How to Be the Speaker
Everyone Wants You to Be
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- MEd, Fellowship in Medical Education
- PD and Dean of GME
- RSNA FDW
- Whitley Award
- RSNA Outstanding Educator
Disclosures

• I have served as a consultant for RSNA and directed an annual faculty development workshop sponsored by RSNA

• I am the Editor of Seminars in Roentgenology
Objectives

1. Apply adult learning principles
2. Demonstrate effective presentation skills
I will model behaviors
Who are you?
Principles of adult learning
• Adults are goal-oriented
• How will this activity help me reach my goals?
• Necessitates lectures be organized with clearly defined elements
• Adults are relevancy-oriented and practical
• WIFM (what’s in it for me?)
• Apply to real-life
• Allow learner to identify his/her needs
• Adults (all learners) need respect
• Share ideas and learn from each other
• Comfortable physical environment
• Follow planned schedule
• “Safe” learning environment
• Set degree of difficulty high enough but not too high
• Adults learn best when they are active participants in learning
Tell me and I forget. Show me and I remember. Involve me, and I understand.

*Chinese proverb*
10% of what we read

20% of what we hear

30% of what we see

50% of what we see and hear

70% of what we say

90% of what we say as we do (orally work out a problem)
PEOPLE GENERALLY REMEMBER:

• 20% of what they HEAR
• 30% of what they SEE
• 50% of what they HEAR and SEE
What is the average adult attention span?

1. 5-7 minutes
2. 8-10 minutes
3. 15-20 minutes
4. 25-30 minutes
What is the average adult attention span?

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2. 8-10 minutes
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4. 25-30 minutes

Stuart J, Rutherford RJD. Lancet 1978
Because of the passive role of learners in a lecture, learner attention span is relatively short.

Use a technique to help maintain attention at 15-20 minutes.
Incorporate Interaction

- Ask ?
- Brainstorming
- “Think-pair-share”
- Case-based examples
- Directed listening
- ARS
• Adults learn best with feedback

By Gabe Martin

While testing out his new cereal mix on his horse, Dave gets some unexpected feedback.

http://www.cts.com/~borderline/
ARS

- Facilitates interaction
- Anonymous
- Instantaneous results
- Feedback to speaker and attendee
- Can be used “on the fly”
- Takes time
• T/F, Y/N, MCQ
• Make questions meaningful
• Discuss the correct and each wrong answer
40-year-old man with acute shortness of breath
What should be done next?

1. Recommend CT of the chest
2. Recommend D-dimer test
3. Call the referring clinician
Presentation Skills
Assumptions

• You want to see good presentations
• You want to deliver good presentations
Have you developed and delivered a PowerPoint presentation?

1. Yes
2. No
Think of the last lecture you attended that inspired you. Why did it inspire you?
Inspire

“To arouse or generate feeling or thought”
Lecture Components

• Introduction
• Body
• Summary
• Consider pre/post test
Introduction

- Review objectives
- Ask rhetorical?
- Ask for show of hand to?
- Use ARS
- Quotation
• Present a case
• Videotape
• Cartoon
• Demonstration
• Role play
• Share personal experience
Body

• Better to have too little than too much!
• 2-5 key points
Summary

• Brief
• Address main points
• Ask learners for ?
• Ask ?
PowerPoint

The Good, the Bad and the Ugly

Pamela Bagley and David Izzo, Biomedical Libraries
The Good
The Bad
The Ugly!

Need I say more?
“Presentations largely stand or fall on the quality, relevance, and integrity of the content. If your numbers are boring, then you’ve got the wrong numbers. If your words or images are not on point, making them dance in color won’t make them relevant.”

Edward Tufte “PowerPoint is Evil”
Which font is easier to read?

1. This is Times New Roman, a commonly used serif font.
2. This is Arial, a commonly used sans serif font.
Serif = Tail

Times New Roman
No Tail

Arial
# Font Sizes (Eye Test)

<table>
<thead>
<tr>
<th>12</th>
<th>16</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>40</td>
<td>44</td>
</tr>
</tbody>
</table>
Which do you prefer?

1. This is 20 font
2. This is 28 font
3. This is 32 font
4. This is 40 font
PowerPoint default font:

- 44 (heading)
- 32 (main text)
I routinely use $\geq 50$ for headings and $\geq 40$ for main text.

The size of this font is 54.
Which is easier to read?

1. ALL CAPITAL LETTERS
2. A mixture of capital and lower case letters
Images

- Make them big
- Delete poor quality images
- Optimize contrast
- Crop
Hypersensitivity pneumonitis
Hypersensitivity pneumonitis
KISS

Keep

It

Simple
Example of a Bad Kiss

- There is too much text on this slide, which makes it too busy
- The font is only 36, which makes it hard to read
- The lines extend too far inferiorly on the slide, which make them hard to read
- The animation effects are annoying
• Keep slides simple
• Rule of 6
• Avoid distracting animation
PEOPLE GENERALLY REMEMBER:

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Pneumonic for cavitary nodules

- Cancer
- Autoimmune diseases
- Vascular (septic emboli)
- Infection (TB, fungal)
- Trauma (pneumatocele)
- Young (congenital)
Mnemonic
(NOT pneumonic)
• Appropriate color schemes
(Avoid red and green)
Bad Color Scheme

A colorblind person may not see the text
Colorblindness

- 8-12% European males; .5% females
- Cannot distinguish colors
- Red/green most common
- Traffic lights, sunburn, raw meat, slides
Giving a Presentation

- Emphasize 2-5 key points
- Rehearse
- Incorporate interaction
- Be entertaining
• **Rehearse!**
• Be completely familiar with the content and organization of the slides
Speak in a conversational tone
Speak slowly and incorporate pauses
Speak loudly enough that everyone in the audience can hear.
Speak directly into the microphone
What is the average adult attention span?

1. 5-7 minutes
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Incorporate Interaction

- Ask ?
- Brainstorming
- “Think-pair-share”
- Case-based examples
- ARS
Don’t use the pointer as a wand.
People will pay more to be entertained than educated.

Johnny Carson
Dr. Fox
Quotations

“Computers will never be popular.”

Thomas Watson, former Chairman of IBM
“Why would anyone want a computer at home?”

Ken Olson, founder and former president of Digital Equipment Corp.
Who said the following?

“640K of memory will be enough for everyone.”
The Quotations Page – Your Source for Famous Quotations:
www.quotationspage.com
It's a stress fracture.
Body Movements

- Appropriate gestures
- Eye contact with audience
PEOPLE GENERALLY REMEMBER:

_____ % of what they HEAR

_____ % of what they SEE

_____ % of what they HEAR and SEE
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Key Points

• Base content on objectives and learner needs
• Limit content
• Make lectures interactive
• Make lectures entertaining
Case-based Presentations

1. Define a case
2. Define a CBP
3. Describe the key elements of a CBP
4. Apply case-based approach to large group teaching
A case is...

...a problem with a known solution that involves radiologic imaging.
A CBP involves...

...showing numerous cases that complement each other and address a common theme.
Key Elements of CBP

• Asking questions with ARS (audience participation)
• Serial presentation of history/images
Sushi Analogy
• Who has eaten sushi?
• What is sushi? (one word or phrase)
What is Sushi?

- Uncooked food
- Japanese food
- Seafood
- These are labels that we use to index information
Labeling is how we add new experiences to our memory and compare them to prior experiences.
We label images...

• LUL collapse
• Sclerotic lesion
• Spiculated mass
Case-Based Teaching to Large Groups

• Follow learning objectives
• Show cases relevant to practice
• Show several examples
• Show different diagnoses that look alike
Objectives

1. Recognize the findings of LUL collapse on a CXR
2. Describe the differences between the appearance of LUL collapse and similar appearing but different diagnoses
3. Recognize LUL collapse as a sign of lung cancer
Create Questions Based on Objectives
Objective #1

• Recognize the findings of LUL collapse on a CXR
Describe the findings
Abnormal opacity left lung
Luftsichel sign
Mediastinal shift to left
Anterior displacement of major fissure/retrosternal opacity
Anticipate Failure

- Abnormal opacity left lung
• Abnormal opacity left lung
  - left upper lobe pneumonia
  - left pleural effusion
• Mediastinal shift to left
• Mediastinal shift to left
  - Right pneumothorax
• Anterior displacement of major fissure/retrosternal opacity
• Anterior displacement of major fissure/retrosternal opacity
  - Anterior mediastinal mass
Create foils for the following question:

Which of the following findings is NOT shown on the CXR?
1. Abnormal opacity in left lung
2. Mediastinal shift to left
3. Left medial pneumothorax
4. Anterior displacement of major fissure
Objective #2

Describe the differences between the appearance of LUL collapse and similar appearing but different diagnoses.
Create foils for the following question:

Given the findings on the CXR below, what is the diagnosis?
1. LUL collapse
2. Left pleural effusion
3. Anterior mediastinal mass
4. LUL airspace disease
Objective #3

Recognize LUL collapse as a sign of lung cancer
Create foils for the following question:

In a 50-year-old man with the following CXR, what is the likely diagnosis?
1. Lung cancer
2. Anterior mediastinal lymphoma
3. Left pneumothorax
4. LUL pneumonia
Show examples of Foils
Left upper lobe pneumonia

Left upper lobe collapse
Left pleural effusion  LUL collapse
Show additional examples (expand the sushi experience)
Review of Key Points

• Case-based teaching builds a foundation of knowledge using practical, work-related cases

• It is based on the similarities and differences between multiple cases
• It encourages critical thinking if the questions and foils are tailored to the objectives.
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_____ % of what they HEAR and SEE
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The Lecture Song