

Inclusivity in collaborative learning: the impact of identity on LGBTQ+ students in the active learning classrooms of Imperial

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BSc in Medical Biosciences (BMB)

- Launched in Oct 2017
- Year 1 and Year 2 designed to be entirely “Flipped Classroom”
- Very few lectures
- 2 to 3-hour active learning sessions
- Working in teams

Prior to class

You will engage with interactive online content including videos, text, diagrams, animations and quizzes for you to monitor your progress.

During class

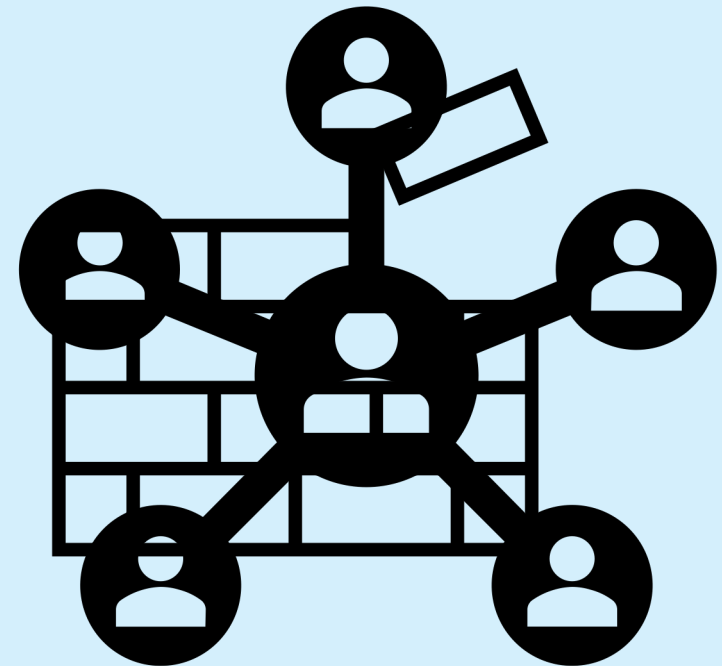
You will take part in group activities to consolidate and expand your knowledge and understanding.

After class

You will have an opportunity to reflect on specific aspects of the lesson to consolidate your knowledge.

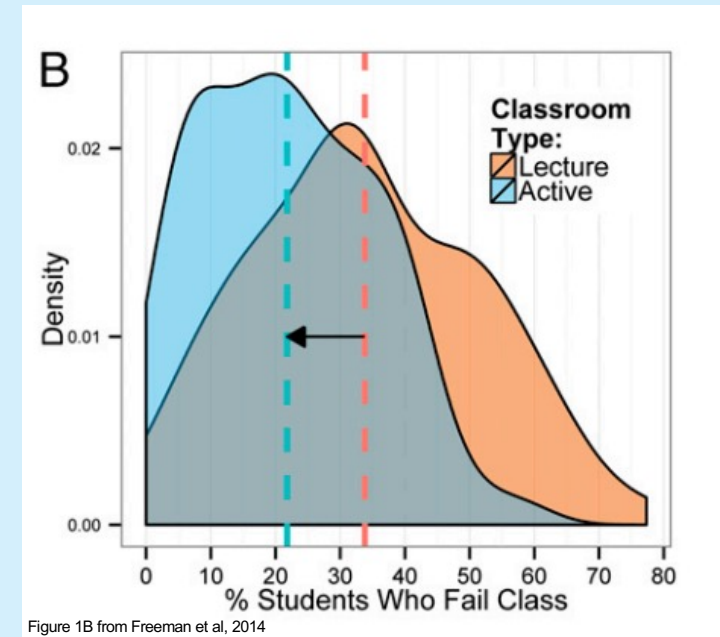
Active Learning Enthusiast!

- Constructivism (Bruner, 1960)
 - Knowledge is constructed, not transferred
 - Learners must be an active participant in their learning
- Social Constructivism (Vygotsky, 1980)
 - Social interactions
 - More Knowledgeable Other



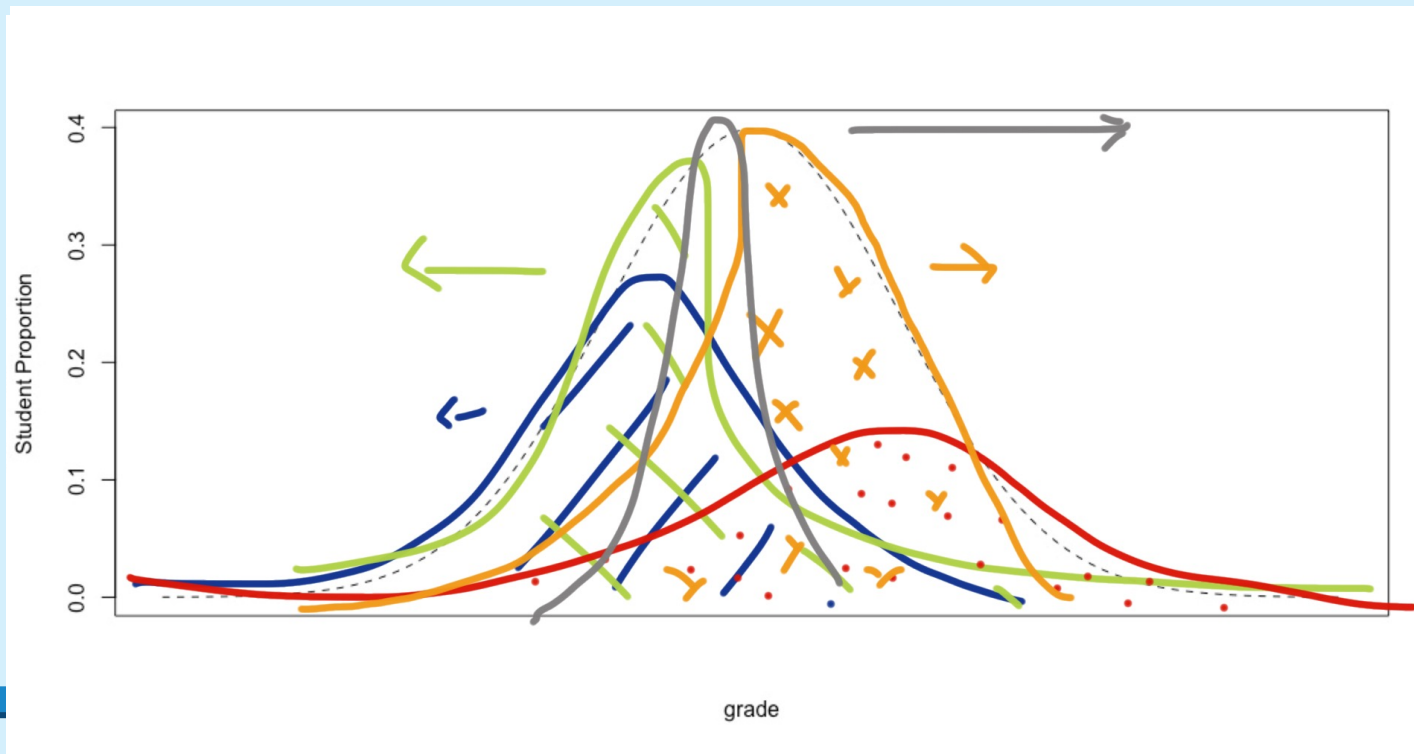
Active Learning Evidence

- Freeman et al (2014) meta-analysis of 158 studies of AL implementation in US STEM
 - Reduced % of students who failed a class
 - Average improvement of 6% ~ half a grade



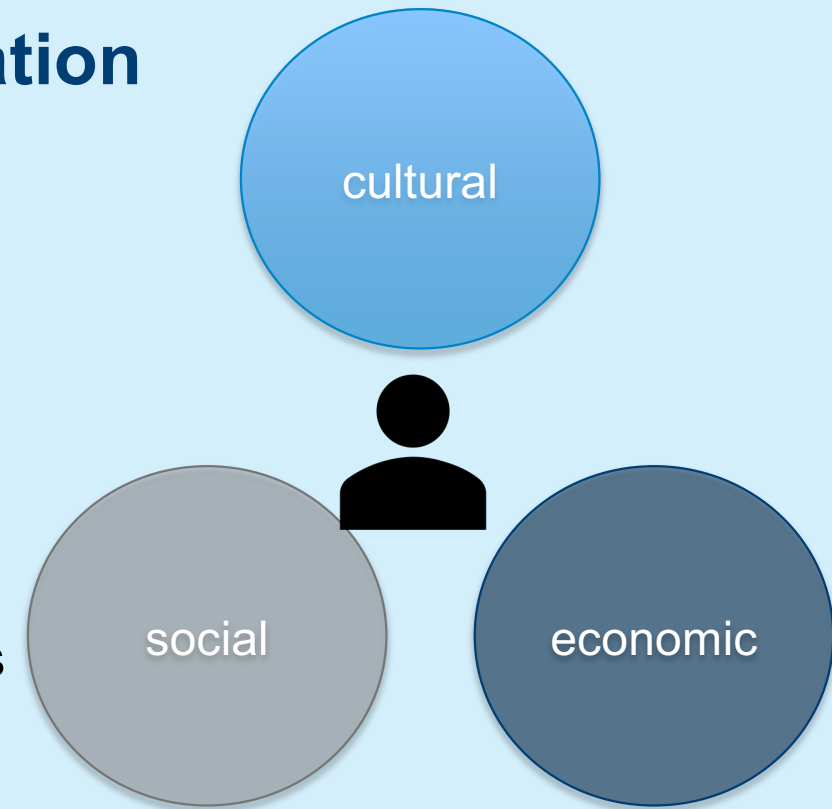
Imperial College
London

What if not all students benefited from Active Learning in the same way?

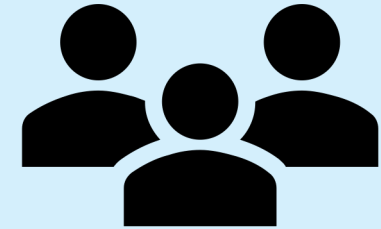


Why would identity impact participation in Active Learning?

- Bourdieu's theory of habitus
- An individual's...
 - Experiences
 - Capital (cultural, social, economic)...affect how they act in a given scenario
- In active learning which relies on participation, this could lead to a disadvantage for those whose participation is reduced due to their habitus



Why LGBT+ identity?



- Personal reflection
- Heterosexist environment – coming out
- Fear of confirming negative stereotypes – stereotype threat (Steele & Aronson, 1995)
- Past experience of bullying in educational environments
 - Twice as likely to consider leaving education due to bullying, harassment or discrimination (UCU, 2016)
- Higher risk of anxiety and mental health struggles (Chakraborty *et al*, 2011)
- Limited existing research, most in US (Cooper & Brownell, 2016)

Research Approach

- Questionnaire distributed by IQ society
- Used as recruitment and priming tool for 1:1 interviews
- 6 semi-structured interviews conducted March 2020
- Thematic Analysis

Pseudonym	Self-identification and pronouns
Ali	"So like gender wise, I consider myself gender nonconforming. But like filling in forms and things like that, if it asks for gender, I usually try and find an X or some other kind of option. If it's asking for sex, I'll put female. And as far as sexuality, I just identify as queer, sort of as an umbrella term." "they them"
Gabriel	"Well, I'm cis gender male and gay." "He him."
Hadi	"So I would identify as bisexual, though I have a preference for people of the same gender as myself. So that tends, so a lot of my friends consider me gay. I don't really mind either term. I use he him his pronouns, I respond to they as well."
Leia	"...right now I'm transitioning, male to female." "I'm trans and bi" "she her"
Priya	"I'm cis gender bisexual." "She her"
Ravi	"Yeah, I just say I'm a gay man" "he him"

Self-identification and pronouns of interview participants. Pseudonyms were chosen either by or in conjunction with the participant.

Identity saliency

- Cisgender participants tended to be less aware of any impact their identity had on their participation during active learning than trans or non-binary participants.
- When is it appropriate to “come out”?

“Why does my being gay affect my understanding of linear regression?” Ravi

“Even though it's not relevant to the subject matter, it's important because it affects how you actually interact with the subject matter.” Ravi

“I don't really know what to introduce myself...as, like I am constantly scared people are going to judge me... it definitely makes me uncomfortable a lot of the time in group work... I try to avoid talking to new people. So because of that I don't go to classes. I just don't go.”
Leia

“... [I] don't really think that TBL is, kind of, the time and place to really have that discussion. I mean, that's not to say that the discussion isn't important, absolutely not, but it's just, you don't, I feel like I personally feel it would be really awkward if I was just in TBL and I kind of randomly just mentioned it for no reason.” Hadi

Barriers to participation

- Fear of discrimination
- Previous experience of discrimination
- Impact of “coming out”

“...So because of that I don't go to classes. I just don't go.” Leia

“I didn't go to any of those extra sessions or anything 'cause I felt so uncomfortable there with this person.” Ali

“...it was fairly religious there... You were at a very high risk of suffering bullying. I know I had a friend who did suffer from that as a consequence.” Hadi

“...it's actually it made me notice... someone else on my course who has come out to me, in confidence, because she said that because I was so open about it, she felt she could say... she's very different in a group and she's much more reserved... a bit awkward... which is not at all what she's like when you speak to her one to one.” Ravi

“...before I came out... I was quite a bit quieter and quite shyer... I was less keen to speak up, share ideas... Generally, I would say something and people just didn't hear it. I would just let it go unheard.” Priya

Identity of others

- Time to build relationships is valuable
- Active learning provides an opportunity to meet people

“...we're in small groups the whole year [with] the same people for a lot of the active learning activities. So I get to create personal friendship relations with them so they know me, knowing my identity and so being more comfortable... but for [a specific class] we're a completely different group of people. And I don't really know those others.” Gabriel

“And if I was in the group with the people that I'm out to, it'd make a difference, it means that I probably would go there, and like, at least be able to just sit down and actually try and focus on it, because I'm surrounded by those people.” Leia

“...one of my friends is a bisexual woman... one of my closest friends in the year... I met her for being allocated to the group... I really think that the active learning sessions made [us] closer...” Gabriel

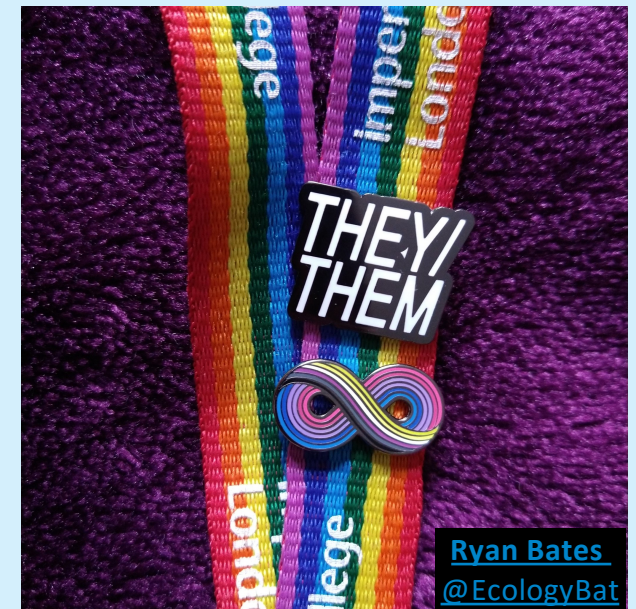
“But I think my opinion definitely changed when I came to university and saw that everyone really is open. The rainbow lanyards and you know generally everything.”
Priya

External symbols of belonging

- Rainbow lanyards
- Valuable
- Mood
- Post-COVID meaning...

“...if, say, I had a PBL session and the PBL tutor, I don't know, had a rainbow pin or something. I would like try and like be like the star of that session. I think just, because I'd be happy.” Ali, March 2020

‘I think the only substantive viewpoint of mine that's changed is about signals that make me feel a bit more confident in my environment... the rainbow NHS thing has shattered most of that. What I said was accurate at the time though.’ Ali, March 2021



Energy and Effort

- All students discussed energy or effort required during interactive learning sessions that related to their identity:
 - Internal filtering or behaviour management/changes
 - Handling insensitivities (microaggressions)
 - Emotional labour to teach their peers (or staff!)

“And I think having to filter everything you're saying takes a lot of energy. And sometimes you're like, oh, I'll just not bother saying anything...” Ravi

“...because I think that in some situations I try to be more masculine, and hide the fact that I'm gay” Gabriel

“Some people tend to make a lot of jokes about stuff like this... I mean, I'm a first year, so a lot of the people in my class are 18-year-old guys and they can still be quite immature.” Priya

“it's just a bit annoying sometimes.” Gabriel

“Well, that's sort of making me the teacher again, not what I want to be, because I have the agency. I can choose what I want to educate people or when I have the energy to spend.”
Ali

Cognitive Load (Sweller, 1988)

INTRINSIC

Inherent difficulty of
material

EXTRANEOUS

Any effort that does not
contribute to learning,
e.g. presentation of
material unclear,
confusing instructions

GERMANE

Processing – the act of
learning itself,
development of schema

Cognitive Load (Sweller, 1988)



Recommendations - general

- Consistent Group membership and opportunities to socialise
 - Increase in confidence, coming out, or comfort with members of group linked with less extraneous load
 - Class doesn't always seem like “the right time” to come out
- Active Learning good practice
 - Increased energy requirement needs appropriate preparation and recovery time
 - Understanding rationale of active learning

Recommendations – LGBT+ specific

- Cultural Competence Assessment
 - Student support (e.g. tutors) or teachers lacking knowledge, dismissive
- Rainbow lanyards and pronoun pins/email signature
 - Those who are comfortable and able to
 - Supporting students who wish to do the same
- Curriculum Review
 - Specific instances of inappropriate teaching highlighted



Thank
you!

Acknowledgements and references

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