classical methods of delivering learning and instead use modern methods. Some of the activities carried out with these methods are: analysis, definition of the problem, working in groups, brain storming, critical thinking, information collection, selection, decision-making, explaining decisions to others, findings, demonstration, simulation. These are forms of learning during the implementation of which students are active in the learning process, are part of the process and take their obligations more seriously because they are more involved. This paper analyses how such methods can be utilized even in large classes.

A combination of some of these methods might be the most appropriate way of teaching. The question is why we should use active learning instead of passive. The answer is simple. Given the results from the study of the so-called "learning pyramid", it is clear that better learning results are mostly achieved with these strategies. In

addition, students in these classes are active and creative. They participate in the implementation of the learning process, express their opinion freely, are more flexible in the classroom, have tolerance toward differences in thinking, have good chances of acquiring better scientific knowledge, are encouraged to solve problems, are able to explain to others the issues addressed cooperatively with each other, support or reject each other's ideas and make decisions that implement the same in practice. The goal is not to memorize something for the moment that later can be forgotten, but to learn how to solve problems in everyday life. In this Socratic method of education, teachers engage students by asking questions that require generative answers. (Copeland M, 2005) while Barbara Bray highlights that "the whole purpose was to (1) teach you how to think and (2) prepare you for a lifetime of self-learning" (Bray B.2012). In comparison, in 'classical' learning, students are passive, they are not required to

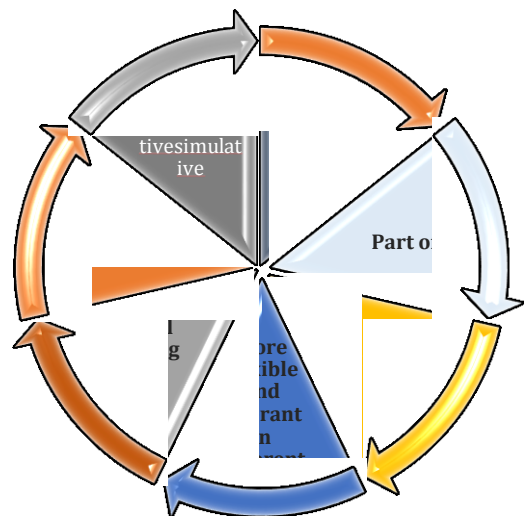


make something concrete, but rather memorization of knowledge is of paramount importance. Even when assessing their knowledge, methods are primarily based on how much has been memorized.

### *Use of interactive methods for teaching in classrooms with large students number*

This paper is divided into two parts. The first part considers some key issues such as attendance and use of active methodologies from the perspective of the author as a teacher and a member of a central observation team responsible for observing colleagues and aiming to improve teaching practice. The second section focuses on the results of a student survey. At the end, there are conclusions drawn from both parts and some tips and recommendations.

Even though nowadays lectures in classrooms with large numbers of students are a main pillar of teaching and learning, yet many activities described above could be implemented in such classes. The implementation of these activities in classes with large numbers of students may be difficult, but success is possible. A modern (interactive) teaching approach is often ignored and neglected as not being efficient or appropriate for large groups of students, and has even been disregarded by a number of teachers, or its implementation viewed with scepticism. The 'classical' form of teaching, *ex cathedra*, when the professor teaches and students have a duty only to listen, according to some, can never be replaced by any other form of teaching. However, according to the hypothesis that active learning methods provide better opportunities for student learning, such opinions appear somewhat incorrect, outdated and unconvincing. Experience shows that, despite the difficulties that may be encountered, their use gives enviable results.



**Source:** Own calculation with Data from the observation

Justifications for marginalizing active methodologies are of different types, but without doubt, among those that are more important are the difficulties that

come in the implementation of active learning. It is almost impossible in a classroom with large numbers of students to engage all or most of them in debate. Another major impediment in implementing active learning remains the management of the lecture. The noise and confusion that could be caused, poor management and control of the learning environment by teachers, poor communication between students and the professor, for example, could seriously hurt the learning process.

In order to succeed in the implementation of active learning and overcome barriers that hinder effectiveness, it is suggested that some additional effort must be made during activities and actions in the learning process. A range of approaches tailored to fit larger class should be used in order to foster curiosity and interest in learning. Some important approaches are: ensuring regular attendance of students in classes, students' active participation in the debate, the use of case studies, presentation of events through video and the Internet, findings, explanation of key words, problem solving and the simulation of a case. Therefore, to evaluate how far these methods were effective, the author examined teaching observation reports conducted during the previous year and analyzed the results of a questionnaire given to students in a sixth semester International Finance Business core course. Thirty five students out of forty three completed this.

## **Observation analyses and comments**

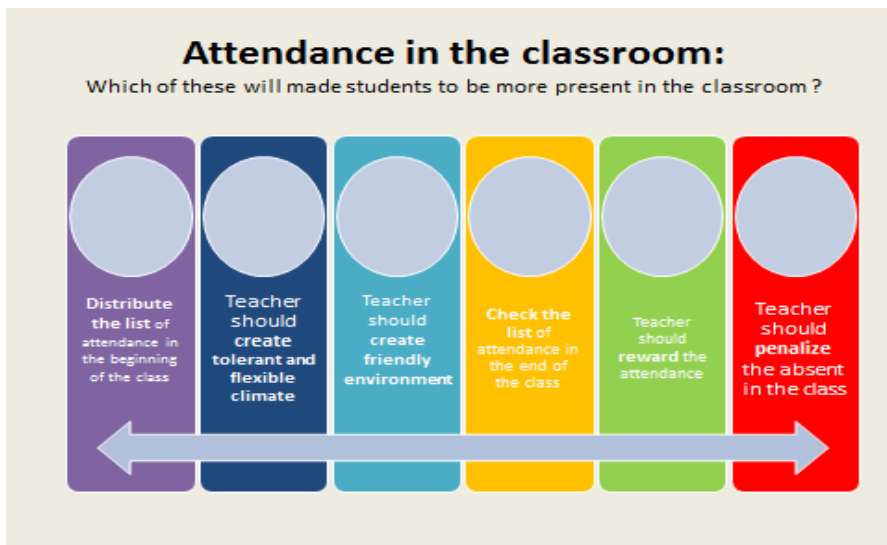
### *Regular student attendance in classes*

We assume that attendance in the class is essential for academic success and that it is also very important for stimulating the professor for better engagement. The other supposition is that good attendance encourages more students to participate in debate and exchange ideas. Practically, we believe that taking an attendance register helps to motivate students to attend and is important for developing their personal responsibility. (Michelle Miller, 2013). When the number of students is large, it takes a lot of time to identify student by reading their names and therefore, circulating a previously prepared rooster for signature is more efficient. At the end of the class, the teacher could randomly read a few names in order to verify whether those students are present and then mark the empty boxes with red pen to avoid these being filled later.

The teacher should also consider that the attendance of students in the class depends a lot on him. Students feel that their participation is higher if the teacher

is friendly and polite and knows how to create an open atmosphere and a relaxed ethos in class. The opposite will happen if the teacher does not create favourable conditions for participation, is harsh or has no tolerance for different opinions. From the observations made last year in SEEU, the professors that were evaluated highly in their observation reports especially for creating an open learning environment had good class attendance compared with others with less good teaching evaluation.

Regular attendance of students may also be stimulated by awarding students as part of the final mark or as a penalty for non-regular students. In the author's analysis of observation reports, the following chart shows the most important factors which influence attendance.



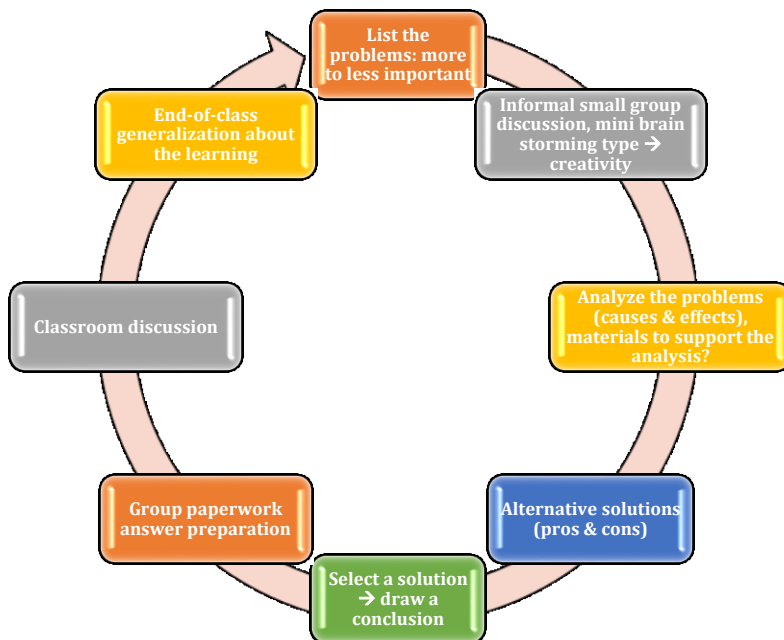
**Source:** Own calculation with Data from the observations,

### *Development of a case study*

The survey results and the author's observation reports indicated that students find it helpful to have a method such as a case study for analysis as part of the lecture and active is is very possible with larger classes. Experience shows that the case study should be short, with clear instructions. Case studies should be related to a learning unit. Distribution should be done in a way that ensures students share the material. During dissemination of the material, the teacher may ask students after they have read the material to try answering questions set at the end of the text or on a slide. Before the debate begins, students may discuss

the issue with the colleague next to him/her, while the teacher communicates with the students by guiding them. The debate is facilitated by the teacher. The teacher should start the debate by encouraging students to participate. Creating a secure, pleasant and relaxing environment, sometimes with easy humour by teachers, helps students to participate. This relaxing and warm environment can be enhanced when the teacher calls students by name to participate in the debate. This makes them feel proud, appreciated and respected - they are not just numbers in the classroom. It's worth learning names from the start by asking for them and by trying to memorize them from the register. This can be done even in a larger class.

During the discussion of the case study, problems could be numbered or described as most and least important. In small groups, problems could be analyzed, causes and effects identified, alternatives solutions to problems could be given and finally overall conclusions. At the end of the case study, each student could answer at least two questions such as: What I have learned from this case study? What is my experience from everyday life related to this case study? Such case studies with students should be planned to allow time for the students to participate and in that way can contribute to active learning.



**Source:** Case study cycle of activities (data from observation reports with effective use of case studies)



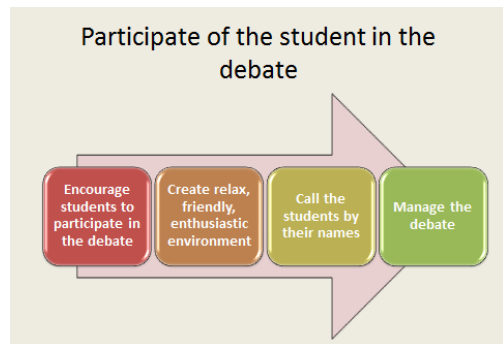
## *Participation of students in debate*

Student participation in debate also depends on other factors that the teacher should identify and use. Such techniques were identified in observation reports as being effective. For example initially, it should be noted that one of the important conditions is that students should be prepared in advance for the class. They have to read the materials that are provided as reference for the realization of the course and this should be referred to during the class.

Questions that the teacher sets at the beginning should be simple, but then become more complex. They should be open and enable students to give general answer and later to go deeper into the planned topic. In this case, it is important to note that the responses should not be expected to be given immediately. Students

should be given a reasonable time to think and then respond. The teacher should encourage participation in the debate by asking different students. He/she should be careful that every student answers and that he direct and guide the debate skilfully in the right direction. The debate should continue until all ideas are exhausted on the issue discussed. Everybody involved in the debate should be supported but importance should be given to answers that are correct and complete. In such cases, examples of open questions which can be asked are: what do you think? Who has a different opinion? Who has any comment or has anything to add to this topic? Even in larger classes teacher may facilitate such discussion by skilfully including a range of students and such techniques were observed in colleagues' classes.

Another method for effective learning is to provide a solution to a task. For this to be successful, the material must be well prepared in advance and easy to understand. During delivery, the teacher should give clear instructions, quick and concise so as not to cause confusion. One good method is that in the beginning, students work individually, then compare the results with each other and finally a student publically gives the outcome of the task given with explanation and analysis. Other students confirm, comment, add or eventually give alternative results with explanation. At this stage, the teacher can confirm the answer and



could illustrate key points of the problem by referring to an Internet site, linking theoretical and practical part. Of course, this site should have been previously found and stored on the desktop. Sometimes, direct questions can be addressed to students: "Well, what do you think?" This is done on purpose so that no students are passive and lacking motivation to participate.

While individual students are answering, the teacher should concentrate and be more careful. Any answer given by the student must be evaluated and not ignored. The teacher should not move to the next question without elaborating the first one fully. The timing for intervention in the debate and proper direction in discussion are the duties of teachers and colleagues with high quality evaluation of their teaching demonstrated such skills.

### *Conclusions and explaining key words*

It was seen as effective that conclusions which are made in the classroom should be made by the teacher in cooperation with the students. Students need to be more active, because the wording of conclusions could be an indicator of whether learning has been successful. Also, at the end of the class, the teacher may engage students in explaining the key words for the unit. These words could be translated into English or the relevant language to ensure that students get the exact meaning.

Toward the end of the class highly evaluated teachers used recap and distributed material that could be in the form of a quiz or key questions for monitoring learning. The questions should deal with the main issues that were discussed during the class. Some of the questions require the completion of the empty places in the sentence, or short answers; others require critical thinking. This type of method provided a brief repetition of what was discussed before and confirmed how successful the learning was and also how to solve real-life problems. Another activity is called "one minute question and answer". Students write on a piece of paper a sentence describing the most important concept that they have learned during a certain class and secondly, a sentence about what has remained unclear from that day's lecture.

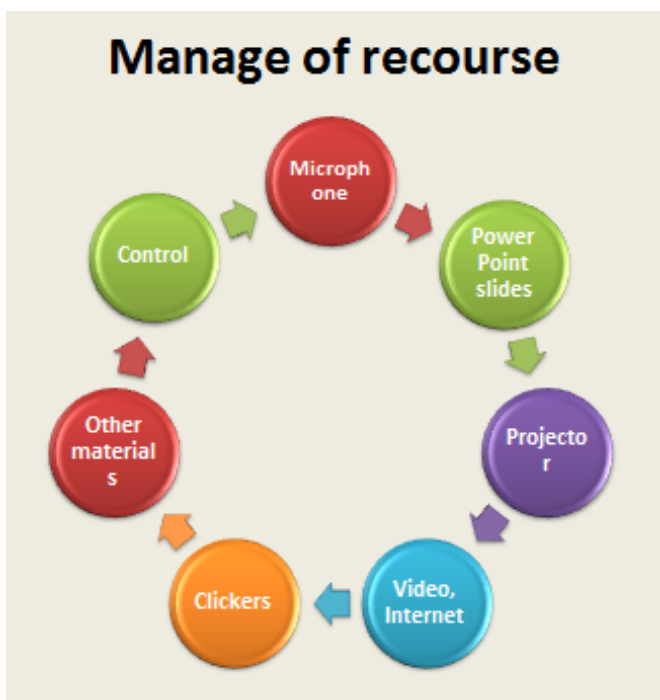
At the end of the class, in the last slide, the teacher should provide literature as well as the title of the topic of the lesson which will be realized next week. Literature and additional material which should be prepared for future classes should be included.

### *Use of technology in the classroom*

Successful realization of active teaching and learning in classrooms with large number of students requires special conditions and by necessity, we should mention the use of modern technology. The importance and role of using resources becomes more important when we have in mind a large student number and rational use of time. So, in order to be heard by all the students in a typically large space, it is necessary to use a wireless microphone which creates enough sound and enables free movement throughout the classroom environment. Another important source is the use of the projector and the Internet. PowerPoint slides must be well prepared, not too loaded with text, sometimes just one photo can replace the meaning and significance of a whole page of text.

Change of slides should be through remote control so that the teacher is not static just next to the PC; the same remote control should be used for highlighting key words, etc. Slides should be used in different ways, such as prediction and analysis by students. Also, it is preferable during discussion and explanation to use the white board actively and with different colour markers (each has its meaning), but which looks good and clear even from afar. In the case of lessons in classes with

large number of students there is a device called "clicker", in the form of mobile phones, where each student uses one of them to give the answer. They are especially practical for the realization of quizzes in class although they are not yet widely available in Macedonia.



**Source:** Own calculation with Data from the observations

## *Class management*

When we are talking about management in the classroom, then we must consider the combination of different interactive methods that a teacher uses. This effective combination depends largely on the ability and skills of teachers. It is very important how well the teacher uses and implements each of these methods to maximize learning. For example, the time and order of using one or other method is of particular importance. The learning must proceed logically and the best lessons are planned with a clear structure for activities and outcomes. The results from the student questionnaire and observation reports showed that the students appreciated knowing what to do, when and what the next step was. Also, time management should be carried out in a completely friendly way.

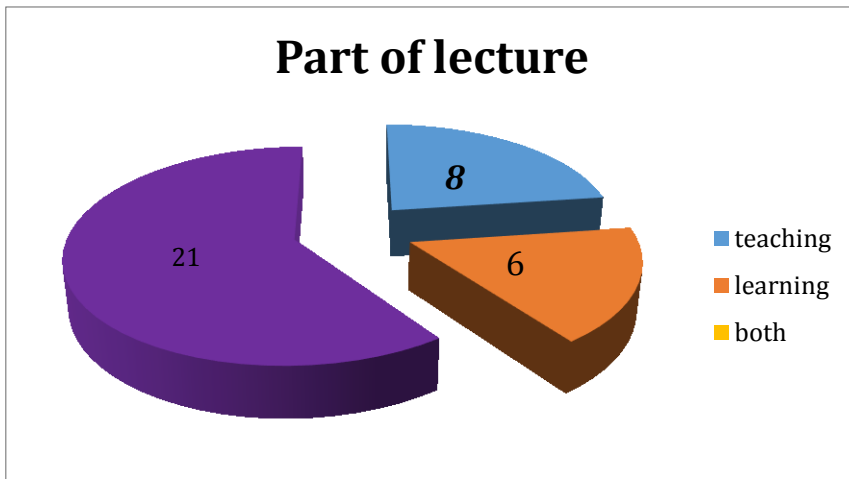
Finally, the teacher should move in a relaxed way around the classroom, and be in a good communicative distance both at the front and back of the lecture hall during the class. Approaching closer to students activates them by making them think that the teacher will ask him/her a question.

In conclusion, the teacher should explore what it is that makes the learning process successful and what not. S/he should also develop the effective methods and reduce or eliminate the weaknesses and consider how to adapt strategies to a large class.

## **The results of the empiric study**

The empiric study was done in the class with third year Business students. The questions related to topics such as teaching and learning methods, use of case studies and class environment. They were in total 43 students and the questionnaire was completed by 35 of them. At the start of the semester, we set some common expectations. We agreed to work together, which meant that every student would come prepared for class, be part of a small group, and would initiate and open debate related with the topic. After that, each of them would participate in the discussions and contribute to the lesson. The students answered the questionnaire at the end of the semester and below are outlined some of their key comments.

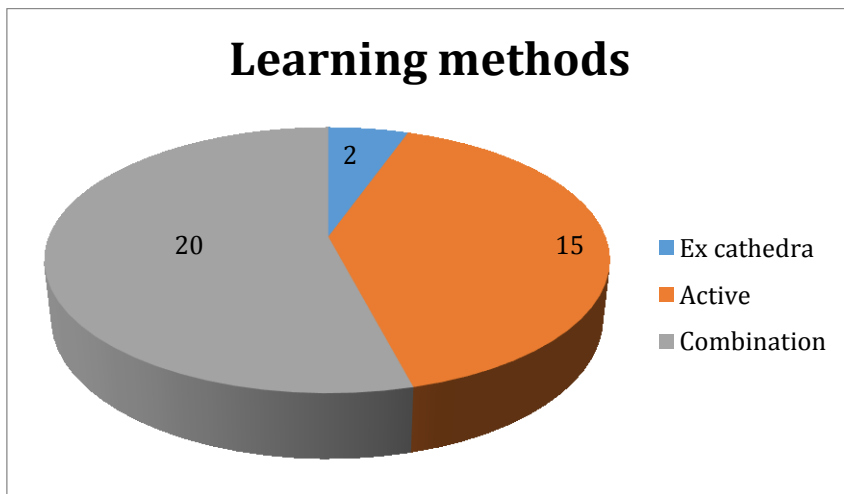
*Which part of lecture was more important to you?*



**Source:** Own calculation with Data from the student survey,

In the first question, most students, 21 of them, answered that the most important parts of the lecture are both teaching (teacher presentation) and learning (active participation). So from that we can see that students give a lot attention to both elements.

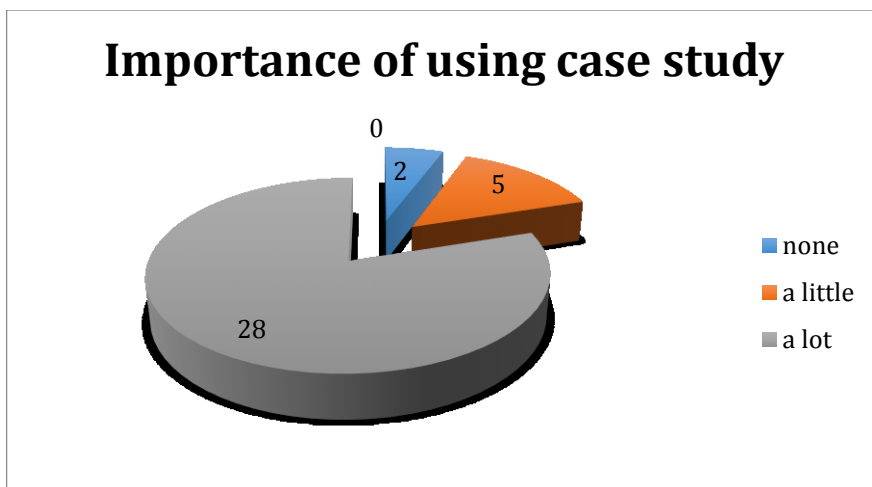
*Which learning method do you like more?*



**Source:** Own calculation with Data from the student survey,

When students were asked about which learning methods they liked more, 20 of them answered that they preferred a combination of ex cathedra and active methods. This means that students want some teaching and some active learning.

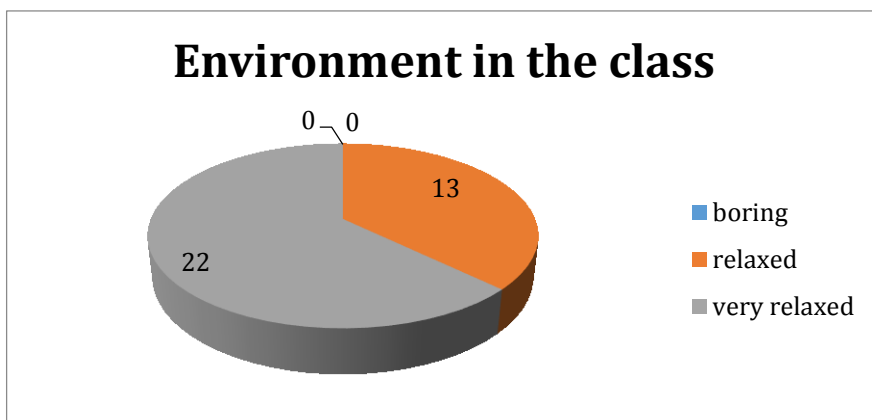
*How important do you think using case study was during the lecture?*



**Source:** Own calculation with Data from the student survey,

In the question related to the importance of using case studies, 28 of them thought that it was very important for successful learning which suggests that the majority of students prefer to be actively engaged in the topic and its application.

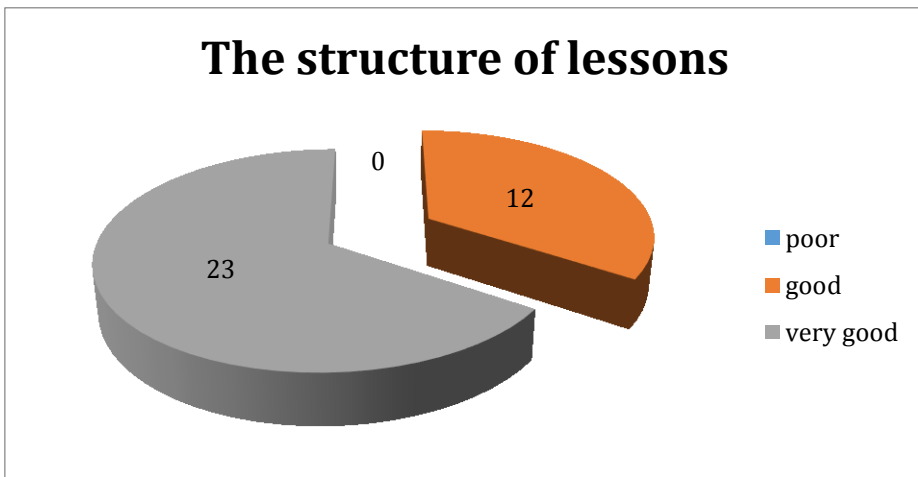
*How do you assess the environment in the class during lectures?*



**Source:** Own calculation with Data from the student survey,

The fourth question was about the environment in the class during the lectures. 22 of them answered that the environment in the class was positive because it was very relaxed, which meant that during the class there was an open ethos for discussion, everyone could participate, give opinions for problem solving, and this created a friendly environment. This is an indication that creating such an open learning ethos is appreciated by students.

*How do you rate the flow of the lecture structure?*



**Source:** Own calculation with Data from the student survey,

The last question was about the structure of the lessons, such as having a clear introduction, checking previous learning, clear topics related to practise, time for student activity such as case study, helpful conclusion related to the lesson and a recap of the benefits. A variety of methods was planned for each class and the students appear to appreciate this.

## **Conclusion**

The learning cannot be considered successful if the teacher does not commit seriously to two main activities: teaching and learning. The literature, the analysis of the student questionnaire and the teaching/observation experience suggest that active learning has advantages and produces better results than a more traditional approach although active learning can be combined with teacher presentation. Part of this are some conditions which students need to fulfil, such as regular attendance, being prepared for lessons and being ready to participate.

In active learning, the teacher should combine more activities ranging from short lectures to a range of student activities with clear conclusions. Students must be engaged in learning, they should be encouraged to be creative, think critically, gather information, analyze, make decisions, explain to others, take responsibility and defend decisions made. The learning process is best realized with cooperation between the teacher and students. A unit should not be memorized by students which might be forgotten the next day. Students value being taught how to solve problems, learn how the theoretical part applies in everyday life and, what is important, and increase their confidence.

If the professor has a large number of students, the implementation of active learning in the classes is more challenging but success is possible by expecting students to prepare outside class, by planning concrete activities for students and allowing time for these to be realized. According to the student questionnaire, for the successful realization of learning in classes with a large number of students the teacher should always be creative in teaching. Creativity does not allow learning to become monotonous. Classes must be varied, well planned and with structure. Active learning methods provide this opportunity.



## References

1. Dreikurs, Rudolf. (1968)., *Psychology in the Classroom*. Harpercollins College Div. ISBN 0060417560
2. Copeland, M. (2005). *Socratic Circles: Fostering Critical and Creative Thinking*. Portland, MN: Stenhouse Publishers, p. 7.
3. Dreikurs, Rudolf. (1993) *The New Approach to Discipline*, Plume
4. Dreikurs, Rudolf. (2000). *Encouraging Children to Learn*. Behavioral. ISBN 1583910824
5. Vicki, Soltz, (1970) *Articles of Supplementary Reading for Teachers and Counselors*
6. Dreikurs,R.,(2012),<http://www.teachermatters.com/classroom-discipline/models-of-discipline/the-dreikers-model.html> [retrived: May 18, 2012]
7. Walter,C. Parker (2003)., *Teaching Democracy- unity and diversity in public life*, ISBN 0-8077-4272-4 Teachers College, Columbia University
8. Dreikurs, R., (2012),  
[http://wik.ed.uiuc.edu/articles/d/r/e/Dreikurs,\\_Rudolf\\_9120.html](http://wik.ed.uiuc.edu/articles/d/r/e/Dreikurs,_Rudolf_9120.html)  
[retrived: May, 2012]
9. Stuart, J. & Rutherford, R.J. (1978) *Medical student concentration during medical lectures Lancet* 2:514-516
10. Michelle Miller, (2013) *What classroom Teachers Can Do to Increase Attendance?* Wichita Public School, KS
11. Barbara Bray, (2012), *Twilight of the Lecture*, Harvard Magazine, May-June, 2012
- MazurE, (2013) *Presentation and Workshop for 2013 Stony Brook Teaching and Learning Colloquium*  
<http://www.youtube.com/watch?v=BZqNBGVQqeA&list=PLBBww06ogoqBN34GVzivfZbu9otet3e1><http://www.youtube.com/watch?v=EDU5EY492jI&list=PLBBww06ogoqBN34GVzivfZbu9otet3e1&index=3>
13. (retrived: 2014)
15. Peggy,Ch.(2013) *Beyond the Lecture: Student-Centered Activities and Assessment*

<http://www.youtube.com/watch?v=6G6s2US8yx8&list=PLBBww06ogoqBN34GVzivfZbu9otet3e1&index=4> (retrived: 2014)

16. *Bolonja teaching pictures,*

[https://www.google.com/search?q=Bolonja+teaching+picture&es\\_sm=93&tbm=isch&tbo=u&source=univ&sa=X&ei=oUHCU4isBNTA7Aan0ID4DQ&ved=0CDIQsAQ&biw=1366&bih=667](https://www.google.com/search?q=Bolonja+teaching+picture&es_sm=93&tbm=isch&tbo=u&source=univ&sa=X&ei=oUHCU4isBNTA7Aan0ID4DQ&ved=0CDIQsAQ&biw=1366&bih=667) (retrived, May, 2012)