

TEACHING AND LEARNING ABOUT TEACHING AND LEARNING:

UBC's graduate course in evidence-based pedagogy

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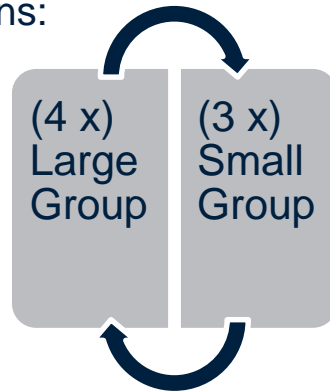
OUTLINE

- Course design
- Large group sessions
- Small group sessions
- Impact on beliefs about reformed teaching practices
- Impact on self-efficacy and instruction
- Future plans



COURSE DESIGN: “TEACHING AND LEARNING IN EARTH, OCEAN AND ATMOSPHERIC SCIENCES”

- Educational theory and practice
- Graduate course
 - Masters and PhD students in EOAS
 - 100+ students in the 10 years it has been offered
 - Previous students become facilitators
- Two-thirds of a full course credit
- Modeled after the Instructional Skills Workshop (ISW; www.iswnetwork.ca)
- 7 alternating weekly sessions:



COURSE LEARNING OUTCOMES

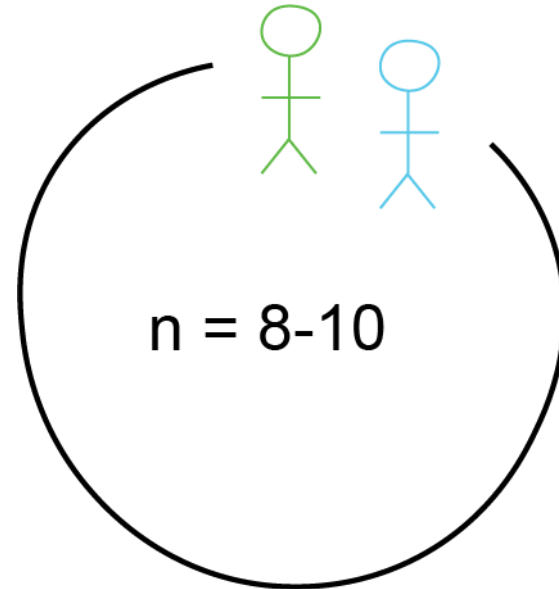
By the end of this course, participants will be able to:

- Effectively evaluate peers and provide constructive feedback
- Create an environment conducive to learning for diverse groups of students
- Develop strategies for fostering student inquiry and independent learning in Earth, Ocean and Atmospheric Sciences while meeting students' need for support
- Formulate learning objectives for TA-led activities in Earth, Ocean and Atmospheric Science courses
- Engage in critical reflection on one's own teaching practice
- Design and implement mini lessons and lab assignments for Earth, Ocean and Atmospheric Science courses using the frameworks provided in the course



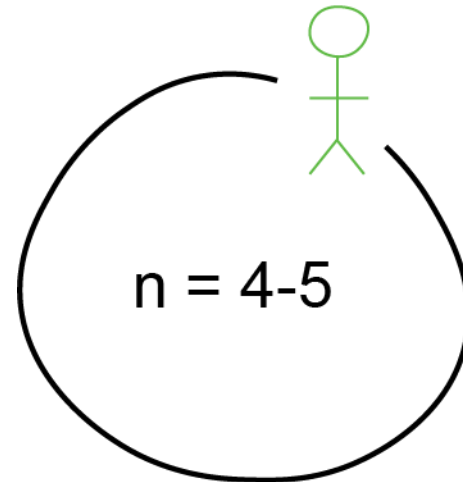
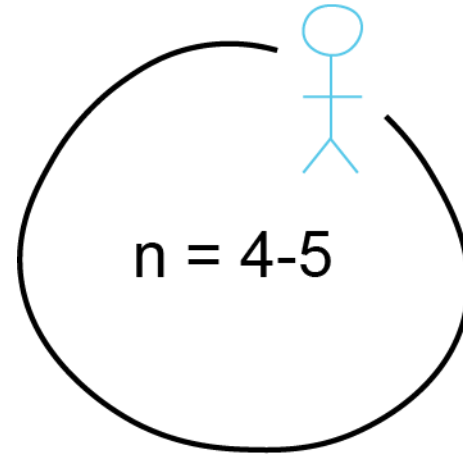
LARGE GROUP SESSIONS

- 2 hours each
- 3 x 30 minute lessons
- Model student-centred practices
- Example topics:
 - Learning objectives
 - Marking and rubrics
 - Challenging classroom situations
 - Equity and inclusion
- Formative feedback each session



SMALL GROUP SESSIONS

- ~4 hours each
- Participants practice instructional techniques
- Topics open, avoid content fixation
- Mini lesson 'cycles' (40 minutes each)
 - Up to 10 minute set up
 - 10 minute lesson delivery
 - 7 minute written feedback
 - 13 minute verbal feedback
- Peer feedback driven, facilitators do not provide feedback
- Time for reflection in between sessions



IMPACTS: BARSTL SURVEY

- Beliefs About Reformed Science Teaching and Learning (Sampson et al., 2013)
- Collected 2015/16, n=88
- Students who had taken the course:
 - Scored higher than those who had not ($p=0.06$)
 - Scored significantly higher on the section “how people learn about science” ($p=0.03$)
- Students scored significantly higher after taking the course ($p=0.005$)
- PhD students scored significantly higher than Masters students ($p=0.004$)



IMPACTS: SUMMATIVE EVALUATIONS

- Collected 2008-2016
- Students reported higher confidence in teaching abilities after taking the course
- Emergent themes on reflective questions about teaching and learning (n=48):
 - Increased emphasis on student centered teaching
 - Application of techniques
 - More self-directed approach to own learning

“I feel more at ease now when thinking about teaching. I’ve realized it’s not a life-or-death situation!”

“I think that is the #1 benefit. I am more aware of my own learning habits and now have the toolbox to modify my own learning.”



IMPACTS: TEACHING ASSISTANT AWARDS

- 11 department-wide Outstanding Teaching Assistant Award winners
- 3 university-wide Killam Graduate Teaching Assistant Award winners
 - All took and/or co-facilitated the course



FUTURE PLANS: THIS COURSE AND BEYOND

- Move up to a full credit course
- Adopt a more active recruitment approach
- Impact more department teaching assistants by expanding TA training offerings
 - About 80 per year in the department
 - Apply some of the key principles to a shorter format
- Build a more formal teaching and learning graduate student community



FUTURE PLANS



TEACHING STATEMENTS

EOSS316 - Allison Jolley - October 22, 2018

Objectives:

- describe the purpose of a teaching statement / relationship to teaching portfolio
- reflect on your own teaching approaches, beliefs & experience

**START NOW
DON'T WAIT**

your portfolio is due:
19 November 2018

part of a

teaching portfolio

may also be

- used to apply for academic jobs
- used for promotions and tenure

FAVORITE TEACHER



QUALITIES

- takes students seriously
- humorous
- easy to talk to
- interactive
- a friend first (caring, supportive)
- organized
- teaching topics unrelated to the subject (open classes)
- patience of a saint

approaches

beliefs

teaching statement
grounded in
evidence

living
document

evidence

- evolves with you
- helps you reflect
on your own practice

questions to help build your statement:

- Why is teaching important to you?
- What is one of your "personal best" achievements as a teacher?
- What do you find most challenging as a teacher?
- What is your main goal with respect to student learning?

experience

ACKNOWLEDGEMENTS

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