Peers in pracs: embedding peer mentoring within the classroom in a first year biology subject

Andy Leigh, Faculty of Science
Georgina Barratt-See, HELPS, Student Services Unit
georgina.barratt-see@uts.edu.au
Joanne Kinniburgh, Faculty of Design, Architecture and Building

Issues #1

Students can feel like little fish...

Issues #2

Transition: learning how to learn science in prac classes

Reluctance to ask questions of Teaching Associates (TAs)
• Embarrassment / shyness / cultural differences
• TAs required to grade assessment – power difference

Inspiration

U:PASS
• ALTC awarded program
• 5 years in the Top 10 of the UTS Student Satisfaction Survey
• But 25-40% attendance to U:PASS sessions (voluntary)

School of Architecture Peer Tutor program
• Within subject
• All students have access

Our aim

To enhance the student learning experience in first year science...

...by having student peers in prac classes

(trial: Biocomplexity, 2014, funded by FYE grant; student leader coordinated, 2015)
**STEP 1: recruitment**

- High achieving current students who recently completed Biocomplexity
- Selected for both communication and empathic skills
- Incentives:
  - Valuable training and experience in a laboratory and mentoring context
  - Good looking CV and graduate profile
  - Increased pathways for TA positions after third year
  - Certificate and formal thank you
  - Increased self-confidence

**STEP 2: training**

- Elements of mentoring training from U-PASS and Peer Tutoring
- Nature of role
  - Different from TA
  - Different from U-PASS leader
  - Peers not to teach content
- Boundaries, ethics, self-care
- Referral to services and support structures
- Facilitation and communication skills
  
  **Sustainability:** this year’s Peers train next year’s Peers

**STEP 3: evaluation**

To know if this worked, design needed to be:
- Statistically robust (large numbers, replicate samples)
- Experimentally robust (no confounding factors)

**Student experience surveys:**
(confidence in asking for help, experience in class, sense of belonging)
- **First prac** (week 4) = 71% response rate (465 responses)
- **Last prac** (week 12) = 78% response rate (511 responses)
- Students in classes with Peers AND without Peers surveyed

**TA and Student Peer feedback:**
(the kind of communication they had with students)
- Online survey end of semester (week 13)
- TAs = 78% response rate (25 TAs responses)
- Peers = 94% response rate (15 responses)

---

**STEP 3: evaluation**

Peers only present in HALF of the prac classes

(UTS HREC REF NO. 2013000744)

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9am</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1pm</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5pm</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

- 8 sessions (time slots)
- Each with 2 classes of 40 students (16 classes total)
- Each with 2 TAs
  
  For each paired session:
  - 1 class contained 2 peers, 1 class contained no peers

**Peer focus group and voluntary written feedback**
Did the presence of Peers improve students’ confidence in asking for help?

"I feel confident to ask for help at University"

Responses more positive in pracs with peers (p < 0.05)

First prac (week 4)

Last prac (week 12)

For prac classes with NO student peers, negative scores INCREASED over semester

Responses more positive later in the semester (p < 0.001)

"I feel part of the University community"

For prac classes WITH student peers, negative scores DECREASED over semester

Increased over time ONLY in classes with Peers (By 12% peer x time interaction p < 0.001)
Challenges:

- Role differentiation
- Expectations for PIPs, TAs and students
- Were they actually helping?
- How can we make it sustainable?

In 2015:

- 3 PIP’s from 2014 took on coordination
- Did all the recruitment, training, scheduling, administration, thank you event, and evaluation
- Did it for nothing except references and leadership experience
- But learnt HEAPS...

I thoroughly enjoyed being a PIP coordinator as I gained confidence and was able to improve various skills such as communication, teamwork, leadership and organisational skills. Prior to being a coordinator, I did not feel comfortable speaking up in a group setting and sharing my ideas with others. However, I have now learnt how important it is that, especially in a small team setting, every member speaks up, shares their ideas, gives suggestions and supports each other. I also now feel comfortable doing so. In addition, I have also learnt how important it is to be able to compromise by being open to other people’s ideas and suggestions in order to decide on the action which will in this case benefit the PIP program the most and allowed us to effectively carry out all required tasks.

As I was involved in the interviewing process I was able to gain great insight. I learnt how certain behaviours such as body language, expression and appearance influence the perspective employer’s first impression and how important these are in regards to your success in the application process. Lastly I learnt how important it is to be reliable and committed in order to appear professional, i.e., responding to emails in a timely matter, turning up to interviews and training days on time (and even just actually turning up!), reading through all the information given so that you know what is expected of you, looking interested and actively taking part in the discussions etc.

All in all, even though I found being a coordinator quite difficult and challenging at times, I really enjoyed my role and I definitely believed that it has allowed me to grow as a person.

I was able to see things from the other side of the table in terms of the recruitment process and pin point what things matter/make a difference (e.g. Attitude, posture etc., and what that meant to us the interviewers)

Also, being responsible for the organisation of each step in this process was great. As I am now more aware of how exactly this whole recruitment and coordination process works.

Besides, the opportunity to interact with students (PIP mentors) and academics was great as you get to know more people and grow your own connection too.

Overall, coordination of the PIP program was indeed challenging when you are an undergraduate student who have very limited free time to try to fit in more things into your schedule, however, it is still possible to manage and be part of if you are willing to do so.

As a coordinator, I have enhanced my leadership, planning, teamwork, management and recruitment skills. As well as, have enjoyed an experience that was unique to me personally.