Using problem-based learning in ‘traditional’ teaching spaces: Some reflections and examples from a Scottish psychology department

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Overview of this presentation

• Brief overview of our Psychology undergraduate programme
• My (staff) experiences with PBL so far
  – examples and compromises
• Our student experiences
  – expectations and benefits
• Some conclusions and reflections
The psychology undergraduate (bachelor) programme at Strathclyde

Year 1
3 subjects
> 400 psychology students

Year 2
2 subjects;
150 psychology students

Year 3
1 or 2 subjects
100 psychology students

Year 4
1 or 2 subjects
100 psychology students
Early experiences of PBL

2007: Grant from the Higher Education Academy to develop PBL materials for a qualitative research methods module

‘Qualitative Methodologies in Practice’

Optional class
4th (final) year class
Maximum 30 students
Groups of 4-5 students
Floating facilitator
12 week class
Suzanne is a high school teacher on the Shetland Islands and is often involved in school trips abroad with pupils. During a trip to Sweden one summer, she notices one of her pupils, Helen, taking something without paying from a market stall. Later in the same trip, Suzanne witnesses an intense argument between Helen and one of her classmates. Before the class returns home, Suzanne broaches the issues with her colleagues and they consider how to address the issue.

Problem 1: ‘Research Committee’ – reading different qualitative methodologies & understanding the theoretical reasons behind different methods

Problem 2: ‘Project Team’ – working out how to analyse some qualitative data that is provided – how to analyse?

Problem 3: ‘Grant report’ – choosing own topic, collecting data, analysing and writing up.
Student evaluations of the QMP class

I loved not having lectures, I often zone out in lectures so it was so good learning this way and I definitely engaged more.

Fantastic way to learn - would strongly recommend this class. It really allows you to get involved and work individually and as a team player.

PBL tasks were extremely useful, was great to be exposed to a different mode of teaching. Very useful to work in groups during the process and develop skills necessary for the future.

I found that PBL was a really good way of learning as it felt like you were actually doing work and learning something after each class compared to lectures where it can be easy to lose focus and interest.
Compromises

- Timetable heavily structured
- Problem scenarios have ‘edges’
- Class size (student numbers) limited
- (Physical & pedagogical) space is a constant battle
Developing PBL across the psychology programme: 2011-2012

1st year:
‘Wall of fame’ problem (3 sessions)

2nd year: ‘no space’ in curriculum.

3rd year:
- Social Psychology: ‘Panoramic productions’ (8 sessions)
- Individual differences: The MI5 problem (5 sessions)

4th year:
- Qualitative Methodologies in Practice (whole class) (since 2008)
- CHIPS: Conceptual and Historical Issues in Psychology (6 sessions over 2 semesters)
1st lesson learnt:

Consult with ALL teaching staff before attempting to implement PBL across a programme (i.e. anything other than your own classes). Plan as a team from the first stages.
There are some interesting facts about each of these ancient, wrrinkly, white-haired chaps you may not have heard before...

- One of them put rats in boxes...
- Another used his own young children as participants in experiments...
- Someone else enjoyed watching dogs salivate...
- And finally, one of them made a bold suggestion about children desiring their parents...

First year at Uni can be a bewildering time. In psychology, lecturers keep talking to you about strange experiments and old guys with white hair who are in dire need of a shave. Dogs that are made to salivate? Rats kept in boxes? It sounds so confusing! However, there’s a lot more to psychology than the chaps at the top of the page, and your team is going to play a part in teaching your fellow classmates about all the major events in psychology over the past hundred years.

The problem you have been assigned is:

How has psychological research influenced the world?
Feedback from 1st year students (150 responses)

Around 40% thought the materials were fun and interesting (a mix of responses for the rest of students)
  45% enjoyed the chance to work in a team/group
  33% enjoyed meeting new people and making friends
  35% wanted smaller groups
  46% wanted a better space to talk

When asked what did you learn:
  61% said ‘more about psychology’
  39% said ‘how to work in a group’
2nd lesson learnt:

Students appreciate having space and time to interact with their peers. They often don’t get this (not in Psychology, at least) until nearer their 3rd year.

Large student numbers mean that PBL is difficult to include in the teaching programme: physical space & tutor availability
Reports of a terrorist plot have just been intercepted by the Head Honcho...

I need a new employee to head up "Operation Buttercup", but who do I choose??

I can't decide who to pick from their CVs alone, there's only one thing for it...

Can you devise a psychometric test which will enable the Boss to determine who is best for the job?
“I found that it was good to have different perspectives and I felt like we kept each other motivated.”

“It became a hindrance when members did not meet deadlines or contribute as much as others.”

“I enjoyed the extent of effort thrust into constructing the contents of the brown envelope i.e. the materials etc. These made me smile and relax in approaching the team and task at hand.”

“I felt there was a tendency for some people in my group to agree with what was being said for the sake of the task getting done more quickly.”

“My first experience with PBL was extremely positive. I found it informative, interesting and sufficiently challenging.”

...FROM THE INDIVIDUAL DIFFERENCES ESSAYS...
## Summary of Individual Differences class

<table>
<thead>
<tr>
<th>What worked</th>
<th>Problems</th>
<th>Lessons learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging materials</td>
<td>‘CVs’ were distracting</td>
<td>Avoid peripheral material</td>
</tr>
<tr>
<td></td>
<td>Task was too simple (for group size &amp; time given)</td>
<td>Increase difficulty of task and/or reduce group size</td>
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<td></td>
<td>All groups on same task – risk of copying or repetition</td>
<td>Vary the problem slightly for each group</td>
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<tr>
<td>Working in groups</td>
<td>Group sizes too big (10 students)</td>
<td>Stick to 6 or 7 students per group</td>
</tr>
<tr>
<td>Groups were productive in class time</td>
<td>Room structure not suitable</td>
<td>Book multiple tutorial rooms</td>
</tr>
<tr>
<td>Class was motivated to engage</td>
<td>Task was not assessed: students want it to ‘count’</td>
<td>Consider assessing work produced, in groups? Be clearer about benefits of knowledge gained</td>
</tr>
</tbody>
</table>
Your group has to come up with a mobile phone app which could help an individual in day-to-day life who has one of the following conditions (you choose).

**ASPERGER'S**

**SCHIZOPHRENIA**

**AMNESIA**

You are not expected to know the ins and outs of the technological side of designing an app, but should detail the principles of one, and how it could assist the social and personal functioning of the particular individual, whose case study you are examining.

You will be giving a PowerPoint group presentation on TBC (worth 10% of your mark for this class) to the rest of the class about your app, and how it has the potential to benefit an individual with your chosen disorder.

App-y days!
3rd lesson learnt:

Possible concerns about ‘dumbing down’ when alternative materials such as comic strips used.

Tension between teaching as ‘giving lots of information’ and ‘motivating students to learn’.
Peer tutor scheme

...inspired by Keith Topping (Dundee), and Nancy Falchikov (Edinburgh)
...also the PALS scheme at Glasgow (Steve Draper) and new peer tutor scheme at York St John University (Natalie Noret)

Cross-level peer tutoring in the same institution

‘Proctoring’

Originally designed to have 4\textsuperscript{th} years going into 3\textsuperscript{rd} and 2\textsuperscript{nd} year classes, and 3\textsuperscript{rd} years going into 1\textsuperscript{st} year classes...
1. Introduction session (early October): announcing the pilot scheme and signing up potential 3rd and 4th years
2. 1st facilitator training – teaching small groups (2 hour training, mid October)
3. 2nd training session (2 hours) a week before tutors go into classes. Hand out reflective diaries.
4. Pre-class briefings; ‘pep talk style’.
5. Midpoint feedback and reflection (mid November: see picture)
6. Endpoint feedback session (lunch) (mid December)
Peer tutor reflective diaries

“I really enjoyed my time as a peer tutor. I got on well with both my groups and I think it has made me a bit more confident in my ability as they were looking up to me for advice. It has also shown me which issues can arise in group work and given me experience in how do deal with these.”

“I feel a bit nervous as I don’t think the group want my help – so I have to work on ways in which I can help them and show that they are capable of doing well.”

“I think that I have grown more confident through this experience, I’m a lot more eager to help others now. I am really glad I took part in it, was definitely a worthwhile experience.”
4th lesson learnt:

Students need help in learning how to ‘reflect’. This is not something we explicitly teach, yet it is relevant for so many classes and programmes.

This is starting to be included as part of ‘personal development planning’ (PDP) activities, but is SEPARATE from classes – so students don’t see it as important.
Final reflections

• Materials (e.g. PBL scenarios/problems) are heavily structured and tutor-created: concerns about students ‘new’ to PBL?
• Lack of time in the curriculum to learn HOW to do PBL
• Students working in groups: ‘loafing’ and communication
• Physical space (lack of suitable rooms) often over-rides all other plans
• Peer-tutoring was a good solution when no staff available, but time needed to train, plan and embed into the teaching culture
• …overall…compromises (but I still think it is worth it)
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Youtube video:
Talking about PBL and being inspired by Linköping!

https://www.youtube.com/watch?v=MS23EQpay0g