Students as Partners in Action: A scalable mentorship framework

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UQ Student Strategy… A process of student engagement whereby students and staff share responsibility for T&L

- Develop a university-wide initiative that partners students with teaching staff, researchers and industry, … and creates a culture of shared responsibility

- Create a program of peer-to-peer, staff, alumni and industry mentors that supports students from application to graduation.

- Foster collaboration that harnesses the creativity of both students and academics in shaping learning and teaching at UQ.

Seminar Overview

- Dual motivations – <u>secondary-tertiary student engagement</u> AND <u>student learning</u>

- Our framework in action – Round 1 (2017)

- Round 2 (2018) - Lessons learned and improvements implemented

- Reflections on key elements for success, scalability considerations, traps to avoid

Motivation 1: Secondary-tertiary transition
What's the problem?

School Context

UQ Tertiary Context

**Caring teaching
Learning as a team sport
Performative culture
Digital natives
(social contexts)**

**Independence
Acquiring foundational knowledge
Digital infants
(administrative & pedagogical)**

Past Strategies..

- Coffee & cake
- Pizza & drinks
- BHSPE M.A.T.E program
- O-week programs

Reflect & Share

- Consider the transition and mentor strategies you have implemented in your school/program.

- What were the primary enablers and barriers driving the success or failure of these strategies?

Our light bulb moment ….

- Meaningful and purposeful student engagement occurs when initiatives are grounded in **STUDENT LEARNING**
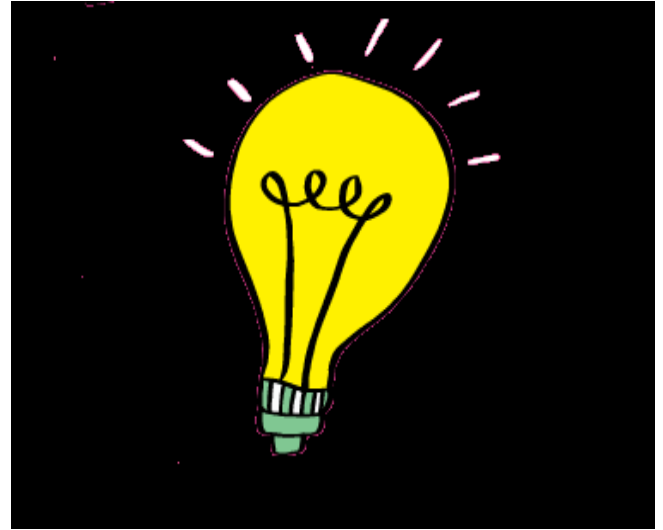
# HMNS 1st – 3rd Year Mentor Initiative

- **<u>Hypothesis</u>** – mentor/mentee engagement would be enhanced if the initiative was delivered within a teaching and learning context.

- **<u>Long Term Goal</u>**: provide a sustainable, student led strategy to enhance 1st year HMNS students' transition into UQ/HMNS life.

- **<u>Strategy</u>**: align a Lab-tutorial experiences of BIOL 1900 (*Biophysical Development, Measurement and Assessment*) and EXMD 3372 (*Exercise Science Professional Skills*) to facilitate purposeful mentoring, advice and support from 3rd to 1st yr HMNS students, **within** the context of an authentic core learning experience.

Motivation 2: Enhancing Student Learning
Harnessing student qualities to solve T&L challenges

Introductory course challenges

- **Limited individual attention for complex tasks**
- **Variety of student backgrounds/ competencies**
- **Uncertainty about required standards**
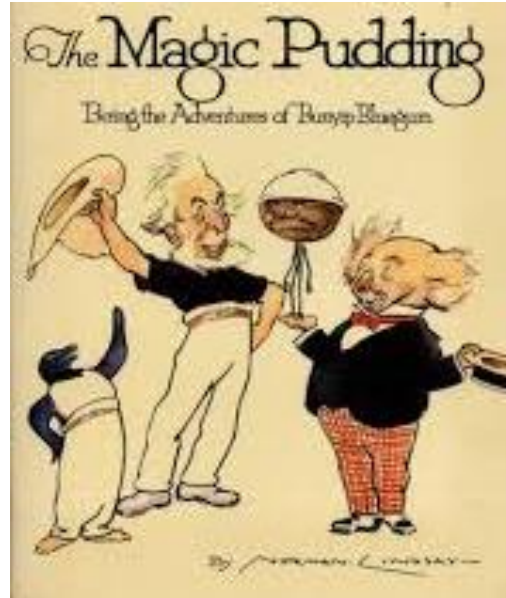
Professional course challenges

- **Hard to manufacture opportunities to demonstrate professional competence**
- **Hard to manufacture authentic communication scenarios**

Compare & Contrast

- Can you identify similar introductory-professional preparation course challenges?

OR

- Does your program have a different set of challenges or issues?
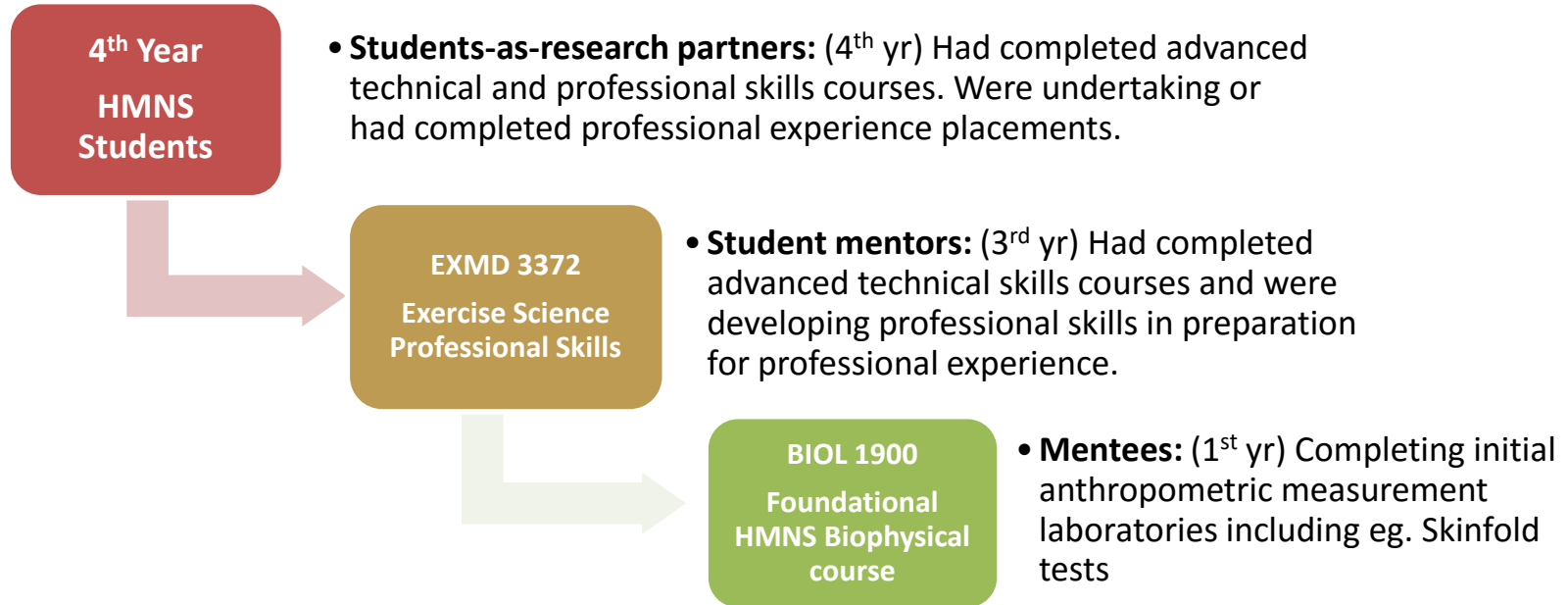
Mentorship Project Round 1 - 2017

Four cohorts of participants:

1. Staff: Course coordinators, tutors and HMNS T&L Chair
2. 1st Year HMNS students: Biophysical Development, Measurement and Assessment (BIOL 1900)
3. 3rd Year BExSS students: Professional Skills (EXMD 3372)
4. 4th Year HMNS students-as-research-partners (project evaluation)
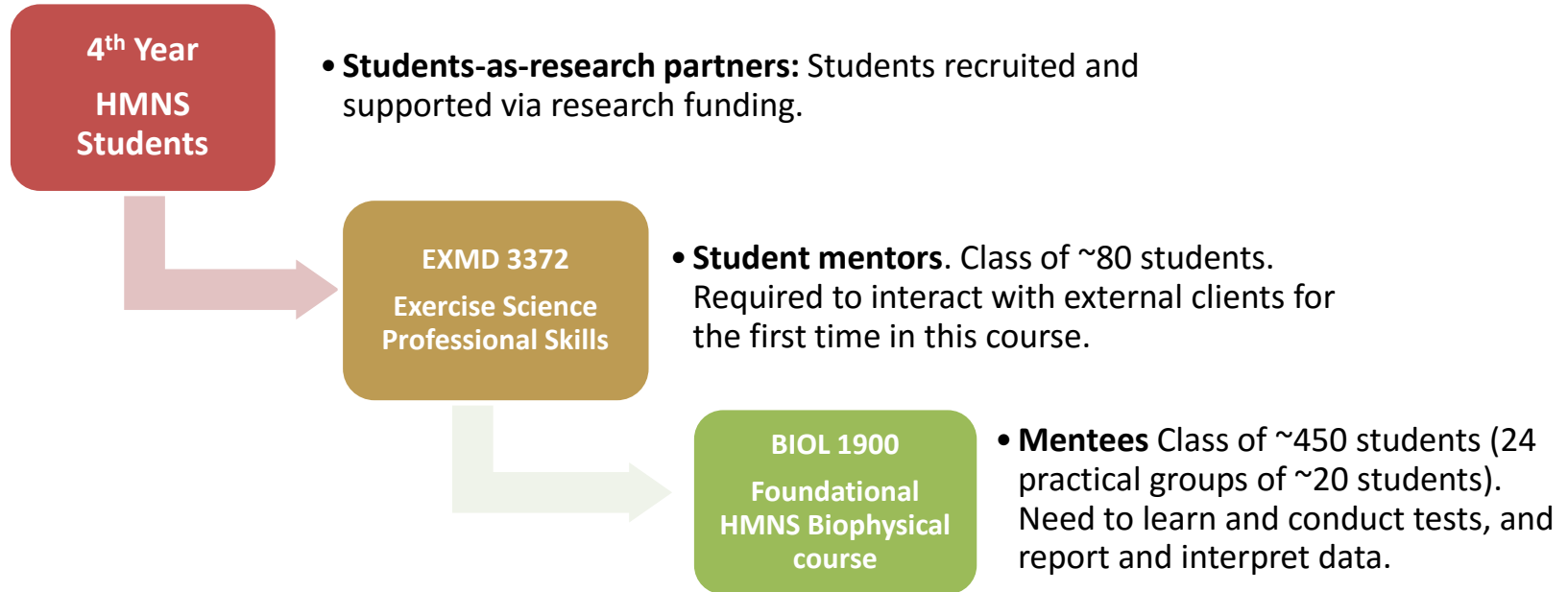
Project evaluation via 3 data collection techniques:

1. BIOL 1900 Online Survey - Likert Scale responses (~340 responses)
2. Tutorial Observations conducted by 4th Year HMNS students
3. Focus groups with 1st Year BIOL 1900 students

Framework for the mentorship project

4th Year HMNS Students

- **Students-as-research partners:** (4th yr) Had completed advanced technical and professional skills courses. Were undertaking or had completed professional experience placements.

EXMD 3372 Exercise Science Professional Skills

- **Student mentors:** (3rd yr) Had completed advanced technical skills courses and were developing professional skills in preparation for professional experience.

BIOL 1900 Foundational HMNS Biophysical course

- **Mentees:** (1st yr) Completing initial anthropometric measurement laboratories including eg. Skinfold tests

Framework for the mentorship project

4th Year HMNS Students

- **Students-as-research partners:** Students recruited and supported via research funding.

EXMD 3372 Exercise Science Professional Skills

- **Student mentors**. Class of ~80 students. Required to interact with external clients for the first time in this course.

BIOL 1900 Foundational HMNS Biophysical course

- **Mentees** Class of ~450 students (24 practical groups of ~20 students). Need to learn and conduct tests, and report and interpret data.

Framework for the mentorship project

4th Year HMNS Students

- **Students-as-research partners:** Observe 5-8 labs, collate observation notes and provide feedback, conduct focus groups

EXMD 3372 Exercise Science Professional Skills

- **Student mentors:** Instruct and demonstrate skills for mentee groups of 3-4, conduct testing to document own technical proficiency

BIOL 1900 Foundational HMNS Biophysical course

- **Mentees:** Conduct tests and be tested, collect and submit own data that forms basis of laboratory report assignment.

Quantitative Findings – 2017 Survey of 1ˢᵗ year cohort

- **Question 2**:
  - On a scale of 1-10, how confident do you now feel that you are able to accurately take skinfold measurements according to the prescribed protocol?

- **Question 5**:
  - On a scale of 1-10, how valuable did you find the 3rd year mentor interaction to help you to learn to measure anthropometry and neuromuscular performance properly?
  - If you did not have a 3rd year mentor, how valuable was your interaction with your BIOL1900 tutor?

- **Question 6**:
  - On a scale of 1-10, how valuable did you find the 3rd year mentor interaction for general information and advice about your overall university experience and your degree program?
  - If you did not have a 3rd year mentor, how valuable was your interaction with your BIOL1900 tutor?

	Question					
	Q1	Q2	Q3	Q4	Q5	Q6
No Mentor	8.00 (1.32)	6.74 (1.82)	8.62 (1.34)	8.64 (1.52)	8.06 (2.18)	7.45 (2.70)
Mentor	8.13 (1.44)	7.34 (1.74)*	8.61 (1.54)	8.84 (1.43)	8.81 (1.35)*	8.32 (1.85)*

How did we work with our 4th Yr students-as-research partners?

4th Year HMNS Students

- **Students-as-research partners:** Observe 5-8 labs, collate observation notes and provide feedback, conduct focus groups

Observation Schedule

HMNS 3rd Yr-1st Year Mentor Initiative

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GENERAL LABORATORY INFORMATION

1. Researcher Name: _____ _____

2. Tutor name: _____

3. Participant Numbers: (place total in each box)

   [ ] Tutor   [ ] 3rd Year students   [ ] 1st Year students

4. Day (please circle all that apply):   Monday   Tuesday   Wednesday   Thursday

5. Week and venue: _____

6. Were there any other people present? If so, please list: _____

Key Themes

1. **Time Use** – describe the overall use of time. Descriptions may include phrases such as; 3rd yrs students were rushed and didn't complete test, 1st and 3rd years had plenty of time, station X was unable to complete learning. General adjectives will include – rushed, waiting, alignment across stations.

2. **Transitions** – describe the movement between stations and learning spaces. Descriptions will identify efficiency of 1st yr movement, safety, drivers of transitions, clarity of directions and destinations.

3. **Teaching Quality** – describe the quality of teaching and who is teaching. Descriptions can address who is the dominant speaker, provision of feedback, involvement of tutors, clarity of instructions, 1st years posing questions.

4. **Task time focus:** describes the ratio of time spent during each segment on; a) teaching the skills, b)general mentoring discussion/advice, and c)management of students/equipment and data collection.

HMNS 3rd Yr-1st Year Mentor Initiative: Observation schedule

Time	Time Use	Transitions	Teaching Quality	Focus-of-task variables
0.00-10.00				
Time	What is the tutor doing?	What are the 3rd Yrs doing?	What are the 1st Yrs doing?	What are additional participants doing?
10.00				
Time	Time Use	Transitions	Teaching Quality	Focus-of-task variables
10.30 – 20.00				
Time	What is the tutor doing?	What are the 3rd Yrs doing?	What are the 1st Yrs doing?	What are additional participants doing?
20.00				

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Focus Group Interview Schedule

4th Year Focus PROTOCOLS
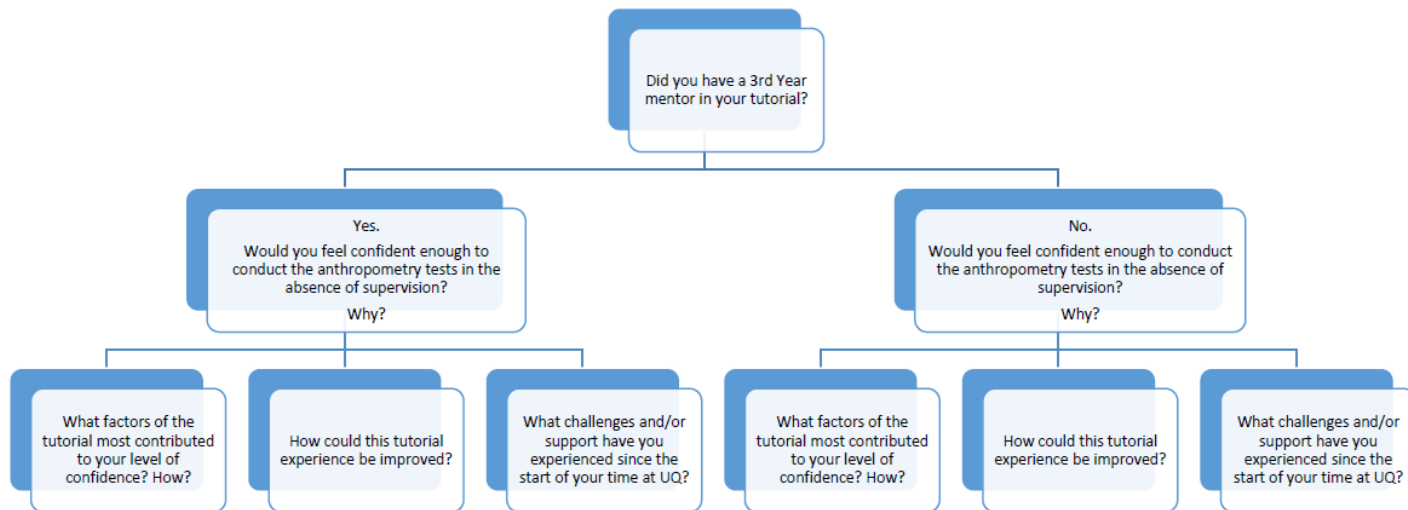
1ˢᵗ Year Focus Group Data

✓ *..it was real interesting to get a good chat with the people in third year..it was a bit more casual, which was very good.*

✓ **The 3ʳᵈ year mentor** *spoke a lot about her experiences when she was getting assessed doing it and that really helped know what they're expecting when we have to go through it eventually.*

✓ *…our guy just came in and he knew everything and we felt really confident with him*

X **The third years had no idea what we were actually doing, only what they were meant to be writing down**

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3rd Year Informal Feedback

X **Many did not recognise the value of the communication opportunity**

X **Wanted more complex technical skills – the skills instructed were predominantly "basic" elements of their professional repertoire**

X **Were sceptical as to the motivation behind the exercise – free tutoring?**

4th Year Observation notes

- ✓ *"The 3rd years gave good clear instructions and no-one seemed rushed - which allowed the first years to feel more open to ask questions"*
- ✓ *"Smaller groups seemed to have more time on task"*
- ✗ ***Questions over technical competency of 3rd years***
  - ✗ *"3rd years not consistently teaching skills correctly – e.g. waist circumference from front and another from side."*
  - ✗ *"Some 3rd years appeared not 100% sure of some protocols."*
- ✗ *"Only one 3rd year student asked his 1 group about how they are enjoying the degree"*

Reflect & Share

- Within your context, would you face the same benefits and challenges that we experienced?

- What would be your proposed solutions to these issues?
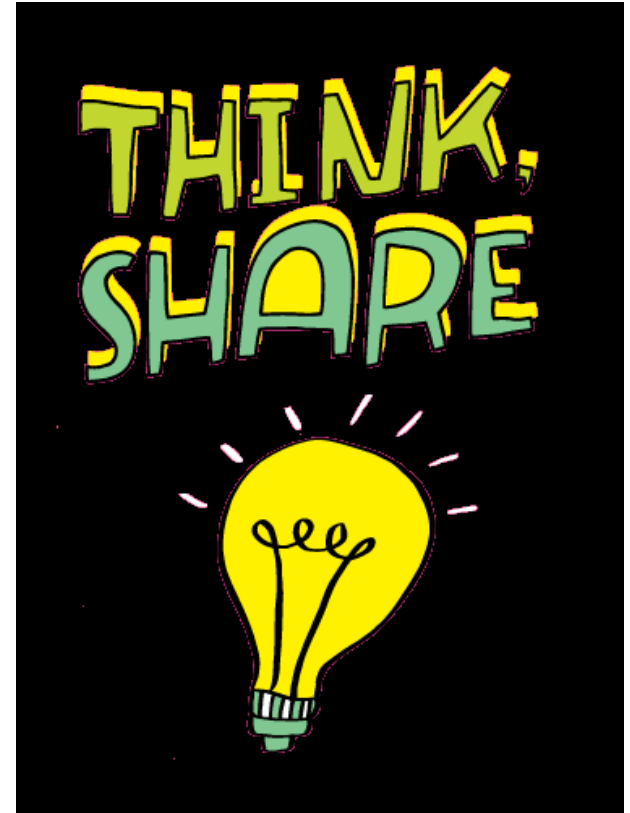
Key lessons: Round 1

- Laboratory experience provided a meaningful, purposeful context for 1st Year student mentorship

- 1st year students valued **BOTH** the academic and career input provided by the 3rd year students

- 3rd year students did not fully appreciate or embrace the opportunity to develop professionally-relevant communication skills
  - A focus on their technical competence was a mistake.

- Logistics matter!!!
  - time for interaction, simple class structures, everybody the same…

Improvements: Round 2

- ✓ Increased clarity for all staff and students on the purpose and objectives of the experience (ECP), blackboard, laboratory manuals.
- ✓ Formal introduction to and emphasis on communication components of the task for 3rd year professional students
  - Observations by 4th year SAP team focused on communication
  - Feedback report presented to 3rd year cohort
- ✓ Enhanced logistics so that all 1st year students had access to a 3rd year mentor
- ✓ Re-organised structure of lab tasks to provide more time for engagement between 3rd and 1st year students

Feedback from 1st Year Mentees

- On a scale of 1-10 (1 = no value, 10 = extremely valuable), how valuable did you find the 3rd year mentor interaction for general information and advice about your overall university experience and your degree program? 8.4 +/- 0.2 (n = 303)

- On a scale of 1-10 (1 = no value, 10 = extremely valuable), how valuable did you find the 3rd year mentor interaction to help you to learn to measure anthropometry and neuromuscular performance properly?

9.0 +/- 0.2 (n = 303)

So far, what are the best aspects of this course?

- The pracs - having the 3rd year students
- Having interactions with the 3rd years in the lab and then being able to talk to them in the downstairs area has helped in solidifying my future preferences and focuses
- ..the third year students are great to talk to
- I was impressed by the third year student, XX, that assisted my group in the VO2 sub max lab. It was great to have the guidance, but also someone approachable to ask some obscure questions to.

So far, what improvements would you suggest?

- first lab with the student was really good but the second lab my group was assigned someone who was very rude and condescending, made learning more difficult and hard to interact and ask questions with the student
- The 3rd years should also help us apply our knowledge in the activities better

What the 4th Years reported...
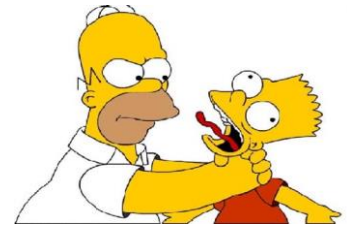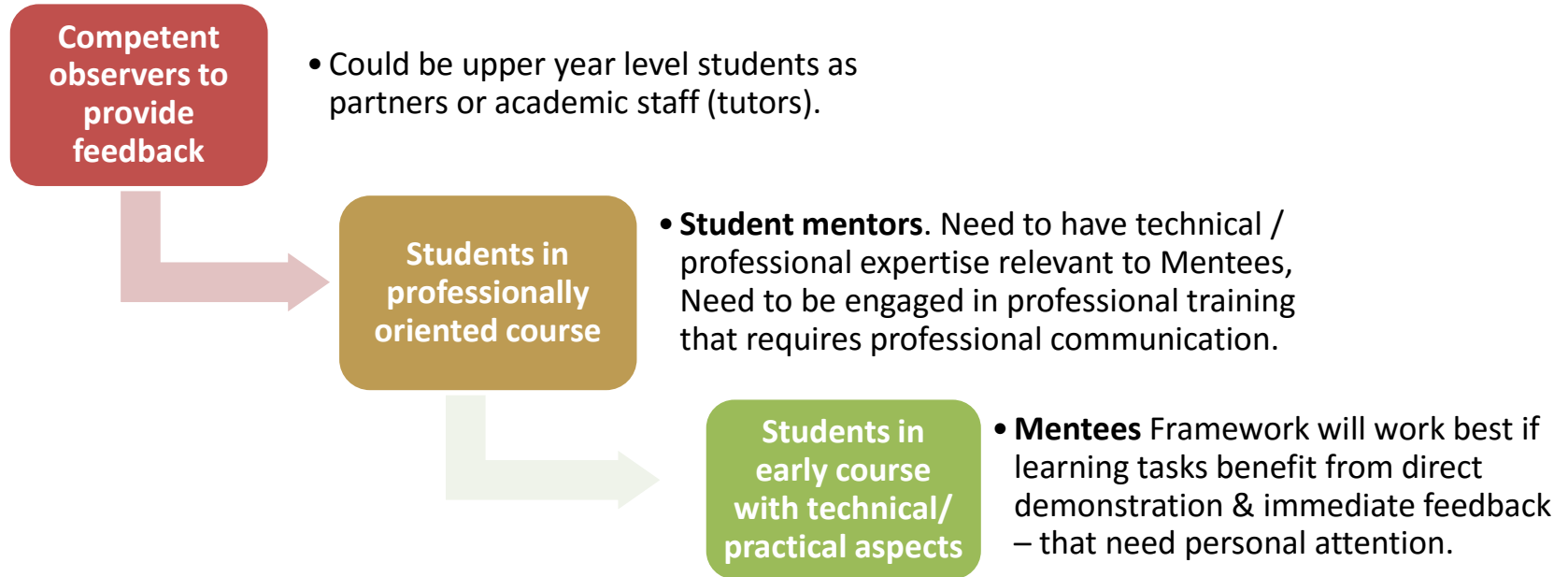
What did our 3rd Yr Mentors do well?

- Generally professional and prepared
  - **Key Question: would your future boss be happy with your presentation (eg. attire) ?**
- Many students were able to create rapport quickly with 1st years and gain benefits
  - **Key Question: why are you doing this session and who is your focus?**
- Real success – when 3rd Year students encouraged professional contexts and orientation
  - **Key Question: are you creating an environment that is focused on your client's needs?**

Where could 3rd yrs improve?

- Learning to scaffold input – finding the sweet spot
- Explanations that were too long
- Getting bored or losing interest when repeat sessions
- Showing how but not teaching
- Not correcting poor or incorrect practice

Key Question: How effective are you at posing questions?

Generic framework for student-led mentorship

Competent observers to provide feedback

- Could be upper year level students as partners or academic staff (tutors).

Students in professionally oriented course

- **Student mentors**. Need to have technical / professional expertise relevant to Mentees, Need to be engaged in professional training that requires professional communication.

Students in early course with technical/ practical aspects

- **Mentees** Framework will work best if learning tasks benefit from direct demonstration & immediate feedback – that need personal attention.

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Is the framework scalable?

- Innovative T&L approaches can be costly, labour intensive and difficult to implement on a large scale

- Our framework works well for quite large introductory courses (~450 students), and can be cost neutral

- Once time is invested in the learning materials and logistics, the framework should expand to any scale with little extra cost (time or financial)

- A ratio of about 5 to 1 (introductory students to professional students) seems to work well – serious student mentor investment without being too onerous (Goldilocks ratio?)

Pitfalls to avoid

- Don't forget to emphasise learning objectives for each person who contributes

- Maximise opportunities for students to serve as research partners

- Do not try to use student mentoring to cut tutoring costs

- Don't forget about the little logistical things – consistencies and streamlined processes matter

- Need a committed and cohesive academic staff **team**

Project Leaders and Student Researchers

HMNS staff

- Assoc. Professor Tim Carroll
- Dr Sean Tweedy
- Dr Norman Ng
- Dr Mark Connick
- Dr Louise McCuaig
- Dr Eimear Enright
- Ms Julia Finnane

2017 4th Yr HMNS Partner Researchers

- Marika Carr
- Veronica Morlotti
- Grace Atkinson
- Rhiannon Matheson-Peut
- Brooke Chapman
- Tiana Gibson
- Joshua Jorgensen
- Leticia Meagher

2018 4th Yr HMNS Partner Researchers

- Sophie Dodd
- Loxlee Blacket
- Brent Zelinski
- Zoe Ghelfi
- Jessica Heiner
- Anna Mehel
- Kelly Dickson

THANK YOU

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Photos and updates about Conor's progress can now also be found here:
https://conortweedy.com/

Reflection & Questions

THANK YOU

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