

Iris Charlotte Brunner

Department of Global Public Health and Primary Care

University of Bergen

Project for Basic course in university pedagogics, 2015

The lecture: A means of teaching, but not of learning?

Or: How to make a stand-alone late afternoon lecture livelier?

Abstract

Background: The lecture as a means of teaching has been criticized by many experts in the field of education for being too passivating and not contributing to retention of learning content. On the other hand, there are few alternatives when an expert on a field meets a group of students with very little previous knowledge only once. This assignment describes how some techniques that can ease the one way communication of a traditional lecture were tried out.

Methods: A lecture given for master students in Health Science. The teacher tries to apply pedagogical techniques for activating students based on the University Pedagogics course and educational literature. The teacher assesses student participation based on subjective impressions and the frequency of participation from students during the lecture and comments from students afterwards.

Results: A two way communication between students and teacher several times during the lecture could be established. The students asked questions and many participated in short discussions. From the teacher's perspective were the techniques applied partly effective in increasing student participation. However, there is a lot of room for improvement.

Conclusions: Strategies to stimulate active participation of students during a lecture can be successfully applied. The systematic implementation of these strategies requires training and eagerness to experiment.

Introduction

The traditional lecture where some expert tries to transfer his / her knowledge to more or less attentive students by means of one way communication has rightly been questioned.

According to Biggs (1999), the traditional lecture is only suited to the "academic" type of student. The "academic" here describes the well-prepared student, who has already questions in mind when the lecture starts. These students engage in higher order thinking, reflect on the significance of the learning content, link it to previously acquired knowledge, and draw their own conclusions. Their counterparts, as described by Biggs, are the students who are not

driven by an innate eagerness to learn. They have a more pragmatic approach, want to obtain qualification for a decent job, but are not necessarily interested in the subject that you are teaching. These two ways to learning are described as the deep versus the surface approach. The challenge for a teacher is to design learning environments in a way that deep learning can be facilitated even in students not prone to it. While students with a deep approach to learning gather knowledge under most conditions, a traditional lecture may be counterproductive for those with a more superficial approach. A method that requires “surface students” to participate more actively, such as problem-based learning, seems to be more suitable for them. On the other hand, there are doubtlessly some advantages with a traditional lecture. A lecture can give an introduction or an overview over a topic, reach many students, can present alternative interpretations of textbooks and help to understand difficult literature (Skodvin 2006). Fortunately, there are also techniques to attenuate the one-way character of a traditional lecture and make it more dialogue oriented. Constructive alignment, a term also coined by Biggs (1999), means aligning the curriculum in a way that facilitates higher order cognitive processing instead of pure retention of facts. Creating coherence between teaching, learning outcomes and assessment is emphasized (Biggs 2003). Constructive alignment can be applied to a curriculum and to each single part of a curriculum, such as a seminar or a lecture. In this assignment, a model from the Center of Teaching and Learning at the University of Windsor serves as a framework to introduce activating elements to a lecture.

Method

- The setting: A master program at the University of Bergen, Department of Global Health and Primary Care. The Master Program in Health Science consists of 1 semester with joint teaching for all health professions, i.e. nurses, therapists, radiographers and others. In this first semester the foundations of scientific theory and ethics are imparted. The second semester is dedicated to profession specific courses and in the third and fourth the students are supposed to write their master thesis. The lecture on which this assignment is based took place in the second semester for a small group of master students in physiotherapy science.
- The students: The master students in this course are usually highly motivated. They want to achieve a higher academic level to be able to advance in their respective jobs or to engage in research activities. Many of them take this master program at a later stage in their career.
- The lecture: It is titled “rehabilitation of the arm in neurological patients”. It is one of a series of more or less connected lectures in a course called “movement science” where both the scientific background, the actual practice and own research of the staff members is presented.
- The framework: “A model to help you plan active learning lessons” (Kotter and Kustra 2012) was given to us during the university pedagogics basic course. This model is used to facilitate student participation and higher order learning. It consists of a list of different aspects that can help to design a more active learning experience. I will in the following describe the ones that were applied here and how they were related to the students and the topic.

1. Motivation or Bridge-in. This is mainly meant to catch the students' attention, by telling a story, posing a question or making a provocative statement. Instead of starting directly with the subject the curiosity of the students is aroused. In the lecture I told a case story where a patient participated in a new, controversially discussed treatment approach, which seemed to be almost brutal. The story served as a link to the field of arm rehabilitation and as an explanation for why I got interested in this field.

2. Outcomes and goals. When planning the lecture I tried to think of what outcomes are to be expected. First and foremost the lecture is meant to provide an overview. The students should have heard about this field of rehabilitation and preferably be able to link the background and the methods described to already known concepts of movement science. For some, the topic in and of itself may be of little relevance, since their master project concerns other fields. However, the critical appraisal of treatment approaches can be transferred to a more general understanding of evidence-based practice. There will be no direct assessment of the content of this lecture, but of the movement science theories behind. With this in the back of mind, I tried to focus more on linking to existing theories by asking questions about where to place a certain treatment approach.

3. Pre-assessment. To get an idea of prior knowledge, at the beginning of the lecture the students were asked to describe their professional background and current work status. This gave me an idea of how thoroughly some concepts have to be explained and who of the students could actually be a resource for facilitating discussion.

4. Active learning. Active learning is about how to get students involved even in a relatively passivating setting as a lecture. I divided the lecture in different chunks and tried to involve the students by asking questions after each chunk and giving the opportunity for discussion.

5. Summary / closure: The lecture was summed up by a content review. I also asked for a verbal feedback on the content of the lecture.

Results

In general, it was a lively lecture with a lot of participation from the students. I will in the following paragraph present the assumed and / or observed results of the different techniques applied and critically appraise my implementation of these in the discussion part.

1. The bridge-in story caused some laughter and astonishment, and seemed to work as an awakener.

2. There was no assessment of outcome other than questions if they could relate some of the topics touched to prior movement science theories. The intended outcome, to remember and critically appraise some of the approaches provided, was at least partly achieved because of lively discussions during the lecture.

3. The pre-assessment was informally by asking the students about their background. This was very informative, since I got to know that only two of them were actually working within the field. This resulted in a more thorough explanation of some topics.

4. Active involvement of the students by asking questions was frequently applied throughout the lecture. Since the group was small in the first place, almost any questions ended up in a small group discussion. As far as I could see, everybody participated at least to some extent. In the break the students got the possibility to try out some electronic gadget related to the topic presented. Two of the male students did.

5. There was no formal post-assessment. I tried to wrap up what we had been talking about. When asked about their impression some of the students mentioned that they had gained some insight in the field and that it had been interesting.

Discussion

What worked and what didn't? In general, both I and the students seemed to be satisfied. With the help of the University pedagogics course I felt that I had received some tools that contributed to a more active learning unit. Previously, my focus had been on "what do I want to tell". Since I learned a little bit more all the time, this resulted in cluttered lectures. On the other hand, it wasn't quite easy to stick to "less is more" and focus on what the students should learn. Since most of the lecture is a stand-alone learning unit and meant to provide an overview certain topics have to be covered.

By dividing the lecture in chunks and asking questions the monologue structure was attenuated. I had prepared some questions on beforehand from which I assumed they would facilitate discussion. A teacher can provide space for discussion and try to make the students feel comfortable so that they are likely to participate. In hindsight, I think I should have given even more time for reflection. Fortunately, the students were very communicative, especially one of them helped a good deal in creating a dialogue.

Having said that, I also would like to mention that I had the impression a certain routine in implementing student active learning would be helpful. This was the first time I consciously applied some the techniques and it didn't come quite natural. Some repetitions and further trying would and will give me more self-confidence. I should have given more time for discussion, and asked more questions. To be able to endure a minute of silence could be an important quality.

Some thoughts about what I would like to do before the next lecture. The students would be asked to examine different treatment approaches for patients with stroke within the field of neurorehabilitation. They should examine the scientific evidence and their conceived advantages and disadvantages. I would dedicate 5-10 minutes of discussion at the beginning of the treatment unit. The lecture should be divided more clearly in chunks, with a short summing up and time for reflection and discussion. At the end of the lecture the students could be given the possibility to sum up themselves, e.g. by brainstorm what they remember. I would ask for anonymous written evaluation with a short questionnaire.

The lecture as a means of transferring knowledge has been questioned. Some experts conclude that the lecture is passivating and does not stimulate high-order thinking (Bligh 2000, Biggs 2003, Raaheim 2010). Retention is supposed to be better in explorative small-

group learning and other student active learning units. Nevertheless, a lecture can be valuable when a new subject has to be introduced or the critical reflection of an expert on a difficult topic is expected (Skodvin 2006). The teacher can take appropriate measures to make a lecture more student-active. Simple measures, such as telling stories, posing questions and prompting discussion throughout the lecture can be appealing for the surface learners, too.

References

Biggs, J. What the student does: teaching for enhanced learning. Higher education Research & Development. 1999: 57-75.

Biggs, J. (2003) Teaching for quality learning at university. SRHE & Open University Press

Raaheim, A. (2010) Learing og undervisning. Bergen: Fagbokforlaget.

Skodvin, A. (2006) Mellom kateter og kaos. Forelesning i forskjellige varianter. I Strømsø, H., Lycke, K.H., Lauvås, P. (red.). Når læring er det viktigste. Undervisning i høyere utdanning. Oslo: Cappelen Akademisk Forlag.