

2015 Association of Professors of Dermatology Annual Meeting

Effective Lecturing & Enhanced Learning

Charles J. Hatem, M.D.

Harold Amos Distinguished Academy Professor

Professor of Medicine

Harvard Medical School

Chair, Department of Medical Education

Mount Auburn Hospital

chatem@mah.harvard.edu

A checklist for effective lecturing & enhanced learning:

1. Gather details about intended audience:

- Who are they?
- What's your charge?
- Where's the audience 'at'? What are their needs?
- Program overview?
 - Size of audience?
 - Your place on the program.
- How will you be introduced? By whom?
- Reference, as appropriate, host/institution

2. Case the joint

- Get there early: Where's the room? Talk to people.
- Room layout:
 - Size/Seating
 - Lighting
 - AV equipment/computer—if not your own will software be compatible?
 - Have a 'Plan B'
 - Using a pointer
 - Use of the microphone

3. 'Begin at the end.' Identify the main messages of your lecture/ the take home points. Search the literature thoroughly before the first slide is made.

4. Employ what is known about the science of learning and apply to the construction of your slides/lecture.

5. Recognize lecturing as a performing art:

- Start on time, never early, end on time
- Clear statement of goals of talk: connect with what went before
- The 'hook'
- State how audience will be empowered
- The danger of jokes
- Provide a menu
- Avoid laser light show, use your hand!
- Use good board skills
 - Write legibly and big enough for back of the room
 - Consider how to organize material on the board
 - Avoid abbreviations

6. Reduce PowerPoint Overload (after Atkinson and Mayer/see below)

- use clear headlines
- 'chunk' the talk
- get rid of unnecessary text
- use visuals synergistically with words
- delete anything that detracts from chief idea

7. Strategies of 'the middle'

- Key ingredient: enthusiasm!
- Address and partner with the audience: "The audience writes the poetry"

- Do not tell all
- Use Stories and be aware of their internal structure.
- Authenticity
- Keep it simple!
- Use metaphors
- Demonstration: the visual to demonstrate the complex
- Communication both verbal and nonverbal
- The kinesthetics of speaking
- Challenges of large group, interactive lecturing
- Increase lecture participation
- Key challenge:
 - Attention commonly lapses after 10-15 minutes—how to deal with this?
- Slide construction
- Fonts
- Useful strokes
- Danger! Too many slides
- PowerPoint pitfalls
- What's the message and is PowerPoint the medium?
- Copyright issues
 - Attention to copyright law is a matter of respecting intellectual property (and the law!)
 - Know Fair Doctrine guidelines
 - Just because it's on the web doesn't mean it's in the public domain.

8. How to end a lecture

- End on time!
- Summary
- Connect with what's next
- Salute the audience
- End on a high note/consider a 'scripted finish'
- Post-lecture Questions
 - Repeat the question
 - Reframe for sake of clarification
 - Hostile questions—
acknowledge the emotion but do not argue, "Happy to discuss this with you after the session."

9. Reflection-on-action

- Personal
 - 'Autopsy' notes
 - Videotape review
- Peer
 - Receive feedback effectively
- On the matter of anxiety:
 - Preparation
 - Enthusiasm
 - Practice
 - Realistic expectations
- Prepare for catastrophe

Final Overview:

10 Steps in the Journey to Effective Lecturing and Enhanced Learning

1. Know your audience
2. Begin at the end
3. Preparation is vital
4. Use principles of multimedia (and neuroscience) for enhanced learning
5. Teaching as a performing art that aims for relevance delivered with high emotional valence
6. Get feedback from self-reflection, audience and peers
7. Q&A period is an integral part of the lecture
8. Summarize key points
9. End on a high note
10. Never give the same talk twice

Bibliography*

Atkinson C. *beyond bullet points*. 2007 Microsoft Press.

Atkinson C, Mayer R. *5 Ways to reduce PowerPoint overload*. <http://www.indezine.com/stuff/atkinsonmayer.pdf>

Berger W. *A More Beautiful Question*. Bloomsbury, 2014.

Brown G, Manogue M. *AMEE Medical Education Guide No. 22: Refreshing lecturing: a guide for lecturers*. *Medical Teacher*. May, 2001; 23:231-244.

Cherry K. *Types of Nonverbal Communication: 8 Major Nonverbal Behaviors*
<http://psychology.about.com/od/nonverbalcommunication/a/nonverbaltypes.htm>

Copyright Charts - Hall Davidson www.halldavidson.net/copyright_chart.pdf (Excellent charts for review.)

Coulehan J. *Metaphor and Medicine: Narrative in Clinical Practice*. *Yale Journal of Biology and Medicine*. 76 (2003); 87-95.

Derek Bok Center for Teaching and Learning

<http://isites.harvard.edu/fs/html/icb.topic58474/TFTlectures.html>

(see especially: *Tips for Teachers: Twenty Ways to Make Lectures More Participatory* and Mosteller's notes on The "Muddiest Point in the Lecture" as a Feedback Device.)

Duarte N. *slide:ology, The Art and Science of Creating Great Presentations*. O'Reilly Media Inc. 2008.

Gülpinar MA, Yeğen BC. *Interactive lecturing for meaningful learning in large groups*. *Med Teach*. 2005 Nov;27(7):590-4.

Gunderman R Ashrafian MH. *Eight questions to enhance lecturing*. *J Am Coll Radiol*. 2013 May;10(5):327-8.

Harvard University. Office of the General Counsel. Copyright and Fair Use. <http://www.ogc.harvard.edu>

Huitt, W. (2003). The information processing approach to cognition. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University.

<http://www.edpsycinteractive.org/topics/cognition/infoproc.html>

Issa N, Mayer RE, Schuller M, Wang E, Shapiro MB, DaRosa DA. *Teaching for understanding in medical classrooms using multimedia design principles*. *Med Educ*. 2013 Apr;47(4):388-96.

Issa N, Schuller M, Santacaterina S, Shapiro M, Wang E, Mayer RE, DaRosa DA *Applying multimedia design principles enhances learning in medical education*. *Med Educ*. 2011 Aug;45(8):818-26.

Lochner L, Gijssels WH. *Improving lecture skills: a time-efficient 10-step pedagogical consultation method for medical teachers in healthcare professions*. *Med Teach*. 2011;33(2):131-6.

Malik AS, Malik RH. *Twelve tips for effective lecturing in a PBL curriculum*. *Med Teach*. 2012;34(3):198-204.

Mayer RE. *Applying the science of learning to medical education*. *Medical Education* 2010; 44:543-549.

Mazur E. Education. *Farewell, lecture?* *Science*. 2009 Jan 2; 323(5910):50-1. (Also see the Mazur Group Homepage: <http://mazur.harvard.edu/>)

McLeod P, Steinert Y, Capek R, Chalk C, Brawer J, Ruhe V. *Peer review: An effective approach to cultivating lecturing virtuosity*. *Medical Teacher*. 2013;35: e1046-e1051,

McKee R. *Storytelling That Moves People*. *Harvard Business Review*. June 2003. p. 51-55.

Miller GA. *The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information* *The Psychological Review*, 1956, vol. 63, pp. 81-97

<http://www.musanim.com/mam/miller.html#memory>

Morgan N. *How to become an authentic speaker. Even sincere speeches often come across as contrived. A four-step process will help you create a true emotional connection with your audience*. *Harv Bus Rev*. 2008 Nov;86(11):115-9, 138.

Morgan N.. *The Kinesthetic Speaker, Putting Action into Words*. *Harvard Business Review*. April 2001; 113

Newman LR, Brodsky DD, Roberts DH, Pelletier SR, Johansson A, Vollmer CM Jr, Atkins KM, Schwartzstein RM. *Developing expert-derived rating standards for the peer assessment of lectures*. Acad Med. 2012 Mar;87(3):356-63

Newman L, Lown B, Jones R, Johansson A, Schwartzstein R. *Developing a Peer Assessment of Lecturing Instrument: Lessons Learned*. Acad Med. 2009; 84:1104-1110.

Reynolds G. *Presentation Zen Design: Simple Design Principles and Techniques to Enhance Your Presentations* New Riders. December 28, 2009.

Reynolds B. *Presentation Zen: Simple Ideas on Presentation Design and Delivery (2nd Edition) (Voices That Matter)* New Riders. December 18, 2011.

Timpson W, Burgoyne S. *Teaching & Performing: Ideas for Energizing Your Classes*. Atwood Publishing, 2002. 2nd Ed. p. 42.

Sarason S. *Teaching As A Performing Art*. Teachers College Press, Columbia University. 1999.

University of Chicago, Center for Teaching and Learning. <http://teaching.uchicago.edu>

University of Maryland University College. *Copyright and Fair Use in the Classroom, on the Internet, and the World Wide Web*. <http://www.umuc.edu/library/copy.shtml>

University of Medicine & Dentistry of New Jersey. Center for Teaching Excellence: <http://meg.rbhs.rutgers.edu/cte/>

*All the URLs listed were accessed and active as of July 8, 2015