





Qu.1. What does "Large" mean to you?

Solo

If you mention to someone that you teach a large class, what number are you in fact thinking of?

Please send in the first number/size you think of digitally (or on a scrap of paper if you haven't got a digital device working here).

In pairs

When you've sent in your first thought, then turn to a neighbour who has also sent in her/his first thought and discuss what size you said. If you change your mind as the result of this, send that in too.

Qu.2. What does "Engaging" mean to you?

<u>Solo</u>

If you are thinking about successfully engaging a large class, what do you feel you mean by "engaging"?

Please send in your first thought on this in a fairly short phrase digitally (or on a scrap of paper if you haven't got a digital device working here).

In pairs

When you've sent in your first thought, then turn to a neighbour who has also sent in her/his first thought and discuss what you each said. If you change your mind as the result of this, send that in too.









Case study of video-links for overflow lectures (1)

This session, psychology suddenly had to use an overflow lecture linked by video to the regular one(s).

BO-LT-B as overflow from Joseph Black for a 5pm lecture. We dictated that about 60 students should attend it.

(45 attended first lecture there; 30 remained by 18 Nov) We paid a GTA to be there; in fact was there early, during, and stayed on afterwards. Answered student questions.

After initial complaints, a hard core came to prefer it and resisted going back to the main LT.

This astonished us; but shows something important about what actually matters to the student experience in lectures. I did a group discussion (kind of focus group); and then we did a questionnaire.



Video-link lectures (3)

asked "Why do you prefer this to the live LT?" Answers:

- Less crowding
- Can sit with your friends, and find them when you arrive. You always get to sit with your choice here, cannot do that in a crowded LT.
- No-one staring at you if you come in late (or leave early).
- [It is students more than staff staring/glaring that matters to them]
- · Can see the slides better. (No difference in hearing)
- (Can see the lecturer better too: but was another sample said this.)
- The GTA here so you can ask questions afterwards.
- Can find the building
- They feel more at home here
- Power socket for laptop

Video-link lectures (4)

What % of students feel like this? Our data isn't good enough to give much of an estimate of this.

About 30 students clung to the VLink room, out of 60 originally allocated = 50%.

But in fact of those 30, some had deserted and been replaced by others not originally allocated: so can't say 50%.

Few students in our questionnaire said they had tried both the VLink room AND another room, so relatively few had informed responses.

We just don't know; but we know a sig. subset feel like this, and feel strongly. It isn't 100%, and it is probably less than 50%. Nevertheless, it brings out some neglected factors about what makes students feel at home in a lecture theatre.

Video-link lectures (5)

English Language have used a video link for \approx 10 years; They have found similar things.

They also find that restricted mobility students allowed to go to the LT of choice find this a significant advantage: often shortens their journey usefully.

A lot of students have diagnosed anxiety problems and don't WANT eye contact from the lecturer, so prefer link room. And many say that the view of the lecturer is better on video vs. back of the "live" hall.

LifeSciences similarly say their 5pm lecture has smaller numbers but a better feel to it which some students seek out.

Video-link lectures (6)

My interpretation:

- This is very reminiscent of Tinto's social and academic integration; which is a theory of how to predict dropout, but may perhaps be taken as one sense of "engagement" here.
- Social and academic integration could be interpreted as feelings of being connected to a) staff; b) fellow students.
- Perhaps the obstruction of peer integration in the big LT vs. the VLink room more than compensates for some having the lecturer present.
- And perhaps having a GTA you can be sure of speaking to outweighs having a lecturer you have perhaps 2 chances in 300 of speaking to when it comes to staff contact.









) Take	Unir of Gl	versity asgow	to cl	Tips & Hints for I	Large Class Management
Schedul Primary Grade	Gloss	Secondary Band	Aggregation Score	Primary verbal descriptors for attainment of Intended Learning Outcomes]
	Excelle rit	A1 A2 A3 A4 A5	22 21 20 19 18	Exemplary range and depth of attainment of intended learning outcomes, secured by discriminating command of a comprehensive range of relevant materials and analyses, and by deployment of considered judgement relating to key issues, concepts and procedures.	We are currently
в	Very Good	B1 B2 B3	17 16 15	Conclusive attainment of virtually all intended learning outcomes, clearly grounded on a close familiarity with a wide range of supporting evidence, constructively usilised to reveal appreciable depth of understanding.	developing an
с	Good	C1 C2 C3	14 13 12	Clear attainment of most of the intended learning outcomes, some more securely grasped than others, resting on a circumscribed range of evidence and displaying a variable depth of understanding.	Integrated
D	Satisfac tory	01 02 03	11 10 9	Acceptable attainment of intended learning outcomes, displaying a qualified familiarity with a minimally sufficient range of relevant materials, and a grasp of the analytical issues and concepts which is generally reasonable, about insecure.	and students to
c	Weak	E1 E2 E3	8 7 6	Attainment deficient in respect of specific intended learning outcomes, with mixed evidence as to the depth of knowledge and weak deployment of arguments or deficient manipulations.	cover feedback and
ſ	Poor	F1 F2 F3	5 4 3	Attainment of intended learning outcomes appreciably deficient is critical respects, lacking secure basis in relevant factual and analytical dimensions.	L1 to L4.
G	Very Poor	G1 G2	2	Attainment of intended learning outcomes markedly disficient in respect of nearly all intended learning outcomes, with irrelevant use of materials and incomplete and flawed explanation.	
н	\cup		0	No convincing evidence of attainment of intended learning outcomes, such treatment of the subject as is in evidence being directionless and fragmentary.	







University of Glasgow	Tips & Hints for Large Class Management
Moodle 2 – mo	ore than just lecture slides.
Moodle Books:	Lecture Slides & videos Assessments & deadlines Continuous Assessment updates Learning resources: videos, reading, lab skills
Glossary:	FAQs (continually adapting)
Assessments:	Moodle quizzes (formative & summative) Moodle Lessons Submission of written work Access to grades Marking Schemes Class-wide feedback on assessments

University of Glasgow	Tips & Hints fo	r Large Class Management
Moodle – more t	han just accessing	g lecture slides.
Moodle Extras:	Turnitin PeerWise Aropa Big Blue Button Survey Wiki Chat the next update.	Le caracterization de la caracterizatione de la caracterization de la caracterization de
TopTip Take the you know looks, an the stude	time to make sure how it works, d is accessed, from nt's perspective.	Exercise Care-Alients by proteins 1 Exercise Care-Alients by proteins 2 Exercise Care-Alients by proteins 3 Exercise Care-Alients by proteins 3 Exercise Care-Alients by context 3















Initial Evaluation of PeerWise Data	P	eer iversit	wise ty of Glasgow
	Sem	ester	
	1A 2011	1A 2012	
Number of Students Participating	555	588	
Total Number of Questions Written	1384	1866	
Total Number of Questions Answered	23191	49063	\geq
Total Number of Comments Made	5166	6793	
Average Number of Questions Written per Student	2.5	3.2	
Average Number of Questions Answered per Student	41.8	83.4	
Average Number of Comments Made per Student	9.3	11.6*	
* 1 student made 1,609 comments (cor she answered)	nmente	d on eve	ery question

Initial Evaluation of PeerWise Data	P	eer niversit	Wis y of GI	asgow
	Sem	ester	Revisio	n Period
	1A 2011	1A 2012	1A 2011	1A 2012
Number of Students Participating	555	588	403	236
Total Number of Questions Written	1384	1866	275	29
Total Number of Questions Answered	23191	49063	24173	17236
Total Number of Comments Made	5166	6793	1898	570
Average Number of Questions Written per Student	2.5	3.2	0.7	0.12
Average Number of Questions Answered per Student	41.8	83.4	60	73
Average Number of Comments Made per Student	9.3	11.6*	4.7	2.4
* 1 student made 1,609 comments (cor	nmente	d on eve	ry ques	tion







Investigation of comments written by students



- · Surprisingly polite to one another
- Not keen on questions that are too easy
- Several comments about spelling mistakes
- Self- reflection is evident examples
- Many suggestions for improvement







Welcome to PeerWise	
PeerWise supports you and your peers in the creation, sharing, eva elevant to your studies.	uation and discussion of assessment questions
Adv	vance Homework
Read:	

Comments

PeerWise

"It seems to me that that our enthusiastic embrace of technology is based on some rather shaky assumptions about humanity. For example, the paper seems to assume that engagement, as an end game, is an achievable target and that we may manipulate the environment is such a way as to effectively influence the participants: generate lots of questions, replies and comments. And that this activity reflects ones engagement with learning. All of the above highly questionable.

More importantly, broader data suggests that disengagement is the norm. For example, in an online context 90% of users passively browse, 9% may occasionally do something and much of the active contribution is done by the 1% of outliers who, for whatever psychological reason, feel the need to spend considerable amount of time broadcasting and sharing."

Comments

PeerWise

"On page 6 of the article a comment is made that the importance of feedback had not really been looked at but further attention was going to be given in the future. That seems incredibly short sighted given the massive amount of research already available (and for some time) on the importance of feedback and how to use feedback. An intervention about this would probably have brought about huge improvements in results."

Questions

PeerWise University of Glasgow

Is it sensible to use the deviant behaviour of a small number of outliers to design educational tools that should cater for a broadly understood normal "majority"?

•Yes - if the tool is straightforward and ease to access and manage.

•The 'deviant behaviour' may be seen in purely on-line delivery but is not evident in this model.

Questions

PeerWise³

Jniversity of Glasgow

When using PeerWise, how great is the risk of errors and misconceptions being disseminated through the cohort via student-designed questions?

- The risk is there but in our experience any confusion is flagged by students quickly.
- The difficulty grading includes the option to flag a wrong question.
- Students can also comment to the author (and do) if a question is wrong or seen as much too difficult.

Questions



How can you convince students of the value of PeerWise on a course that is assessed by essays?

The generation of MCQs seems to be more appropriate for certain types of subject. How would it work in literature based studies where personal responses matter or in scenario based learning where there is more than one 'correct' answer?

•It helps with factual information and self-testing but not essay writing skills (use Aropa for that).

Questions

PeerWise

Since the evidence suggests that the CSP model is effective for student learning, can this model replace examinations and other traditional assessment?

- We would say that it can replace some parts of assessment (although not wholly).
- We do not see it replacing examinations.



What can "engagement" mean?

In standard English usage:

- 1. Being affianced
- 2. Engaging a gear
- 3. A naval engagement i.e. battle.
- 4. Occupied (busy); employed.

There is no meaning in English that clearly applies to learners and learning.

What can learner "engagement" mean?

Types of "engagement":

- 1. Amount of work learner will do. Time on Task; Motivation;
- 2. "Passion": amount of intrinsic motivation, regardless of extrinsic.
- 3. Alienation vs. engagement. Connecting personal work with values on the course: with the marking scale. Cf. Life

Sci approach to communicating the meaning of marks. 4. **Depth** of mental processing

- 5. Proactiveness: Active-passive: degree of taking the initiative
- 6. Contingent interpersonal interaction: engaging with people w.r.t. the course.

The next slide is a graph of 4 vs. 5: proactiveness vs. depth.



Chi's (2009) stages of engagement

- 1. Inattentive: not even reading or understanding the text
- 2. Passive: reading
- 3. Active: highlighting, answering a (closed) question
- 4. <u>Constructive</u> (explanatory): Generating descriptive explanations (answer open questions)
- 5. Interactive: peer discussion



Teacher-learner discussion: JITT

In part 3 of this workshop, Chris attempted to enact a simple case of Just In Time Teaching (JITT).

- This is really treating even huge lecture occasions like seminars: where students are required to have done the reading in advance, and the class is used for discussion: to build on that basis rather than substitute for reading.
- Traditionally: seminars; called JITT in Novak's 1999 book describing a quite widespread practice in USA first year science lectures; absorbed into Mazur's PI practice (described later); now called "flipping the classroom" by re-inventors in the school sector.
- Relies on students sending in open-ended questions, or doing a quiz, to guide the lecturer as to what aspects haven't been grasped and using the "lecture" session exclusively to address these.
- ICT facilitates the former; large numbers means a small sample is a good guide to the whole class; first year means the lecturer is confident on the content and can design the session only a few minutes in advance. Scalable to any size audience.

What types of class interaction do I use?

(in my Positive Psychology L4 class. All ≈ independent of audience size)

- · Personal experience snowball. (VIA quaire. MT experience.)
- Personal pre-concept snowball. (happiness)
- Tests of memory used as a self-demo (recall building, Word menus, news items good/bad)
- Group joint product (wiki page)
- Critiquing and using other students' wikis
- Impromptu jigsaw: a subset teaches the rest of the class: MT training; attenders of the consciousness course.
- CI / lesson assembling. Got them each to critique a different wiki, and pool lessons.
- Visiting speakers. Not interactive BUT strongly welcomed.

Learner-learner discussion: (PI 1) The Mazur PI ("peer instruction") Sequence

- 1. Concept question posed (brain teaser)
- 2. Individual Thinking: students given time to think individually (1-2 minutes)
- 3. Students provide individual responses
- Students receive feedback poll of responses presented as histogram display. But NOT told the correct answer.
- Peer Discussion: students instructed to convince their neighbours that they have the right answer.
- 6. Retesting of same concept question.
- 7. Students provide individual responses (revised answer)
- Students receive feedback poll of responses presented as histogram display
- 9. Lecturer summarises and explains 'correct' response

Brain teaser questions (PI 3)

PI and similar approaches are being widely used, very successfully (Mazur nearly tripled the amount students learned from his course) in first year science classes.

Scalable to any size audience.

They depend on writing or borrowing good brain teaser questions, which in turn are often derived from a sci. educ. literature on common misconceptions.

They depend on MCQs with right/wrong answers. Could they work in SocSci?

Possibly

Economics 101; ask at the end "Why does a loaf of bread cost £1:20?" Most answers will fail to mention demand in any way, and mention only supply-side costs.

Brain teaser questions (PI 2)

The point is to provoke debate, internal and between peers. Cf. Socratic questioning, and "catalytic assessment"

Remember the old logo or advert for Levi's jeans that showed a pair of jeans being pulled apart by two teams of mules pulling in opposite directions. If one of the mule teams was sent away, and their leg of the jeans tied to a big tree instead, would the force (tension) in the jeans be:

- half
- · the same
- · or twice what it was with two mule teams?

Twitter in the classroom (1) Peer interaction in parallel with the Teacher

The essential feature is that students are encouraged to be sending and sharing messages during class, during exposition by the teacher. This is a fundamental challenge to the egotism of the presenter. (After all, they are paying for it and it should be me me me who delivers.)

The technology works at any scale; our ability to scan / skim the channel may or may not scale up.

You can hear Graeme Pate's talk on his extensive and successful use of this at tomorrow's LTconference: <u>Session 1A: 11:20-11:50am</u>.

I tried it myself in a small way in one class this semester.

Twitter (2)

In one class (27 enroled; 10 hours), I attempted to introduce Twitter as a second broadcast channel (independent of the first channel consisting of monologue by me in speech and slides).

Graeme Pate identifies 3 kinds of contribution on the 2nd channel: 1. "Linking": URLs or literature citations [7]

- 2. "Reinforcing": elaborations [23]
 - ("re-expressions" in the Laurillard model)
- "Questions": Q&A where a student posts a question and others may answer it. [9]
- That is what we saw some of in this class

It's a way of getting peer interaction in the classroom; but also, of improving interaction (as opposed to only monologue) between L and T.

2cc: The two channel classroom (3)

I call this idea "the two channel classroom" (2cc).

- The traditional idea of a lecture is that T broadcasts, and Ls silently process that individually by writing paraphrased notes.
- Thus there is actually a second channel anyway, for any active learning to occur ⇒ I.e. attention can NOT be exclusively on T.
- The new feature is that this second channel might be broadcast: so that peers could share their active experience of the lecture in a way likely to promote learning, without interrupting channel 1. (Also, questions for T posted. cf. JITT)

Relative to unreflective standard practice, this is a sophisticated challenge to our concepts of what engagement can and should be; of what interaction should be; and of (my / any) simple division of teacher-learner interaction vs. peer interaction.

It also addresses what learners are actually doing in their minds during as lecture.



Main theories raised

- A. "Teacher monitoring": feeling noticed personally; but more, having one's behaviour noticed by staff / dept. / the teacher.
- B. Some educationally important types of "engagement"
 - 1. Tinto's "integration"
 - 2. Time on Task; Motivation.
 - 3. Depth of mental processing
 - 4. Contingent interpersonal interaction
 - 5. The power of peer interaction. [Luke Timmons]

Chi's scheme is really about (2), but emphasising the power of (3) and especially (4).

Luke Timmons

Critical thinking ability depends on whom a student lives with

A student project just completed used the Ennis-Weir Critical Thinking Essay Test. (E.g. critiquing arguments in newspapers)

It turned out that there were stat. sig. diff.s in their scores, depending on who they lived with (but not on the length of their commute): (effect size d ≈ 0.6)

with no friends < with parents < with friends

Thus (even though their recall of frequency of discussions showed no differences) their ability at this measure of CT seems to depend markedly on opportunities for peer interaction.

Wrap up

- Attempted demos / "experiential exercises":
- Audience answers to questions on meanings of "size",
- "engagement". (Teacher, plenary interaction)
- Peer discussion on the questions. (peer interaction)
 JITT section depending on prior homework
- "Twitter" channel2 in action throughout, to collect questions.

Follow-up materials at: http://tiny.cc/EngageClass

Handout with references and links

- Slides
- Links to related web pages

Now audience questions.

starting with our "twitter" type channel 2

