

How to Prepare Educational Lecture: EAGEN 50 Years of Experience

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Abstract

Background: European Association of Gastroenterology, Endoscopy, and Nutrition for 50 years provided a good, professional teaching of gastroenterology across Europe by world-known experts. Teaching tips and tricks to achieve maximum effects are summarized in this review article. **Summary:** The good speaker should be motivated to teach the audience at the time of lecture a topic in way that information provided is remembered. The educational aim should be realistic, well selected, and precisely defined. Putting an order and clarity into information provided are crucial. Speaker should feel comfortable during lecture and enjoy it. Ways to achieve that are described in this review paper. **Key Messages:** Medical teaching by lectures should be simple, clear, well-structured, and enjoyable.

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Introduction

European Association of Gastroenterology, Endoscopy, and Nutrition (EAGEN) over its 50 years existence was devoted to postgraduate teaching at the highest possible level. The topics covered whole gastroenter-

ology without selecting single organ or single disease. The list of eminent gastroenterologists and clinical and research teachers representing EAGEN included Guenter Krejs, Guido Tytgat, Juan Malagelada, Jean Paul Galmiche, Michael Farthing, Peter Malfertheiner, Lars Lundell, and many others. For all of them, “The Lecture” was the way of not only sharing knowledge but also the performance, the show, and the event that was supposed to be remembered as something exceptional. This article is supposed to describe experiences gathered over last 50 years by EAGEN. It is thought to help future teachers in the era of e-learning and computer technologies where the emotional contact between teacher and pupil is slowly disappearing. We, EAGEN, still think that classical art of lecturing is important. The most important practical points to be remembered are presented in Table 1, and the common mistakes to be avoided – in Table 2.

Key Issues before Starting Preparations

It is of utmost importance to have a good motivation to give a lecture. This should not be to show the audience how good you are, how great knowledge you have, and how many papers you published. This usually ends with too many slides shown for too little time, with busy text, small letters, copied figures – difficult to follow, understand, and remember. In that case, the text is spoken too quickly with no real explanations and frequently the

Table 1. Most important, practical points to be fulfilled to have a good lecture

a	Motivation of a lecture should be to teach audience in a way that the messages of a talk are remembered well
b	Choose topics important for the audience
c	Present honest, simple, confident, and clear information
d	Divide lecture into clear parts for clarity
e	Number of slides should be limited (optimally 1 slide/min)
f	Use 6x6 rule (6 words in line, 6 lines on the slide)
g	Letter size, not <28 points, avoid capital letter, avoid centering text
h	Text and background – to be contrasted for good visibility
i	Highlight important parts of the slide
j	Eye contact with the audience, react to audience rumors
k	Prepare take-home messages
l	Treat question time as most important part of the lecture
m	Train to fight stress, try to enjoy lecturing, believe in success

Table 2. Common mistakes occurring during lectures – to be avoided

a	Lecture too long, with too many slides, with too much information tried to be conveyed
b	Lecture topic irrelevant for a given audience
c	Use of too complicated wordings, unexplained acronyms
d	Slides shown for seconds with no explanation saying “what is shown on the slide”
e	Using too small letter, too many lines, complicated schemes, complicated tables with no chance to see and understand
f	Using animations without purpose (e.g., moving cats, etc.)
g	Colorful complicated background of the slides – making it difficult to read
h	No interaction with the audience
i	Skipping question time

number of slides is exceeding the chances to be shown. Also time for discussion in such case is minimal or not at all.

The proper motivation, that you need to be aware of, is the wish to teach the audience the objectives listed in the beginning of speech [1]. This teaching should be done in a way allowing for the audience to really understand

your message and be able to remember your message. Optimally this message should be remembered forever, if at all possible. So, of course optimally the message should be logic, simple and useful in everyday life for the audience. Then there are great chances that people will remember. The quality should be high so that the audience trusts you. Of course, this is not possible to teach the whole knowledge in one lecture, so only the most important things should be conveyed; the rest needs further reading. Suggested further reading – can be easily indicated in one of the last slides. Alternatively, one may also ask the future audience, if possible, to have advance reading as a preparatory measure. Recently, the use of prelecture podcasts was studied and turned out to be very useful in students teaching [2].

Generally, the audience remembers only 5% of the knowledge conveyed during standard lecture without special efforts to increase this percentage. This effort enhancing remembered content include mainly interactivity (questioning, brainstorming, small-group activities, role-playing, case-based examples) and clarity of the lecture [3]. The clarity in turn is enhanced by well-structured lecture. It means dividing it into parts: plan of presentation, clear subsections, take-home messages, and conclusions.

It is also important before the lecture – to know who is the audience (number of participants and expected knowledge) and what is the purpose of the teaching [4, 5]. Is the educational meeting for students, for doctors, which specialty, whether audience is multispecialty, international, or national. This is necessary to prepare differently for research meeting, where specific details on methodology, results, limitations of the study are important; during research meeting such aspects like inclusion criteria and exclusion criteria are of great importance and should be perfectly known. On the other hand, practical educational meeting requires pointing out practical issues without emphasis on different points of view. Depending on above facts, the speakers have to decide what is the plan, what interactivity methods can be used, and what level of difficulty should be presented.

Just before the session, it is very useful to go to the stage to see, how advancing slides works, how to turn on laser pointer, how the microphone is located, and whether it should be adjusted to your height, etc. These technical aspects sometimes can be completely different in different places, and this is very unprofessional not to be aware of these details. The speaker has to spend some time on choosing 3 most important “take-home messages.” This decision should be taken well before the lecture.

How to Prepare the Slides?

The first issue is the number of slides. This should be optimally equal to the number of minutes available for the lecture. This means, for example, that for a lecture length of 20 min – a maximum slide number should be just 20. This is justified by the fact that usual time for explanation of a single slide is 1 min. Sometimes longer with more complex slides, sometimes shorter with easy ones; but mean time is usually 1 slide/min. A maximum ratio is 2 slides per minute is acceptable, but only if there are many slides that are planned to be shown for a very short time without explanations [6].

Next, the rule of 6×6 ; this means 6 lines and 6 words in line on one slide. Usually such proportion allows for clear visibility of letters and clarity of presentation. Full sentences on slides are forbidden. If you see on someone's slides full sentence – it just means it is a weak speaker – unless this is done on purpose.

Format of slides should be the same on all slides, the same font's type with the same size. Bold letters and CAPITAL letters are forbidden; not everybody knows but such letters require unnecessary effort from a reader. Minimum size of letters should be 28 points; this size is clearly visible, fills-in all available slides area providing the 6×6 rule is applied. Centering the text of slides should be avoided, usually this is natural to orientate all lines to the left margin.

Background of the slide and color of letters should be contrasted; white background and black letters, dark background and light (white) letters, acceptable are also classical, old-fashioned slides with blue background, and white and yellow letters. Such contrasted background and letters are clearly visible. Background of the slides should be simple (optimally one color); shading of the background, colorful background with complicated patterns or shaded panoramas – are really forbidden. Such background makes it very difficult to concentrate on the text or even clearly see some parts of the text. The greatest disaster is animations including moving objects in the background, moving animals, etc. These may look nice, but they really distract the audience. Animations prepared on purpose to better visualize something or show how things move – are of course most welcome, providing they allow for more precise explanation of the message.

Highlighting parts of the most important fragments of the slide text – are very useful and should be used whenever possible and necessary. However, please remember about avoiding red and green colors on dark (also on blue) background. They are not visible from distance, es-

pecially because a fraction of population has partial Daltonism.

References showing the source of information on the slide should be shown usually in the right lower corner. Size of the fonts for the reference may be smaller than 28 points, and references are not counted in the 6×6 rule.

How to Behave during the Lecture?

Behaviour of the speaker during the lecture is of utmost importance [7, 8]. There are several crucial issues. One of them is to keep the eye contact with the audience; watching all the time only the screen or the laptop with the slides is unacceptable. Also a good speaker reacts to the signals from the audience. It is always very good to notice that and react accordingly. Gestures should be limited, voice should be loud, and the microphone if used should be kept close to the mouth to transfer the voice loudly. This is a big failure if audience does not hear the speaker. This is also important to control the location of the speaker in relation to the screen and different part of the audience. The speaker should never obstruct the vision of any of those who take part in the lecture.

Never say sorry, if you fail to explain or show something; never skip slides quickly, never say “it is hardly visible,” etc. Just do not show hardly visible slides. Also criticizing audience for something is unacceptable; never make the audience embarrassed or ashamed.

During the lecture, the so called wake-up calls are very useful, which means that from the time to time the speaker says “now I want to say a very important thing” or “now please concentrate – it will be important”. Such statements increase the attention of the audience and are very useful. Such wake-up call should be used every 5–10 min of the lecture. Lectures should be divided into parts, and these parts should be announced, for the audience to feel that there is an order in the lecture. One of the ways to increase the attention is also to ask questions to the audience – for them to think and try to answer. This is very useful. Voting can also be used.

Toward the end of the lecture, it is very useful to announce that you are going to finish the lecture soon – this may work as a wake-up call. At the very end, please summarize what you have just said and name the 3 the most important take-home messages. Then thank the audience for listening, attention, and the time spent together.

The very last part of the lecture is the question time. This is extremely important. The question time should always be obligatory except traditionally in state-of-the-art lectures. There should always be enough time for that. This is very educational for the audience but also a very

useful for the speaker. Speaker should treat that time as a way of becoming aware of what was his message, was he clear enough, has he provided a message as intended, or was there a misunderstanding. Such question time may help the speaker to improve lecture next time. This is of course the role of the chairmen to make question time useful, but on the other hand, speaker should end well in time. Try to answer the questions clearly and be short. Do not make a lengthy speech. If the question is not clear for you, please ask to repeat; if you think the audience didn't hear the question – repeat the question for the audience. Never get angry with someone questioning you, he or she should not be regarded as enemy making your life difficult. Think of question time as something very useful. If it becomes clear that you made a mistake during lecture or you missed some information – thank for it and be honest to admit that. If there are no questions, please encourage the audience. Good speaker sometimes on purpose does not cover a specific and obvious topic – just to give a chance for the audience to ask. The key issue is to be able to enjoy question time and not to be worried.

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Conclusions

A good lecturer has a clear motivation to teach a specific topic. This educational aim should be clear from the beginning and should be realistic. The most important information should be selected, shown, underlined, and repeated. Putting an order clarity into information provided is a crucial issue of the speaker. Speaker should feel comfortable during lecture, and if at all possible should enjoy it. The audience will share your good mood with you, and in these circumstances, you will have a satisfaction, and the audience will remember your lecture as something very valuable.

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