An introduction to teaching

Teaching large groups

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What some students think

How important is each of the following is for you when you think about what makes a good lecturer?

<table>
<thead>
<tr>
<th></th>
<th>A lot</th>
<th>a lot</th>
<th>much</th>
<th>at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gives good notes</td>
<td>98</td>
<td>12</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Gives well organised lectures</td>
<td>83</td>
<td>25</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Knows the subject</td>
<td>77</td>
<td>33</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Goes at an appropriate pace</td>
<td>74</td>
<td>38</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Talks in an interesting way</td>
<td>52</td>
<td>44</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Is enthusiastic about the subject</td>
<td>48</td>
<td>53</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Listens to students</td>
<td>30</td>
<td>55</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>Is good fun</td>
<td>29</td>
<td>50</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td>Is easy to talk to</td>
<td>25</td>
<td>43</td>
<td>39</td>
<td>5</td>
</tr>
<tr>
<td>Varies the pace of lectures</td>
<td>5</td>
<td>31</td>
<td>59</td>
<td>5</td>
</tr>
</tbody>
</table>

Alan Slomson, University of Leeds

http://ltsn.mathstore.ac.uk/workshops/induction2002/slomson.htm
What are lectures for?

1. Applying known concepts or principles to solving problems in new situations
2. Remembering specific facts
3. Analysing information into its constituent elements
4. Evaluating or making critical judgements
5. Organising facts to make sense of them
6. Synthesising or putting together information in new or original ways
Types of lecture

- Dictated lecture
- Students listen and take notes
- Students are asked questions by their tutor
- Students are encouraged to ask their tutor questions
- Students are asked to address problems and discuss solutions in pairs and fours
Levels of learning

- Evaluation
- Synthesis
- Analysis
- Application
- Memory
Key questions

When lecturing -

• What are you trying to achieve?
• Will what you do and say help to achieve it?
Sequence of topics

- Easiest first
- Thematic
- Logically sequential
- Historical / chronological
- Geographical
- Normal / abnormal

- Most immediately helpful
- Controversial
- Theoretical / practical
- Reducing apprehension
- Familiar
A basic lecture structure

• Introduction and overview
  – purpose and context; overview of main points; revision of earlier material
• First main point
  – summarise point; develop and explain ideas; examples; restatement of point
• Second main point (etc)
• Summary and conclusions
  Restate and review main points; conclusions or implications; details of next lecture / related work
Comparative structure

- Introduction and overview
- Theory A
- Theory B
- Criteria for comparing theories
- Comparisons and contrast between theories
- Summary and conclusions
A quest or story

- The goal or starting point
- Clarification, contextualisation, justification of the above
- Steps on the journey
  Successes, failures, insights, confusions, breakthroughs, wrong turnings
- The goals achieved (or not)
- Recap and conclusions
Academic argument structure

- Introduction
- Overview of presenter’s position and supporting arguments
- Counter-arguments
- Demolition of counter-arguments
- Further arguments in favour of lecturer’s position
- Conclusions
- Restatement of own position
  modified or strengthened in light of counter-arguments
Signposting the talk

• This lecture falls into four parts …
• I’m going to make three key points …
• I shall talk for ten minutes, ask you to undertake a short activity, gather your ideas and draw some conclusions …
• I shall advance the following argument in my talk …
Level of concentration

concentration

minutes
Maintaining attention span

concentration

minutes
Breaks and activities

• Take a break
• Read own notes
• Read another’s notes
• Write down a question
• Ask your question
• Tackle a problem / short test
• Discuss a question
• Read some material
Breaks and activities

Careful briefing needed:

• Exactly what they should do, with OHT or handout
• Why they are doing it
• How long they have
• The outcome:
  – group report?
  – students’ solutions?
  – your answer?
Regaining attention

Group work means noise, so:

• Give permission
• State a time limit
• Say what signal you will give to stop
  – OHP off and on
  – Hand raised ... etc
Encouraging dialogue

- Establish ground rules
- Ask a clear question
- Encourage student-student discussion or note-making first
- Allow sufficient “wait” time
- Don’t be surprised by silence
- Treat all questions / comments seriously
What the lecturer might provide

• Reduced OHT handouts
• Skeleton notes as handouts
• Semi-notes as handouts
• Gapped handouts
• Lecture notes and OHT slides on web
• Lecture summary
What the student can be encouraged to do

• Be discerning in what is written down
• Summarise
• Review notes
• Swap notes and thoughts with other students
How tutors can help students

• Brief students at the start of the lecture
• Flag important points before delivering them
• Highlight crucial points
• Review significant points at the end of the session
Handouts

- Purpose and format
- When to give out
- Plan for noise
- Anybody not got one?
- Explain structure and purpose
Chalkboards

- Plan what for and when
- Write big and clearly
- Move across board as you write
- Key points only
- Face students
- Stand aside when finished
- Clean board at the end
Circle the number that best represents your current knowledge:

1. XXXXXXX
   (1) Have never heard of it
   (2) Have heard of it, but don’t know what it means
   (3) Have some idea what it means, but not too clear
   (4) Have a clear idea what it means and can explain it

2. XXXXXXX
   (1) Have never heard of it
   (2) Have heard of it, but don’t know what it means
   (3) Have some idea what it means, but not too clear
   (4) Have a clear idea what it means and can explain it
Minute paper

Please answer each question in one or two sentences:

1. What was the most useful or meaningful thing you learned during this session?

2. What question(s) remain uppermost in your mind as we end this session?
Self-presentation

- Posture
- Positioning
- Eye contact
- Projection
- Pitch
- Pace
- Pausing
- Ends of sentences
- Emphasising key words
Once upon a time I had the misfortune to own a VW Beetle.
It had a 1600cc engine, it was bright orange with customised chrome air vents, and I hated it.
I can state, categorically, that it was the most unreliable car I have ever owned, and the most expensive to run.
Anything that could go wrong did, and at one point even the knob on the gear stick fell off.
Like many others, I had been seduced by the Beetle’s 1930s styling and by claims that it was entirely reliable.
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