

Maximising Learning in Large Groups

POSTGRADUATE
UNIVERSITY OF OTAGO
Te Whare Wānanga o Ōtago
NEW ZEALAND



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UNIVERSITY OF OTAGO
Te Whare Wānanga o Ōtago
NEW ZEALAND
OTAGO MEDICAL SCHOOL
Te Kura Hauora o Ōtago

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Type in chat....
When does a group become 'large'?
Pick a number



2

What does 'maximizing learning in large groups' actually mean?

Giving large-group learners the best chance to learn delivered material in a way that supports them achieving learning objectives

NB. There are a variety of reasons why people may attend in a 'large group'; inform, upskill, community



3

Session objectives



Observe systematic process and description of how learning in large-groups can be maximised



Acquire and discuss new tools and perspectives around teaching large groups



Reflect on potential frameworks and tools for developing large-group teaching sessions

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On today's menu:

- **What do students want?**
- **Preparation**
- **Structure**
- **Content organisation**
- **Delivery / Engagement**
- **Feedback**

Guest starring....

- *Two breakout groups*
- *A couple of polls*
- *Chances for discussion*
- *Halfway break*

Please use the chat function throughout the session

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Content ≠ Learning

Information is everywhere. Students access information *from* everywhere.
What are you trying to achieve with 'learning' in the same room as them?

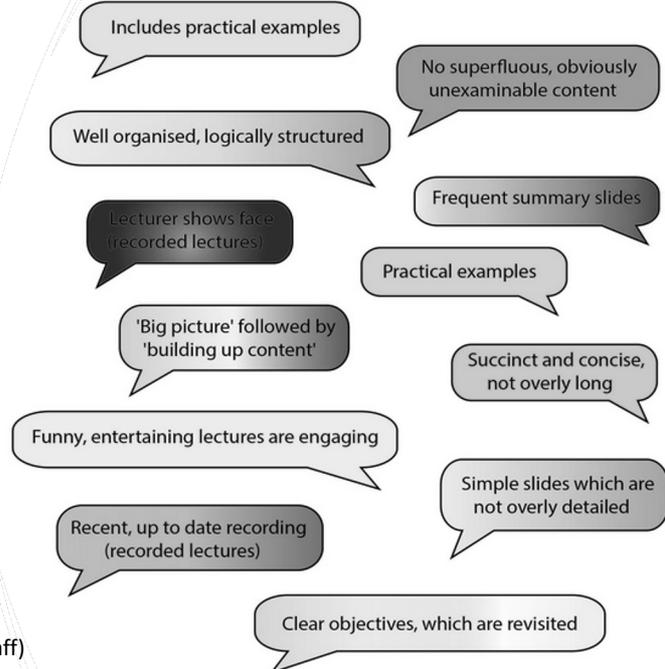
Why should students bother turning up to your large group sessions?

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What do students want?

- Structure
- Engagement
- Clarity
- **Meaning**

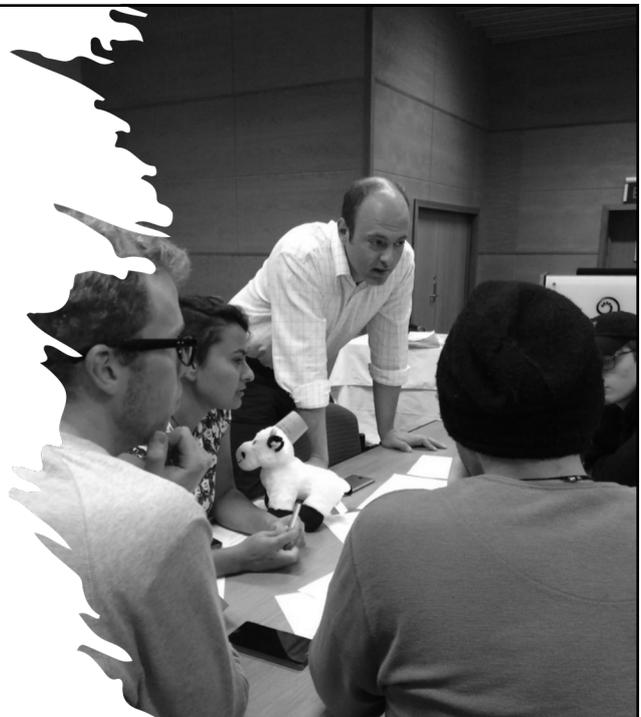
(Most of this is under the personal control of teaching staff)



7

Summarizing the student voice

- Don't assume all students are the same level
- Make sure all can see
- Explain clearly what and why
- Make clinically relevant
- Demonstrate clearly
- Have different strategies for teaching
- Correct mistakes immediately
- Allow time for repetition
- Supplement with explanations / resources as required



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Poll question, type answers in chat:

- Don't assume all students are the same level
- Make sure all can see
- Explain clearly what and why
- Make clinically relevant
- Demonstrate clearly
- Have different strategies for teaching
- Correct mistakes immediately
- Allow time for repetition
- Supplement with explanations / resources as required

Which of these is MOST important to you in teaching a large groups?

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Handwritten notes on lined paper. A circular overlay is present in the center-left. The notes include the word "Preparation" and a bulleted list. The handwritten text includes "interactive", "Break", "B/O", and "interactive".

Preparation

- Roadmap
- Content integration, learning outcomes
- Content levels of learning (Bloom's taxonomy)
- Style / mode / structure

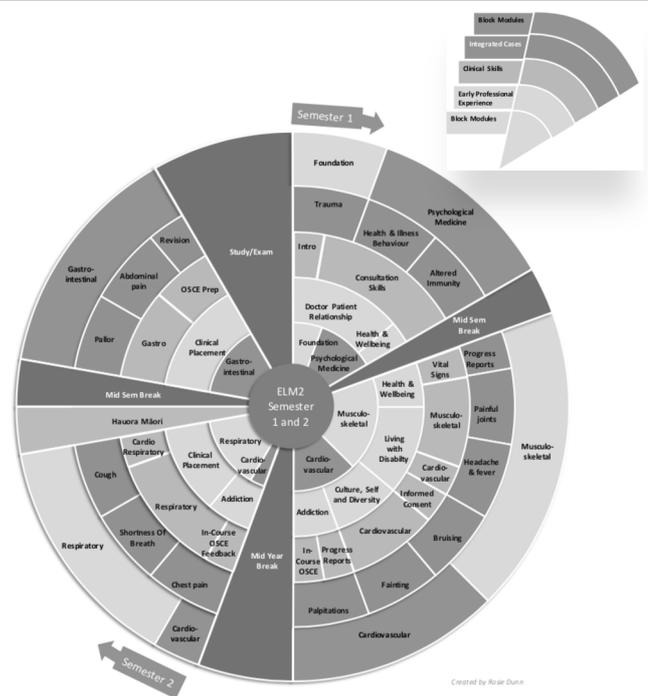
Handwritten notes: "interactive", "Break", "B/O", "interactive".

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Content integration

- Horizontal and vertical integration
- Learning outcomes, constructive alignment

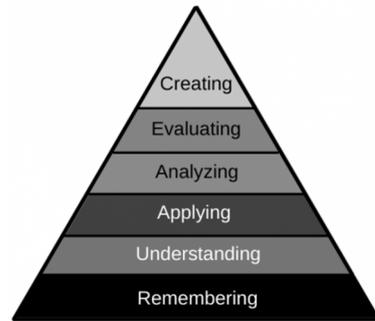
Content has to be useful and relevant to the work students are undertaking



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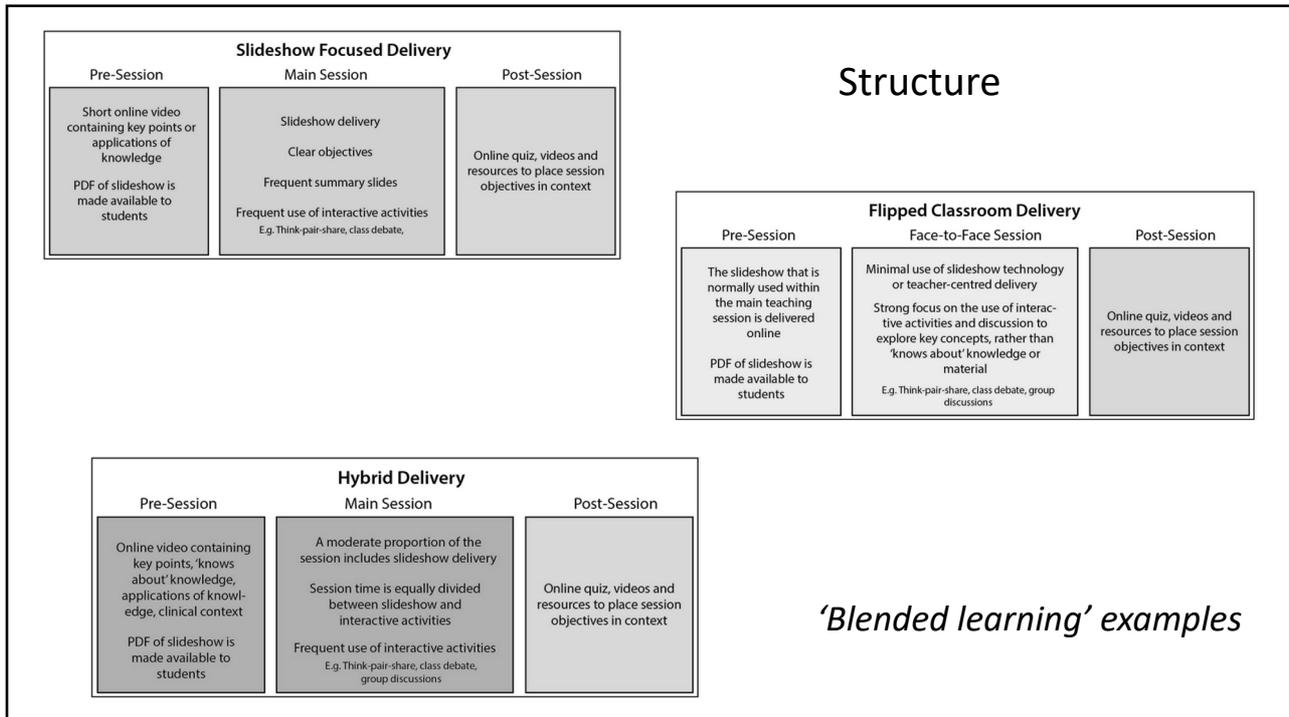
Style Mode Structure

- [Level / type of learning may guide]
- Slideshow
- Hybrid
- Flipped
- Zoom
- Available resources
- Technology
- 'Blended' learning



Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
To find or recall information	To construct meaning from written material or graphics.	To use information in new situations.	To draw connections among ideas.	To value information or ideas	To produce new or original work.
Define Name Draw Outline Duplicate Recall Identify Recognize List Show Match	Associate Classify Compare Identify Comprehend Indicate Demonstrate Interpret Describe Relate Differentiate Restate Discuss Select Distinguish Summarize Translate	Calculate Change Classify Compute Compare Employ Execute Show Illustrate Solve Implement Use Map Write Model	Break Down Experiment Categorize Illustrate Combine Inspect Compare Outline Connect Predict Contrast Question Debate Research Differentiate Separate Examine Subdivide	Appraise Argue Assess Rate Conclude Recommend Convince Score Evaluate Select Support Investigate Test Justify	Compose Formulate Construct Generate Create Produce Critique Propose Design Revise Develop Rewrite Direct

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Breakout One

A very quick 'hello' and intro yourself!

What delivery structure would be the most challenging for you? How could you potentially address those issues?

- *Flipped classroom*
- *Hybrid delivery*
- *Slideshow*



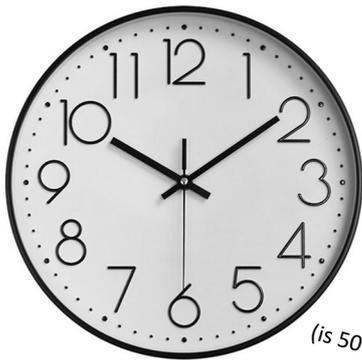
5 Minutes

Followed by general discussion

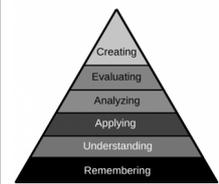
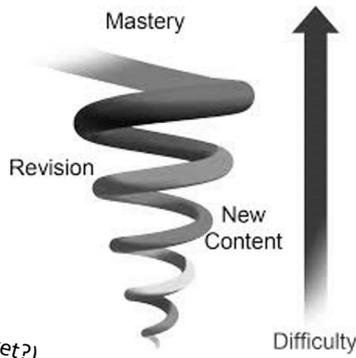
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Content organisation

- **Clear learning objectives**
- **Summaries**
- **Prioritize key content (maximize learning, minimize content)**
- Logical and coherent
- Key points highlighted
- Allocation of time (e.g., difficult concepts)
- Alignment and integration in syllabus (horizontal, vertical, spiral)



(is 50 minutes a target?)



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Jon and Tony's Xmas Wish-list



LEARNING OBJECTIVES



SUMMARIES



CLINICAL EXEMPLARS / SCENARIOS



INTERACTION WITH STUDENTS

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Stand, stretch, move, refuel



Turn your camera off, mute your mic.

Stand up, move around.

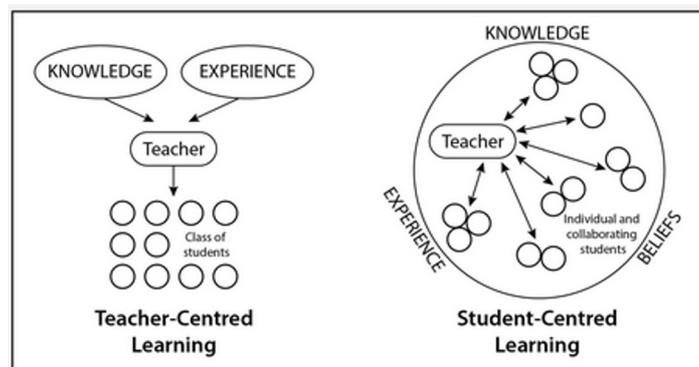
We will start again in 60 seconds.

<https://handandstone.ca/stand-up-and-stretch/>

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Delivery / engagement

Student-centred focus



“Group size affects our ability to engage and interact with students in a personal, one-on-one fashion; in general, this means you have to get them do something between themselves to be actively engaged, rather than you driving the interaction. If there is less personal interaction possible per student, the perception of ‘control’ around engagement is subsequently altered.”

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What is 'engagement'?

"It is an indicator of student success"



https://www.researchgate.net/figure/The-Student-Engagement-Core-Model-Note-Adapted-from-Where-student-teacher-and_fig1_313835696

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Strategies and tools

- Student-centred learning
- Active learning (e.g., groups of 3, pause and discuss, quick questions, think pair share, whip around)
- Blended learning
- Educational tech (e.g., Kahoot)
- Gamification
- Interdisciplinary teaching (and 'Instant expert')
- Engagement trigger (photo, video, statement at start)
- (Small groups) Inquiry-based learning / Project-based learning
- Personalised learning (opportunities to show knowledge)



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'Instant expert'

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Reflection on pre-reading

- Activate student prior knowledge
- Use questions (rhetorical)
- Encourage active learning
- Incomplete handouts
- Demonstrations / examples
- Culturally inclusive
- Learn before lecture

7 ways to engage students in lectures
King's Learning Institute

1. Activate student prior knowledge
Students rarely come to lectures with no knowledge of a topic. Finding out what they already know can help you to pitch your teaching at the right level of academic challenge and identify and correct student misconceptions.

Put it into practice: Begin the lecture with a PowerPoint slide or handout with 2 or 3 open-ended questions and get students to work in pairs to answer them. Brainstorm responses or ask several volunteers to share their answers. Ask 5 to 10 multiple choice questions on the topic based on what you expect students to already know. Use a show of hands for each answer to quickly identify areas you will not need to waste time covering as well as spotting the gaps in student prior understanding. You can then use the lecture to focus on new knowledge for the students and how it relates to their existing understanding. Repeat this type of quiz at the end of the lecture and students get immediate feedback on their learning.

2. Use questions
In most cases when you are lecturing you do not want students just to memorise information but to engage with it in thoughtful or critical ways. Rather than approaching the lecture as an opportunity to provide answers, think about the lecture as a space to model how to ask the right questions.

Put it into practice: Begin the lecture with rhetorical questions instead of learning outcomes to reframe the lecture from an inquiry-based perspective. Stopping the lecture to set questions for individual students to answer individually or discuss in pairs or small groups within the larger class can help consolidate new concepts or topics immediately. By asking students to paraphrase a new idea or argument in their own words, solve a problem, error, answer a multiple choice question, list and prioritise concepts, do a differential diagnosis or pose two or three questions for you to answer.

3. Encourage active learning
It is very difficult to remain fully engaged with a lecture for 50 minutes however inspiring or interesting the lecturer or topic is. This is especially the case if there is little variation in the mode of delivery. Varying topics, for example using images, short audio or video clips or guest lecturers, can improve concentration but encouraging active learning is essential for developing understanding.

Put it into practice: Ask students to look through their notes and review or re-organise them. For example, highlight the important points, identify primary and secondary information or distinguish between claims and evidence. Getting students to draw a concept map or mind map based on structure of the topic, if you want to get individual students to ask or answer questions remember 'Think, Pair, Share'. Start by letting students think individually, then share ideas in pairs. Once they have rehearsed their thoughts and got feedback from a peer they will be more confident about sharing their ideas with a large group. Remember to always leave enough time after you have asked a question for students to answer.

4. Use incomplete handouts
Although many modules now provide copies of PowerPoint presentations in advance of lectures these do not have to include everything presented in the lecture and are not an alternative to attending the class. Handouts which students have to complete as they participate in class ensure they are actively making individualised notes that are personally meaningful to them.

Put it into practice: Leave spaces in handouts for students to write definitions in their own words or record their own examples for a specific idea. You can also ask students to complete diagrams, fill in missing labels, work through a proof, plot a graph, complete a flow chart or fill values in a table. Providing the correct answers ensures that of the lecture but they have actively participated in creating their notes rather than copying down everything in class or just picking up the handout afterwards.

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Breakout Two

What are your favourite tricks for engaging students in a large group:

- *On zoom*
- *In person*



[Refer to circulated document]

4 Minutes

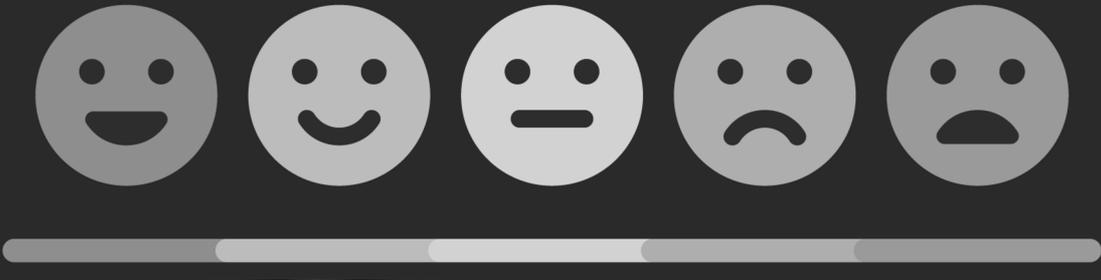
Followed by general discussion

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Feedback



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Your own performance? Elements of the session?

Feedback

- Ask learner(s) verbally, email
- Closed questions: content focused, delivery focused, any other element
- Open ended questions: what did you like, what would you change
- Have a colleague watch a brief part of the session (perhaps specify something you would like observed)
- Video record yourself (ask permission of students!)
- Perhaps ask *specific* question about performance (not general)

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Poll question, type answers in chat:

- What is your favourite way to gather quick feedback on a large-group teaching session?

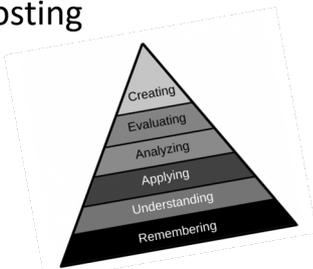
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Session summary

- Framework for maximizing large-group learning outlined
- Several common elements to successful large-group sessions, including planning, engagement, clarity
- No 'one way is best'
- Give it '*meaning*' – consider why people should attend
- Maximize learning, minimize content
- Make feedback a habit

How / why was it done? What worked, for you?

- Pre-reading
- Pre-video
- Video clip
- Roadmap; interactive elements
- Learning objectives
- Signposting



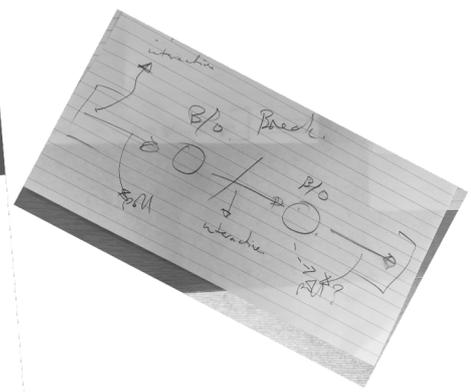
7 ways to engage students in lectures
King's Learning Institute

1. Activate student prior knowledge
Students enter most lectures with no understanding of a topic. Working on what they already know can help you to plan the learning in the right level of challenge and depth, and correct student misconceptions.

2. Use questions
All students have some pre-learning, even if it is not relevant, prior to receiving information. This pre-learning is a developmental asset. Rather than ignoring it, the lecturer can use it as a springboard to ask the right questions.

3. Encourage active learning
It is very difficult to create active engagement in the lecture room. This is especially true if the lecturer is not an expert in the field. The most effective way to engage students is to encourage them to engage in active learning.

4. Use incomplete handouts
Although most students have good notes, the lecturer's presentation is a key resource. It is important to use it as a resource to engage students in the lecture room. This can be done by using incomplete handouts that require students to complete the missing parts.



← **Tweet**

what matters is not whether you actually communicate to the audience, but that the audience gets the impression that you know what you are talking about

And a bit of coke helps, in case you don't have time to prepare properly

So yesterday I gave my lecture. Despite a lack of preparation, I spoke quite well and without any hesitation, which I ascribe to the cocaine I had taken beforehand. I told about my discoveries in brain anatomy, all very difficult things that the audience certainly didn't understand, but all that matters is that they get the impression that I understand it... It was good company: Billroth, Nothnagel, Breuer,

12:58 PM · 19/04/20 · Twitter Web App

91 Retweets 22 Quote Tweets 521 Likes

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Thank you



EDSSU Colleagues



Jon



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Links, references

- Education Unit resources (including DKYs):
<https://www.otago.ac.nz/oms/education/mbchb/staff/resources/>
- ELM Curriculum Delivery and Teaching Strategy:
<https://medschool.otago.ac.nz/course/view.php?id=1918>
- <https://www.ucl.ac.uk/teaching-learning/publications/2019/aug/large-group-teaching>
- Venton BJ, Pompano RR. Strategies for enhancing remote student engagement through active learning. *Analytical and Bioanalytical Chemistry* 2021;413:1507-1512. doi.org/10.1007/s00216-021-03159-0

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Pre workshop: Maximizing learning in large groups

- Attached PDF to read
- What are your best methods for engaging large groups, on zoom or in person?
- What do you think students want from large group sessions?

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