

## Review of article

## How to prepare good lecture

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Lecture is one of the classic teaching methods. It is a corner stone in the traditional medical school. It is classified as telling method according to teaching technique and teacher-centered learning method. The main objective of lecturing is dissemination of information. Main job description of lecturer is identification and transmission the most important knowledge to learner in the lecture. It is recommended for consensus subjects such as natural sciences. There are two main components in the lecture, the first is active component (speaker) and the second is passive component (audience). There are types of lectures such as formal, expository and provocative. In formal lecture, lecturer delivers organized and constructed presentation without student motivation and interactive dimension. In expository lecture, lecturer talks the most time with periodic allowed questions from students. In provocative lecture, instructor talks the most time with student motivation by challenged questions for student's knowledge. There are five lecturing styles such as oral, exemplary, information provider, amorphous and self doubter. Oral style is based on verbal skills more than on notes or audiovisual. Exemplary style is organized according to a set of objectives with using media effectively. Information provider style is attached to notes, it doesn't present unnecessary details. Amorphous and self doubter don't achieve instructional goal because it is unstructured approach of lecturing and unable to keep to the topic. These styles have correlation with disciplines such as oral lecturers which are correlated with humanities while exemplars are correlated with biomedical sciences. Information providers and amorphous lectures are common in science and engineering while self doubters are distributed across all disciplines. Poor judgment, poor organization and poor delivery of lecture lead to lecturalgia (painful lecture). It is a syndrome which is characterized by state of heightened or suppressed emotions. It is developed by audience, setting and lecturer.

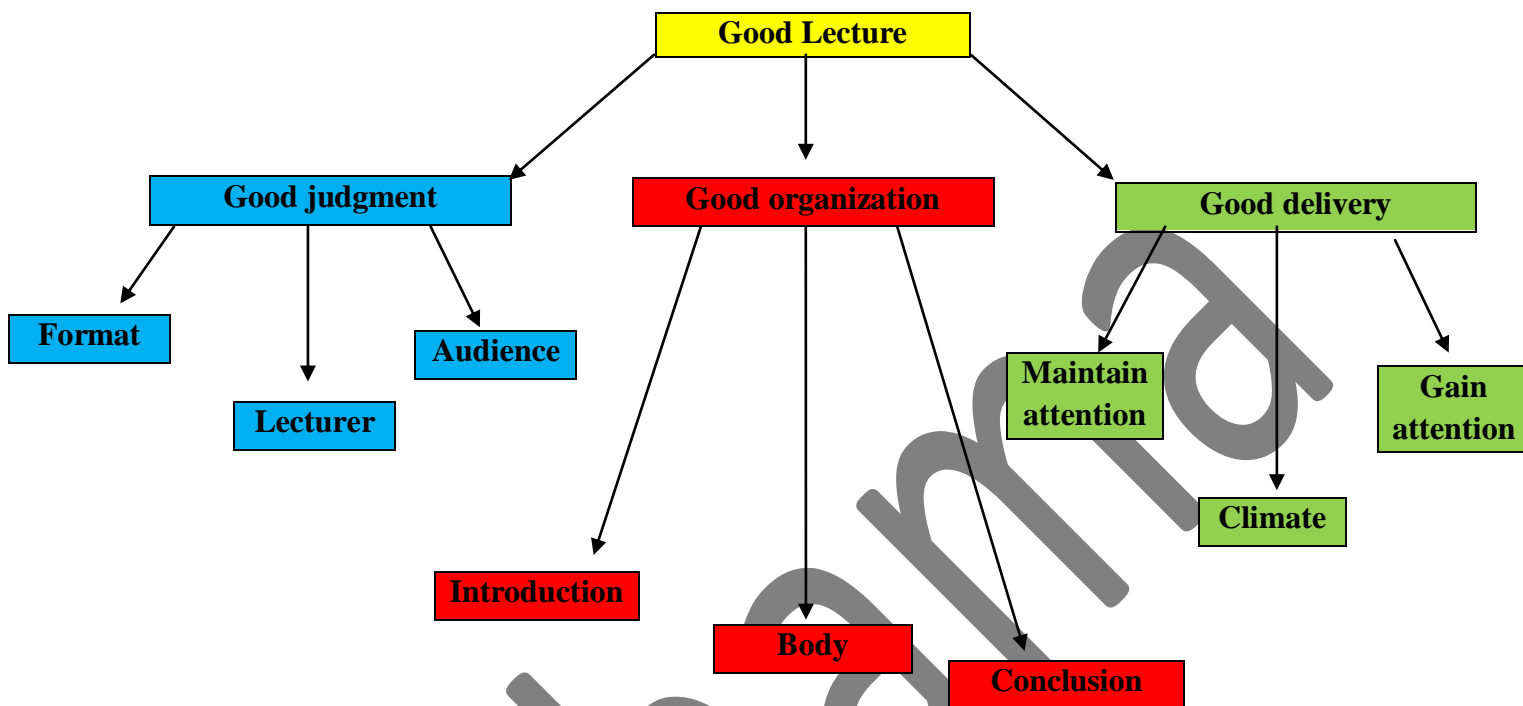
Lecture is a common used type of learning strategy in traditional curriculum but it is also considered as useful method of information exchange in the learning strategy innovation. To create good lecture, it should be good judgment, well organized with good delivery. Lecture judgment means judging the format, the lecturer and the audience. To have a good judgment of lecture, it should have an appropriate format to increase knowledge and understanding according to audience awareness of prior knowledge. It

should have a relevant or interested subject which meets needs of audience with the right choice of lecturer according to knowledge and attitude.

Characters of good lecturer depend on his ability to explain clearly and encourage thought with systematic organization and knowledge experience by enthusiastic attitude. To be good lecturer, you should be able to plan and organize your lecture perfectly. Well organized lecture should consist of introduction, body and conclusion. Introduction aims to gain audience attention, outline educational objectives and content. Body of lecture is considered its main part which should be planned for student satisfaction. Selection of content with sequencing between key points and linkage in-between are main components of body lecture organization. Conclusion of lecture is the last chance for audience in the last fifteen minutes to debrief goals and content of lecture through revision the objectives and key points with facilitating self directed learning and recall. Student feedback is very important issue in the lecture conclusion for improving the educational experience and detection the lecturalgia causes.

The end of the lecturing process journey is delivery of lecture which converts efficiency into effectiveness. It consists of setting the climate, gaining and maintaining attention. Good lecturer who can facilitate the learning by preparation the lecture environment and then conveying it to become safe and relaxed. Preparation of environment depends on ability of lecturer to overcome the physical and emotional issues which affect lecture climate such as noise and temperature (physical issues) and fatigue, hunger and anxiety of audience (emotional issues). Student, teacher and setting are main affecting factors on the climate of lecture. Successful delivery of lecture does not depend on environmental preparation only but it depends also on ability of lecturer to gain the interest and attention of students and then maintaining it. There are many methods which should be carried out by lecturer to gain audience attention such application of clinical case or question related to subject because it leads to active participation and then active learning which increases attention and deep learning. There are other techniques to encourage students' participation and then focus attention on the lecture such as problem solving, demonstration, brainstorming and role playing.

Effective lecture depends on its well organization to be having the ability to achieve the learning outcomes. Good organization of lecture makes knowledge structure in the same context of cognitive structure of students to maintain communication with students and then connection with their understanding. Organization of lecture may be having different forms such as hierarchic and chaining. Hierarchic means collection of different categories of information which are related to one topic in one group while chaining means logical sequencing of events. Organization of lecture may be in picture of variations such as comparison, thesis, conceptual network of area and logical dichotomy. Well organization includes introduction, explicit explanation way, periodic summaries and conclusion which are important factors for promotion the lecture effectiveness. To create effective organization and then effective lecture, it should provide signposts to inform students about what is ahead, provide cues during transition from topic to another, and make a link between prior knowledge and new material and then placing the new knowledge in the context.



**Figure (1):** Schematic approach to components of good lecture.

Interactiveness is considered an important issue for effective instruction. It depends on engaging the students in the relevant activities to the intended learning. It pays attention to learners' needs, responses, and pedagogical concerns. Subject of lecture should be less complex because its complexity decreases interaction based on the inverse relationship of sensitivity with subject complexity. Interactive lecture is considered one of main characters of good lecture. It is one of dynamic methods of lecturing which leads to active involvement and participation of students. Lecturer of interactive lecture becomes facilitator not instructor and then there is an increase of interchange between lecturer, student and content of lecture. Interactive lecture stimulates the interest which increases attention and motivation and then activates memory by focusing on controversial points and real life applications. It leads to higher level of thinking which includes analysis, synthesis, application and evaluation of knowledge. It is a good environment to develop skills of problem solving, communication and decision making. Technique of interactive lecture gives the chance for interchange feedback between lecturer and students at different time's levels of lecture about students' needs and information assimilation. Students can receive immediate feedback about their performance and own knowledge by quizzes application during the

lecture. There is an increase of student and lecturer satisfaction in this type of lecture because of active participation. There is no doubt that there is an opposition to this kind of lectures, so I show it for scientific integrity. Opponents for this type of lecture, claim that it leads to chaos because of control loss upon students and content while others have some fears about ability of lecturer to answer all questions which are posed by students in the lecture.

There are general steps which are incorporated to form strategy which should be carried out by lecturer to become more interactive, it consists of the following procedures:-

1. Be ready to take the risks and overcome the fears
2. Prepare and practice
3. Make objectives clearly and cut down the material
4. Prepare the students for interactive lecture
5. Be flexible without overdoing

There are many used interactive techniques in the medical education which may be used by lecturer to enrich interactive lecture such as the following:-

1. Dividing the class into small groups
2. Questioning the students by:-
  - A. Straightforward questions
  - B. Rhetorical questions
  - C. Brainstorming
  - D. Surveying the class
  - E. Quizzes and short answers
3. Using the students responses by interactive computer systems
4. Clinical cases use
5. Written materials use
6. Organizing debates
7. Simulations and role plays use
8. Films and videotapes use
9. Audiovisual aids
10. Effective presentation skills use

**Characters of good lecture:-**

**1- Good judgment for the following:-**

- A. Format
- B. Lecturer
- C. Audience

**2- Well organization, it should consists of the following:-**

- A. **Introduction aims to :-**
  1. Gain attention of audience

2. Outline educational objectives
3. Outline the content

**B. Body is constructed based on the following:-**

1. Selection
2. Sequence
3. Linkage

**C. Conclusion consists of :-**

1. Revision of key points
2. Revision of objectives
3. Facilitation the self directed learning and recall
4. Feedback

**3- Good delivery**

- A. Setting the climate
- B. Gain attention
- C. Maintain attention

**4- Interaction and active participation of audience**

We can judge the effectiveness of lecture as an instructional method according to the following rules:-

**1- Level (1) - Learner reaction:-**

Participant's views for

- A. Learning experiences
- B. Organization of learning experiences
- C. Content
- D. Teaching methods
- E. Aspects of instructional organization
- F. Materials
- G. Quality of instruction

Lecture has ability to accommodate large numbers of learners in a short period of time but it limits the amount of student participation. It is an economic and efficient method for providing amount of knowledge. It provides organized and summarized content (information) from different sources with structured presentation for complex topics. Material of lecture consists of combination of facts, concepts principles and generalizations. It helps learners to get subsequent learning such as reading assignments. It doesn't adapt to individual learning differences. Learning experiences are usually limited to knowledge gaining only. It doesn't help the student feedback. It doesn't promote active learning or independent learning because questioning and problem solving activities are not usually incorporated inside the lecture. Learner gains usually new knowledge by lecture. It helps acquisition of knowledge but it fails usually to promote or acquire attitude and practical skills for learners such as psychomotor, teamwork, problem solving, communication and self study. Teaching methods of lecture are limited to chalkboard, transparencies and power points slides. It is low technology. Improved of lecture

quality depends on lecturer and using of audiovisual material. Quality of instruction depends mainly on personal characters of lecturer and his skills for physical environment control, organizing the content, learners' attention capture and communication. A nonverbal behavior of lecturer is one of evaluation methods to study effectiveness and delivery of lecture. Body language and voice are two main components of nonverbal behavior. Body language of lecturer is depends on lecturer-learner distance, body movement and stance, facial expression and gestures. Attitude of lecturer such as movement during speaking, compensation the distance by gestures employing, regular eye contact and purposeful body movement, determines the extent of learner interest and attention, and enrich spoken message. Voice variables depend on many different vocal characters such as strength of speaking, enunciation, pronunciation, rate of speech, variety of voice characters and pauses during speaking. Impact of lecture is usually measured by performance in written examination to evaluate the extent of knowledge acquisition for learner. Theoretical, direct and assay questions provide fair learner performance because it meets usually scope of traditional lecture which depends mainly on acquisition of knowledge but learner performance will be poor if questions based on scenario and problem solving skills are used because it depends on brainstorming skills.

## **2- Level (2)- Learning of skills and knowledge**

### **Level 2A**

Changes of attitude or perceptions towards teaching and learning among participant groups are limited. Passive action and attitude is main title of learner for traditional lecture as instructional educational method. It doesn't create motivation or enthusiasm for attitude change of learner towards teaching and learning such as motivation for additional learning.

It is not enjoyable for learners who feel boredom. It gives the interest for the subject through enthusiasm transmission by discipline of lecturer only. It requires more research and preparation for students' attention and motivation maintaining. It is not an effective method for maintaining student interest.

### **Level 2B**

Lecture helps the learner for acquisition of concepts, procedures and principles (knowledge) but it fails to provide acquisition of thinking and problem solving, psychomotor and social skills. According to blooms taxonomy, learner can remember and understand by lecture but he cannot apply, analyze, evaluate and create.

## **3- Level (3)- Changes of learner behavior**

Transfer learning to workplace (desire of learner to apply new knowledge and skills in the workplace), is difficult to occur because concentration on acquisition of knowledge may act against change of attitude and behavior, and skill performance in the practice field. Learner cannot able to transfer the knowledge to novel situations.

## **4- Level 4- Result of learning**

### **Level 4A**

Change in the system or organizational practice (change of professional practice) due to educational method (Lecture), is difficult because professional medical practice depends on affective and

psychomotor skills, problem solving and teamwork skills, and decision making skills. Lecture doesn't provide or promote these skills for learners.

#### **Level 4B**

Change students learning (improvement) as direct result of educational intervention (lecture) is restricted to cognitive learning outcomes. Lecture doesn't meet all learning outcomes; it performs theoretical outcomes based on knowledge acquisition only.

#### **Practical example**

##### **1- Planning the lecture by the following:-**

- A.** Identify audience and their background, needs, and prior knowledge
- B.** My lecture is one topic of professional development program of medical education department in our college
- C.** I select **relevant** topic for the lecture in the context of critical thinking and writing course and suitable for audience **interest**.
- D.** Audience is our colleagues (**educators and researchers**) who attend to develop their professional skills
- E.** I schedule my lecture in the **optimum time** for audience concentration (in the late morning)
- F.** I choose **venue** in the continuous medical education building because it is air conditioned, calm (far away the noise) and its number of seats is suitable for attending audience.

##### **2- Structuring the lecture by the following:-**

- A.** I divide my lecture into three parts (introduction, body and conclusion)
- B. In the introduction,** I outline the learning objectives of lecture and identify importance of lecture topic for the work field of my colleagues.
- C. In the body,** I construct the content to be simple and organized in a logic manner.
- D. In the conclusion,** I summarize main points of lecture
- In the end of lecture,** I perform open discussion about the topic through dialogue (question and answer)

##### **3- Preparing the lecture by the following:-**

- A.** I prepare short description about me and the talk to present by introducer before the starting the lecture.
- B.** I prepare around 15 slides of power point presentation in my lecture
- C.** Every slide will take around one minute to prevent missing the audience attention.
- D.** I repeat main ideas of lecture in the beginning and the end of lecture when attention of audience is at its maximum.
- E.** I use simple words as possible as and short sentences.
- F.** I use humor and short novels which are related to lecture topic during the lecture presentation.

**G.** I use readable font size according to size of venue and data show resolution (Arial, space 1.15 , two different fonts at least in the one slide)

**H.** I use related figures and clipart to the subject.

**I.** I use suitable background color for color of text

**J.** I go to the venue to assess data show, technical equipment to ensure that software is suitable for my presentation, light of venue, air conditioned, and remote slide advancer.

**4- Practice before the lecture by the following:-**

**A.** I rehearse myself several times for presentation of lecture to detect defects and control the time of presentation.

**B.** I perform trial in the venue to ensure that presentation is loaded and open normally.

**5- Delivery the lecture by the following:-**

**A.** I go to the venue before the starting time of lecture to check equipment of presentation for the last time before the lecture.

**B.** I stand in position during the presentation which doesn't block view of any member of audience.

**C.** I start lecture by asking questions related to lecture topic to determine prior knowledge of audience.

**D.** I attempt to use appropriate humorous words to ensure communication with audience and overcome tough academic atmosphere.

**E.** I speak clearly and make sure that my voice reached to all audience by microphone or without it.

**F.** I show enthusiasm during the presentation to pay attention of audience and prevent boring by using the body language, my facial expression and tone of my voice.

**G.** I determine pauses during presentation according to presentable points and it effects.

**H.** I make eye contact with all audience and move during the talking to overcome any barriers with them without distraction their attention.

**I.** I use pointer or remote to refer to important points or ideas.

**J.** I encourage audience to be interactive by asking questions in the beginning, during and the end of lecture, in the first to identify prior knowledge, during presentation by putting two learning objectives in question format, in the end by open discussion.

**K.** I give example to audience to apply main lines of effective argument for their active participation.

**L.** I finish my lecture on time.

**M.** I use short and succinct answers in the end of lecture.

**N.** I receive the feedback from audience in the end of lecture through their questions and reactions.

**Summary and conclusion**

Lecture is classic educational method. Main job description of lecture is acquisition knowledge. Judgment of lecture effectiveness depends on many factors such as learner reaction, learning experiences, performance and impact. Good lecture means well planned, structured, prepared and

delivery. It is motivating and exciting when keeps high level of active participation of audience and then interaction between lecturer and audience. Good lecturer is inspirational role model to students and plays important role to overcome some drawbacks of lecture.

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