IOSR Journal of Research & Method in Education (IOSR-JRME)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 9, Issue 4 Ser. IV. (Jul. - Aug .2019), PP 45-48
www.iosrjournals.org

Recent Advances in Instruction

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Date of Submission: 14-08-2019 Date of Acceptance: 30-08-2019

I. Introduction

What is Instruction? Instruction involves both teaching and learning. *By separating teaching from learning, we have teachers who do not listen and students who do not talk.*[1,2]

There are different **Modes of Instruction**[3]:

Lecture: Careful presentation of facts with organized thoughts & ideas by a qualified person, Discussion: dialogue between lecturer and students or students in small groups giving feedback to the larger group.

Seminar: Seminar: Activity where members meet under general direction of an expert staff member.

Tutorial: same as a seminar but also focuses on the difficulties students experience in the understanding and using of the subject matter.

Case study: a kind of real-life situation is simulated or presented in verbal or written form that usually involves a problem to be solved by each group.

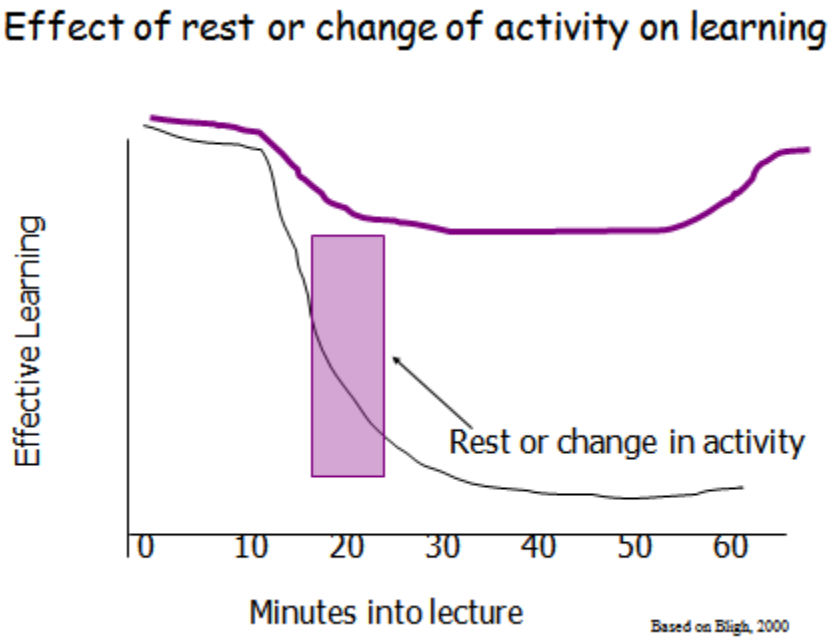
Peer teaching: each member of the group becomes an expert on a topic and teaches this topic to his or her peers in the group.[3]

Recent research demonstrate that students prefer interactive lectures as a mode of teaching. It is also evident that traditional, information-imparting lectures are not preferred by students and therefore attribute to by poor attendance rates.[4] In a study conducted by Nico Allers, wherein the comparison of the preference for learning styles of dental students in a small class in physiology at a South African university with the preference for teaching styles of the lecturers was done. the teaching methods of a small group of dental students (N=35) compared to the actual teaching methods used by their teachers (N=9).The table below lists teaching styles of lecturers compared to learning styles of students. The data collected through Questionnaire 1 (Part A: teaching styles the lecturers used) were compared with the data from Questionnaire 2 (Part A: learning styles the students preferred). The results clearly indicate that the lecturers, as well as the students, in this group of dental students, preferred a variety of teaching/learning styles with lectures preferred by students is 92% and teachers 100%.[3]

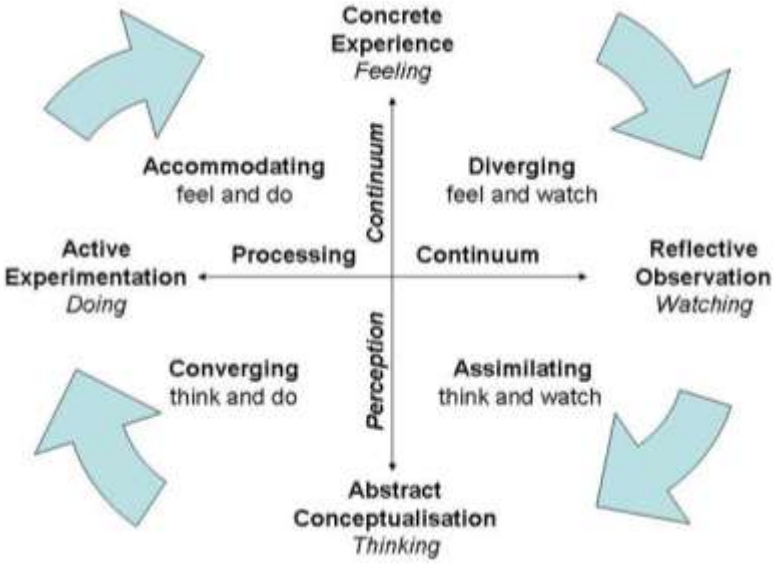
Teaching Method	Preferred by Students	Used by Teachers
Lecturing	92%	100 %
Questioning	59%	89%
Discussion	77%	33%
Demonstration	94%	29%
Seminar	25%	11%
Tutorial	74%	44%
Case study	50%	12%
Peer teaching	43%	11%
Project	30%	0%

Now, the question arrives why do we lecture? There are certainly advantages of Lecturing. They are:1.Lecture helps disseminate information quickly to a large audience, it convey large amounts of information, 2.Provides unavailable information, 3.Covers major portion of our curriculum, 4.Enables model ways of thinking, 5.Helps auditory learners, 6.Maintains control, 7.Sparks interest.[5]

Then, despite these good qualities of lectures, how come *'the more I talk the less my students learn?* Here are some few but important disadvantages of lecturing. Didactic lectures can make the students passive listeners, there will be flagging attention after every 15-20 minutes, and studies have shown that these lectures lead to poor retention for the students.[5]



Before one takes up lecturing, one has to remember the **fundamentals of Learning.**
They are;
1.Learning is an active process- engage more parts of the brain.[5] Active lecturing as an approach to instruction in which students engage the study material through reading, writing, talking, listening, and reflecting.
2.Different people learn in different ways- Visual, Auditory & Kinesthetic.[6] As teachers we often think that the student should learn it because we have said it.
3.Kolb's Learning Cycle: Includes the following components, Concrete Experience, Reflective Observation, Abstract Conceptualization, Active Experimentation. Interactive lectures are necessary to complete the Kolb's learning cycle.[7]



4.Bloom's domain based methods are Knowledge, Skill & Attitude. To deliver the knowledge component of the curriculum, lectures are the best method of instruction.[8]

How to plan and deliver more effective lectures: Keeping the above fundamentals in mind, one has to plan and deliver. Here are some points to prepare an Active lecture / Interactive instruction:[9]
1) Establish the Objectives of the lecture.
2) Consider the Logistics of the lecture.
3) Plan a variety of Approaches.
4) Prepare a set of lecture Notes.

1) **Objective/ purpose of the lecture:** An objective is a precise and measurable statement describing what the student will learn by attending the lecture.[9] An example of how to incorporate Bloom's taxonomy into lectures creating learning objectives.[8]

2*)* **Logistics of lecture**: Arredondo et al (1994) set the recommended lecture time at 45 minutes, including approximately 15 minutes devoted to audience interaction. The number of students attending a lecture has a significant impact in terms of use of questions, amount of interaction, selection and use of media. size and shape of the lecture room A large room with an aisle down the middle makes it possible for the lecturer to move up and down for student interaction.[9]

3) **Lecture approach**: Have an a) introduction, b) body and c) summary in the lecture.[9]
a) *Introduction of a lecture*: Tips for creating an effective; Ask a rhetorical question, use a famous quotation, relate the topic to previously covered content, use a case study or problem-solving activity or role play, a game, short video clip or play music other media, give a demonstration. At this stage the point is simply to bring students attention to the topic and/or stimulate discussion..[10]
b*) Body of a lecture:* Pause every 12 or 15 minutes for interactive sessions. These interactive techniques could be in any form from straightforward questions[8] to constructing test or exam questions[9]. The questions framework can begin with simple then intentional progression of questions leading to higher levels of thinking and involvement as given by Bloom's revised taxonomy. This process will ensure alignment between instruction and assessment and provide validity to your evaluation of students' knowledge and skills.[8] Other ways of interaction are; brainstorming, discussions, use of clinical cases, problem-solving activities, organizing debates, using films and video tapes, and also think-pair-share.[9]
c) *Summary of a lecture:* The purpose of the lecture summary is to draw together the critical information presented and ensure that students leave the lecture with a clear understanding of this information. Techniques of summarizing; Ask the students for questions. This gives students an opportunity to clarify their understanding of the content. Ask questions of the students. Several questions which focus on the main points of the content may be used. Use a slide to review the summary points.[9]

What are the different methods of presenting an interactive lecture?....
The following are certain *questioning techniques*[9]:
1.Ask questions of the entire group, those who wish to volunteer may do so, but the teacher should take care to discourage some students dominating the discussion,
2.Target a question to a specific student, when the audience is relatively small, this technique can be used to involve more of the students.
3.Use students' names when asking questions, this recognition is a powerful motivator
4.Provide positive reinforcement when students respond, this praise will help to create a very positive climate and will encourage more students to enter into the discussion
5.Repeat students' questions and answers to ensure that all students hear.
6. Lastly use key terms which act as memory aids.
An effective lecture can be exciting and rewarding for a teacher. Both the student and teacher will have better and satisfied teaching learning experience.[10]

On the other hand, when a student asks a question to the lecturer, the lecturer can answer the question in three ways; a) directly, b) respond by asking the student a different related question or c) offer the question to the other students.

Evaluating lectures:
1.Feedback from the students- evaluation form.
2. Self-evaluation - uses a video recording.
3. Formal evaluation technique involves the use of an observer. (Sullivan and Wircenski 1996).

Hurdles to practice active / interactive lecturing strategies: Teachers believe that;
1. There is not enough time to cover the curriculum content, the *solution* to this problem is 'cut the content into half'. In other words, rather than prioritization the content, one should focus towards content- concepts and applications of knowledge. The factual knowledge can be read by the student on his/her own.
2. Increase in workload for teachers, the *solution* to this is; be a facilitator, students will do the most.
3.Active lecturing strategies cannot work in large classes. It's a *myth*, they do.
4.Interactive sessions are too time-consuming, *solution* is one or two-minute activities can be incorporated.
5.Teachers don't feel comfortable with it, *solution* is try it because the results are proven.

6.Teachers are used to a certain teaching style and do not change it easily, *solution is* change the teaching style and see the change in students understanding and response.

II. Conclusion

As Frederick (1986) has said, the lecture method is here to stay.[10] Interactive sessions not only enable more involvement of the student in the learning process and retain more information but also, I believe the experience will equip them with qualities of a Future Professional. That is; a)Acquire professional attitudes & communication skills with patients, b)Effective interaction & behavior with colleagues in later years, c)Develop good leadership skills, d)Become critical thinkers, e)Become problem-solvers, f)Become lifelong learners. All of the above support professional development.[7]

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No Author. "Recent Advances in Instruction". IOSR Journal of Research & Method in Education (IOSR-JRME) , vol. 9, no. 4, 2019, pp. 45-48.