International Edition of the Psychological Literacy Compendium

Edited by Associate Professor Jacqui Taylor & Dr Julie Hulme

During 2014/15, the HEA funded the production of a Psychological Literacy Compendium of Case Studies providing examples of psychological literacy gathered from academics in the UK. Following this, we invited psychology academics to submit case studies for a second version of the Compendium and we opened invites to the International community at various conferences. We also invited previous contributors to submit revised version of their case studies showing how they had adapted them as a result of feedback and reflection.

This International Compendium will be published online at the www.psychliteracy.com/ website and within our University repositories. The Compendium was presented at a Psychological Literacy Symposium at the EuroPLAT Conference held in Salzburg in September 2017 and it will be discussed within a workshop at the EFPTA Conference to be held in Reykjavik in April 2018.

The case studies are presented in alphabetical order and while they are not fully representative of the work being carried out internationally, they provide a snapshot of good practice and hopefully will provide ideas for academics wishing to introduce psychological literacy into their curricula.

We would like to thank all our contributors and if you are reading this and would like to contribute to the next edition please email one of us!

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Assignments, Reflective Thinking, and Psychological Literacy
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Key words
Graduate attributes
Problem-based learning (PBL)
Reflection

Synopsis of the case study

The purpose of this research was to pilot a survey to assess reflective thinking among psychology students completing case study assignments. Case study assignments were implemented in the present pilot study in an attempt to cultivate reflective thinking among students in a graduate level psychology course.

Cranney and Dunn (2011) include reflective thinking in their definition of psychological literacy as "being insightful and reflective about one's own and others' behavior and mental processes" (p. 4, quoting McGovern et al, 2010, p.11). Reflective thinking is also present in the concept of the psychologically literate citizen as an individual that can "recognize what they know and what they still need to learn" (Cranney and Dunn, 2011, p. 5). Addressing a need for an instrument to quantify aspects of reflective thinking among students, Kember and colleagues (2000) developed the Reflective Thinking Questionnaire (RTQ) to assess level of reflective thinking among University students. This instrument may be valuable in establishing both baseline levels of reflective thinking among psychology students as well as measuring changes across courses or curricula.

The RTQ contains four subscales, whose language was modified slightly in order to more directly apply to the use of case study assignments; Habitual Action (*When I am working on some parts of the case study, I can do them without thinking about what I am doing*), Understanding (*This case study assignment requires us to understand concepts taught by the instructor*), Reflection (*I like to think over what I have been doing and consider alternative ways of doing it*), and Critical Reflection (*During this case study assignment I discovered faults in what I had previously believed to be right*). *The Habitual Action* subscale assesses performing an activity with little conscious attention. The *Understanding* subscale assesses understanding information without connecting it to a larger situation (often outside the classroom). The *Reflection* subscale assesses examining and exploring an issue, resulting in changed understanding. The *Critical Reflection* subscale assesses a higher level of reflective thinking that changes deeply-held personal beliefs. Each subscale contains four items. Item scores range from 1 (definitely disagree) to 5 (definitely agree).

What did you/ the participants do?

Students in a graduate-level neuroscience course taught in a psychology department completed two case study (CS) assignments during the course of the semester. The assignments were completed during the seventh week of the semester (approximately half way through the semester) and the fifteenth week of the semester (one week prior to the end

of the semester). To complete the assignments, students selected a vignette from a list supplied by the instructor. The vignettes reflected neuroscience-based topics and were selected from *DSM-V Clinical Cases* (2014). Based on the vignette, students wrote a case study response paper including the following elements:

- Diagnosis. Students determined one or more appropriate diagnoses for the client in the vignette.
- Brain structure and function. Next, students consulted research literature to determine how brain structure and function were related to the vignette. Students were be asked to critically examine the literature and identify strengths and weaknesses of existing neuroscience literature applied to their vignette.
- Neuroscience-based treatment options. Finally, students evaluated existing or novel treatments for the vignette disorder based on the neuroscience literature. Desired effects and side effects of the treatment were discussed and weighed in a decision to recommend the treatment for the client.

Prior to the first case study, students completed the Reflective Thinking Questionnaire (RTQ) and provided demographic information. After submitting each of the two case study assignments, students provided qualitative feedback about the case study assignment and completed modified items from the Reflective Thinking Questionnaire (Kember et al., 2010). The modification tailored the language of the survey to case studies.

The case study assignment and RTQ were included in the Learning Management System associated with the course (Blackboard Learn). This project was reviewed by the Institutional Review Board of Northern Arizona University and informed consent to participate was obtained prior to data collection.

What happened/is happening as a result?

The class ($m_{age}=24.54\pm2.63$ years) consisted of nine female and four male students with means of 3.92 ± 0.28 years of undergraduate and 0.54 ± 0.52 years of graduate study. Descriptive statistics for each subscale of the RTQ at each of the three time points in the semester are presented in the table below.

	Pre CS			**Post CS 1**			**Post CS 2**		
	n	**Mean**	**SD**	**n**	**Mean**	**SD**	**n**	**Mean**	**SD**
RTQ (max=5)									
Habitual Action	13	2.17	1.06	8	1.63	0.58	6	1.54	0.75
Understanding	13	4.23	1.09	8	4.50	0.33	6	4.42	0.47
Reflection	13	4.00	0.94	8	4.34	0.63	6	4.29	0.62
Critical Reflection	13	3.33	0.72	8	2.75	0.69	6	2.71	0.53

As only three students completed the full set of three RTQ surveys, repeated measures analysis of variance testing was not conducted on this pilot data. Without statistical testing, we cannot draw conclusions about the effects of case studies on reflective thinking, however this descriptive data provides an initial snapshot of reflective thinking about psychology students early in their graduate training. When calculating summed (rather than averaged) scores of the four subscales, the present data is consistent with the scores of post graduate nursing students reported by Kember et al. (2000; *data not shown*). In general, the results of

this pilot study appear to reflect expected scores on the RTQ among students that have completed an undergraduate degree.

What are your critical reflections?

To prepare students as psychologically literate citizens, it is important to model, promote and provide opportunities for reflective thinking. The case study assignment was added to this course with the intention of promoting reflective thinking. The case study vignettes included perspectives from (fictional) individuals diagnosed with substance abuse, neurodevelopmental, sleep and seizure disorders. While these fictional vignettes may have provided the impetus for reduced *habitual action* and increased *understanding* and *reflection*, they may not have been detailed or authentic enough to challenge more deeply held beliefs or frameworks as assessed by the *Critical Reflection* subscale of the RTQ. Interestingly, student feedback seemed to indicate that students were engaging in critical reflection, such as the students that wrote "To write about neuroscience helped me realize how much I did not know and helped me clarify my understanding in a comprehensive manner", "I came across articles which disagree with each other in some ways. However, many of these disagreements are about the extent to which one hypothesis is complete in its explanatory power. That is, there was at least some kernel of truth to just about any research I came across. It seems that the discipline as a whole is about making small steps towards unifying theories in order to provide the best possible explanation[n]s", and "I can see the advantages of using neuroscience to explain disorders. It definitely works in favor of taking away social and societal stigmas."

Looking to the future, using even more authentic or detailed case studies may be a more effective way of providing opportunities for increasing understanding, reflection and critical reflection. Another way to improve student reflection could involve more active assignment components such as fieldwork or volunteer experiences aligned with the case study. Altogether, assignments that engender reflective thinking contribute to the development of psychological literacy.

What worked/ what didn't?

One success of this assignment was connecting in-class content with larger, out-of-class contexts. In qualitative feedback, students commented on the ways in which the case study assignments helped students synthesize and apply new knowledge with comments such as "[the case study] helped me realize yet another way knowledge of neuroscience can benefit the development of solutions to real-world problems", "[the case study] required me to integrate the information into a treatment plan", and "This case study assignment helped to improve my understanding of neuroscience as a discipline, as I was able to identify articles that were relevant to my subject area and to see the connection between topics."

Areas to improve include reviewing assignment directions and purpose thoroughly before beginning the assignment. Some students commented on their lack of connection to the assignment based on confusion such as "I ended up just picking [a vignette] at random. I did not understand the assignment before I actually started working on it." Other students struggled with the case study assignment based on their perceived lack of foundational understanding, such as the student that commented "… I do not have a firm understanding of

the foundations of neuroscience. It is difficult to reach for higher understanding and perform more complex tasks without first mastering the basics."

What do you recommend to others as a result of this?

Based on this experience, I would recommend considering both quantitative and qualitative data to assess reflective thinking. I would also recommend carefully considering the design and implementation of classroom research to reduce attrition and increase student engagement with activities that promote reflective thinking.

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Where can we see more details?

http://sciencecases.lib.buffalo.edu/cs/collection/results.asp?subject_headings=Neuroscience

http://sciencecasenet.org/

http://sciencecasenet.org/groups/teaching-neuroscience-with-cases/

Student-Staff Co-Construction of Examination Questions

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Key words
Problem-based learning (PBL)
Assessment

Synopsis of the case study

Psychological literacy (PL) is the capacity to adaptively and intentionally apply psychology to wider society (Cranney & Dunn, 2011). PL can be developed in the core curriculum, for example, with biological psychology developing understanding of health and ill-heath, perception, and sleep behaviours; all of which may have relevance to the wider community (Mair et al., 2013). To develop this PL students must understand basic psychological concepts and principles, be able to think critically and have problem-solving skills (Coulson and Homewood, 2016). Previous work has used peer-assisted learning (PAL) to develop PL, stating that this approach develops students' flexibility and creativity in applying their psychological knowledge (Pauli et al., cited in Taylor and Hulme, 2015).

Here a novel approach to a core first-year undergraduate Biological Psychology module is described. For the examination, students answer fifty multiple choice questions (MCQ). However, unlike traditional MCQ exams, students co-constructed the examination by creating questions using Peerwise throughout the module. Peerwise is a free online system whereby users anonymously set and answer MCQs, providing comments and ratings for each question they answer, effectively engaging in PAL. Use of Peerwise encourages creativity and allows peer- and self-assessment of key concepts.

Engagement with Peerwise was assessed for two cohorts based on how many students authored and answered (high engagement) or just answered questions (low engagement). One-half and two-thirds of students authored questions in the two cohorts but the proportion answering was higher with over 10,000 individual answers provided per cohort. The quality and timing of the authored questions meant that only 20% of each exam was populated from Peerwise. However, students did use Peerwise for revision and for one cohort, at least, the level of engagement clearly related to their performance on the actual exam, indicating the practice related to their development of understanding and therefore PL.

What did you/the participants do?
Students were introduced to Peerwise during their degree induction, where they registered on Peerwise and claimed their unique identifier. For the first cohort, students were encouraged to use Peerwise, with reminders at the end of lectures and on the VLE. They were not given specific instructions on question format and could choose any number of choices. For the second cohort, in addition to these reminders, and following student feedback, time was allocated in practical classes to Peerwise and an example question on the practical topic provided. Guidance was also given on authoring the questions, indicating the number of choices (five) and how to author clear questions (i.e. realistic distractors and brief answers) to

produce questions suitable for the examination. Prior to setting the examination, the module organiser reviewed all Peerwise questions for a cohort and selected any suitable for inclusion. In both cohorts, ten questions were deemed suitable, with adaptation. For the first cohort, adaptation was to make distractors more plausible and add answers to create five-choice questions. In the second cohort, only the former adaptation was needed.

Peerwise provides several metrics that were analysed i) percentage authoring questions ii) percentage answering questions ii) number of questions written iv) number of answers provided. From this information, students were grouped into A) no engagement, NE B) low engagement (answering only), LE C) high engagement (authoring and answering HE) to conduct a One-Way ANOVA on the examination result. In addition the distribution of engagement was assessed by looking at the number of questions and answers in three periods (each of 5 weeks): teaching period 1 (P1); teaching period 2 (P2) and revision period before the exam (P3).

What happened/is happening as a result?
In the first cohort (N=139) 72% used Peerwise, with 47% authoring and 97% answering questions. Authoring students contributed an average 6 questions each, giving 289 in total. On average students answered 133 questions each, giving 13259 answers. Authoring varied across teaching periods (P1=51, P2=63, P3=175) as did answering questions (P1=326, P2=609, P3=12324). One-Way ANOVA comparing engagement groups (NE, N=39; LE, N=53; HE, N=47) showed significant group differences in exam performance (F(2, 137)=9.52; p<0.001) with post-hoc analysis showing students who had not engaged did worse than both other groups (LE p=0.012; HE p<0.001). In the second cohort (N=129) 82% used Peerwise, with 65% authoring and 95% answering questions. Students authored, on average 4 questions, producing 281 in total. Answering students completed an average of 110 questions, giving 11084 answers. Distribution across teaching periods varied for authoring (P1=112, P2=42, P3=127) and answering (P1=561, P2=656, P3=9867). Analysis based on engagement level (NE, N=23; LE, N=37; HE, N=69) showed significant group differences in exam performance (F (2, 115) =3.24; p<0.05) but post-hoc tests revealed only a near-significant difference with students who had not engaged performing worse than those who showed high engagement (p=0.07).

What are your critical reflections?
Most students engaged with Peerwise with the percentage increasing when time was allocated during teaching sessions. There were differences in how the cohorts engaged; in the first cohort, a lower percentage of students authored questions but authored more each on average. This could suggest that when students are directed to participate more contribute but they feel less responsibility individually for creating the bank of questions and therefore author fewer questions. It is also possible fewer questions were drafted because quality was higher and this took more time. Patterns of activity showed a surge during revision, when no reminders were given or teaching time allocated. The examination was drafted by this time meaning questions authored could no longer contribute. Whilst students were not made aware of the exact cut-off date, they would presumably have realized that questions authored immediately prior to the exam would not be included. This indicates that students were using Peerwise, at this stage, as a peer-assisted revision tool.

In both cohorts there was a significant difference in exam score between the groups with different levels of engagement suggesting that use of Peerwise did improve knowledge of basic concepts and principles in biological psychology. For the first cohort there was a significant difference between those who engaged and those who did not, with the difference being more

significant when comparing no engagement with high engagement, as might be expected. Interestingly, in the second cohort, the post hoc analysis was not quite significant. Inspection of the exam results for the different cohorts suggests this was because the no engagement group had higher exam scores in the second cohort rather than the other groups dropping. It is not clear why this occurred.

What worked/ what didn't?
Building time into teaching sessions to use Peerwise increased the overall percentage of students engaging with the tool and the percentage authoring questions. It did, however, also result in fewer questions being authored by each student on average. Providing additional guidance on how to author questions produced slightly higher quality student-authored questions. It is possible that this increased guidance was related to the decreased number of questions as students spent longer producing better questions. It is also possible that by introducing staff into the context (by including this in teaching time) students felt less ownership over question development.

Across both year groups, only 20% of the questions on the examination were from Peerwise, which was lower than hoped. However, it seemed that despite not all contributing questions, the majority of students did answer a high number of questions. The pattern of activity suggests that this may be a more of a revision tool than a tool to co-construct questions. Interestingly, we also had a revision quiz on the VLE, authored by the module organiser, which was not engaged with to the same extent, suggesting that the student-led collaborative nature of Peerwise may have been popular.

What do you recommend to others as a result of this?
Peerwise can be used effectively to engage students with multiple-choice style questions but to achieve good levels of engagement it should be used within teaching time. The quality and number of questions provided by the examination drafting deadline is unlikely to contribute most of questions to the examination, but students do engage well with it as a revision tool, supporting each other in their learning. It may be a suitable place to put past exam questions to allow students to work through them with the opportunity for discussion and comments.

Where can we see more details?
Webpages: https://peerwise.cs.auckland.ac.nz/

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Enhancing Psychological Literacy through A Group Selection Exercise

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Key words
Group psychology
Problem-based learning (PBL)
Group work
Reflection

Synopsis of the case study

The psychologist programme at Linköping University - a five-year educational programme that results in students becoming licensed psychologists - uses problem-based learning (PBL) throughout its entirety. PBL is a pedagogical approach that is based on problem-solving, self-directed learning and group interaction. Each term, the students (around 50 in each cohort) are divided into new tutorial groups by a course administrator, with each group normally consisting of 6-8 students. As part of a group psychology course in the beginning of the fourth year, however, the students take part in a group selection exercise to form the tutorial groups on their own. This is the first and only time that the students are able to choose their own groups. It is an exercise in large group and intergroup dynamics, as well as negotiation, since the students must discuss together and make decisions about who will be in each group. The aim of the exercise is to help the students to understand large group intergroup processes, and one's own role in this, as well as the significance and consequences of group formation. This corresponds to the overall aim of the group psychology courses throughout the entire programme where the students use the group as both an objective and as a mean. That is, they both examine and reflect on their own group processes as well as using the group to work throughout the psychologist programme. In its entirety, the exercise involves a short lecture on group formation, the selection exercise, and whole class and small group reflections. It therefore includes practice, theory and reflection. The exercise has been a recurring and appreciated module for more than ten years at the psychologist programme at Linköping University. It has recently been tried on a much smaller scale at Strathclyde University.

What did you/ the participants do?

The exercise comprises four parts:

1) A brief lecture on group composition, highlighting important aspects to be considered when forming a group.

2) The selection exercise immediately follows the lecture. The students are given a few short but detailed rules for the task, such as number of students in each group, that the new groups shouldn't be similar to the previous groups they were in, and that the selection cannot be based on chance or any form of automatic division. It is made clear that the task is a

collective one and that it is not complete until all (even absent) students have a new group. They are then instructed to start working without any further involvement of the teacher. The teacher remains in the classroom, but only as an observer, taking notes on significant events and processes. If the students ask any questions the teacher only responds by referring to the rules. The students get a definite deadline (approximately 2 hours) when they need to present the newly formed groups to the teacher.

3) Once the new groups are formed, there is a whole-class reflection and discussion guided by the teacher. The discussion can be based on observations from the teacher, but also the students' experiences of 'what happened'. The dual purpose is to involve the whole group to make sure that the students get a chance to defuse the situation before leaving the room, and to prepare for the coming small-group reflection, which happens the next day. In their newly-formed groups, guided by a tutor, they reflect further on the selection exercise.

4) A few days later, for their first PBL tutorial, the group's task is to identify theoretical knowledge on group psychology and group formation to understand what happened during the exercise.

What happened/is happening as a result?

During the selection exercise (2, above), the students typically do not start with discussing strategies for how best to conduct the selection, even though they have just had a lecture on group formation. Instead, often one student takes or is informally assigned by their classmates the role of "leader", standing in front of the whole group. The class suggests criteria to use when forming the groups and the "leader" writes them on the whiteboard. Normally very few of these criteria have anything to do with a well-functioning group or can be traced to the lecture they just had. The mandate of the "leader" is often never discussed. There may be discussions between people sitting close together, about the criteria and which are most important; usually some form of practical aspects are viewed as important, such as preference of time of day to work or the need to commute. Once the criteria are set the selection process normally goes rather quickly, possibly due to a wish to belong and to not be left out, though the class is often focused on the time-constraints of the session and there is less reflection at this stage.

What are your critical reflections?

The exercise helps the students to start thinking about what can happen in a large group and how one is affected by the processes occurring. When the groups start to take shape, issues of intergroup processes also become apparent. During the exercise the students often become aware of the importance of ending up in the "right" group. Some criteria are recurrent almost every time such as working conditions (e.g. preference for working together or alone, working mornings or afternoons, working a lot or just enough). If there is a criteria that stands out as more important to the students it can override all other criteria (e.g. preference for language spoken in the group or a wish to form all male/female groups). This usually speeds up the selection process, but may result in a too-quick consensus where many aspects are left untouched. Some aspects are normally taboo, such as a selection in which individuals are excluded based personal characteristics, etc.

The whole time available for the task is almost always needed and there are often moments of stress at the end. The students could probably go on with the selection task for a long time and still having trouble reaching a unanimous decision. It is therefore necessary to set a definite deadline.

One's own role in the selection process often only becomes apparent after the selection task is over and the group starts to reflect on what happened. It can involve a student realising he or she ended up as a leader even though the student had no intention to take on that role. Another common realisation concerns talking space (or 'taking the floor'), where some realize they had talked more than usual and others became quiet.

What worked/ what didn't?

This exercise usually works very well and new groups are formed by the deadline. The opportunities for reflection help the students to see the significance of group processes and their consequences for the new groups and student cohort as a whole. Student evaluations clearly show that it is an appreciated module and that it can contribute to gaining a deeper understanding and knowledge and thereby enhancing students' psychological literacy through a group selection exercise.

The purpose is not to get the best possible groups to work in, but to get a real group experience that can help the students to understand important aspects of group psychology. The students often opt-out of the opportunity to create groups based on the best possible criteria in favour of more simple structural criteria. This is not a problem, as the allocation of group members during all other terms in the psychologist programme are based purely on chance.

What do you recommend to others as a result of this?
Always make sure that the students get a real chance for guided reflection both in the large group and in the newly formed groups in order to avoid possible future negative intergroup consequences.

Professional Practice in Psychology
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Key words
Employability
Enquiry-based learning
Graduate attributes
Group work
Reflection
Work experience

Synopsis of the case study

Professional Practice in Psychology is a final year module. Students learn about applying psychological theory and research findings to real-world scenarios using enquiry-based learning methods. The module is also designed to enable students to combine several strands of learning that have been developed in the preceding years of undergraduate study, including: effective skills in group work; recognising psychology in real life; application of subject knowledge to provide creative solutions; identifying, evaluating and synthesizing psychological knowledge across sub disciplines; and developing effective professional working practices.

Students work in small groups and act as external psychological consultants, recommending solutions to current issues faced by our partner organisations. The final recommendations and the supporting arguments provided for these are assessed at the end of the module.

With this approach we aim to offer our students an opportunity to apply their subject knowledge in a simulated work environment, providing as authentic an experience as possible. As our students are engaged in real world enquiries on issues of importance to our partner organisations there is the opportunity for them to make a genuine contribution to the work of the organisation. In the past this has occurred in a variety of ways including changes to policy or practice, or the development of frameworks for multiagency working between the partner organisation and others.

What did you/ the participants do?

We engage with a wide range of partner organisations to develop the real world scenarios that students will work on in the course of the academic year. Students form small project teams that meet weekly in module workshops, as well as attending lectures attached to the module. The initial lectures and workshop activities are carefully planned to introduce students to the principles and practices of enquiry based learning and help them develop effective team working.

Teaching staff use student preferences to allocate one scenario to each student team, ensuring that all scenarios are worked on by at least one team. Student teams then research and develop solutions for their scenario for the rest of the module.

In developing these solutions students synthesize a number of psychological skills that they have been developing throughout their degree, as well as drawing upon existing and new psychological knowledge relevant to the scenario. The student teams must subject their scenarios to careful analysis to identify all of the relevant psychological process and issues at play, some of which are not made explicit or necessarily understood by the commissioning organisation. Based upon this analysis student teams complete extensive critical reviews of the psychological research literature, and use these to develop recommendations for action that are sensitive to the particular professional contexts of the organisation they are consulting to. The recommendations are pitched to organisation representatives in an end of module conference.

The enquiry based learning approach of the module means the acquisition and application of knowledge is developed through collaborative peer learning. Teaching staff aim to facilitate this process rather than offering direct instruction.

What happened/is happening as a result?

The module achieves a number of objectives related to psychological literacy. The students develop an understanding of how to apply their knowledge and skills to situations, events and contexts outside of the university. Students synthesize learning from across sub-disciplines and years of study. The module ensures students graduate with an experience of professional project work as part of a team.

The enquiry and group based learning approach is challenging for students who have long experienced supported, direct knowledge transfer throughout their engagement with education. Nevertheless it enables students to develop autonomy in tackling problems. It is well-recognised that at level six students are risk averse, therefore this way of engaging with knowledge and skills brings a range of reactions. However by the point of graduation nearly all the reactions are positive, this increases further after graduation and after entering the world of work.

The organisations we work with are very committed to the module and find the student work helpful. Some of our relationships with our partner organisations have been developed by past students who now contribute to the module in a new role.

What are your critical reflections?

Developing this style of teaching from within our community engagement activities is intensive, both in time and expectation management (of both students and organisations). The development of the scenarios is facilitated almost exclusively through professional relationships which are hard to quantify within a modern academic workload system. This process also depend upon the ability of the academic to identify and capture the key issues within a scenario and it helps considerably if the module staff have conducted a wide range of consultancy/applied work with an organisation previously, maybe in their own research.

The rewards for all involved more than justify the utter loss of control of how the topics are 'taught' to students. This is contrary to traditional academic approaches and feels very unfamiliar, but is entirely in line with the enquiry-based learning approach. Even academics familiar with the teaching method of enquiry-based learning might become uncomfortable with the unpredictability of handing over the idea generation of the enquiries to other stakeholder groups. Once the more traditional academic trusts the process of the teaching method, the validity of the enquiries and accepts that the students guide themselves within their project teams, it becomes much more comfortable and very enjoyable. This initial discomfort for staff applies also to students who initially struggle with the freedom enquiry-based learning gives them and the professional trust this format of module invests in them.

Recently we have started to consider how we can include more career planning and preparation in to this experience. Our aim is to ask students to reflect on the skills and learning acquired throughout the degree, to enable them to transfer and apply these in an authentic challenging setting. This reflective aspect, alongside global citizenship and knowledge of subject relevant sustainability issues, are our foci for future development.

What worked/ what didn't?

This module has run for over nine years now and we have identified some challenges and preferred ways of working throughout that time. In order to prevent the organisations absorbing indirect costs of participation in the module (through managing student communications) we thread outcome-oriented ethics of responsibility through the module (to address obvious wider applications as well), outlining and modelling professional ethics within applied work.

Over time, we realised that aspects of the module which had the biggest impact were the exercises and approaches that modelled professional application of psychology in action for our students, rather than leaving them to imagine their application in the abstract. This has resulted in changes to the assessment for this module to be as closely aligned to professional outputs as possible.

What do you recommend to others as a result of this?

The power of this module is not just in the formula of what we do, when and how, but in the underpinning teaching philosophy. We do not teach skills and then ask students to think of ways to transfer those in an abstract setting, but we facilitate and model the practice and application of those skills within new contexts to evidence how they can be transferred.

Where can we see more details?
Webpages: http://www4.ntu.ac.uk/apps/news/173076-
15/Final_year_Psychology_students_take_part_in_Professional_Practice_in_Psycho.aspx
http://eprints.bournemouth.ac.uk/22906/4/psychological_literacy_compendium_final2._amen
ded.pdf (page 25)

A Unit on the Science of Self-Management
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Synopsis of the case study
This first-year level unit, The Psychological Science of Resilience, was created with the support of funding from the Office for Learning and Teaching of the Australian Federal Government, as part of a project that was concerned with equipping students with strategies to survive and thrive during their transition to university studies. International studies have documented the high level of distress students experience in university contexts; in contrast, recent developments in psychology emphasise the potential for individuals to be taught strategies that help them avoid or deal with stressors. The aim of the course was to provide a rigorous introduction to the theory, research and practical tools relevant to the science of self-management, and to provide students with opportunities to apply these tools to themselves. Self-management is the capacity to work effectively toward achieving meaningful goals, and to be flexible in the face of setbacks (Cranney et al., 2016). Evidence-based self-management is one aspect of psychological literacy, the capacity to intentionally use psychology to achieve personal, professional, and societal goals (Cranney & Dunn, 2011). Self-management capacity is essential both to the successful completion of higher education studies, and to the type of graduate that the future needs.

What did you/ the participants do?
This unit 'flips' the lecture content to a requirement of students to undertake 'pre-lab' work which may include readings, watching videos, completing surveys and reflections, and small group homework activities. Then, in 2-hour face-to-face tutorials, extension of the pre-lab work occurs, mostly in the form of interactive group activities, guided by a set of slides with reminds students of key concepts and ensures that the class time is effectively used. There are 10 face-to-face tutorials, with the following topics: Introduction (including to theory of resilience and wellbeing); Stress; Psychological Science (with focus on Mindfulness); Positivity and Realistic Optimism; Self-knowledge and realistic goal setting; Competencies (with focus on study strategies); Communication; Emotional regulation; Psychological Literacy and Responsible Help-Giving; Group Presentations. The group presentations are one component of the assessment which usually asks students to design a video focussing on evidence-based strategies to improve university student self-management. Moreover, students provide a written report on their undertaking of an individual rigorous self-focussed project.

What happened/is happening as a result?
The vast majority of students enthusiastically engage with the learning and teaching activities of this unit. See the "What worked/didn't" section for further detail.

What are your critical reflections?
Over the five years of delivery of this unit, we have responded to student evaluations, and to the scholarly literature as well as educational and technological innovations, and attempted to undertake continuous quality improvement. See the "What worked/didn't" section for further detail.

What worked/ what didn't?
The student evaluations of this unit indicate that the unit as a whole worked, both in terms of the content and the way in which it was delivered. The positive evaluations continue for students surveyed 1-3 years later.
Some limitations: This unit does attract some students who are experiencing high levels of distress, and some with high levels of anxiety or other psychological disorders. Within one or two weeks of the beginning of the unit, there are usually some drop-outs, and from what we can ascertain, these students are not able to tolerate the nature of some of the material (eg discussion of stressors), or are not able to handle the constant work-load of the flipped classroom delivery. Indeed, some students drop out later in the semester, or indeed, fail, for these two reasons. In contrast, some at-risk students appear to benefit greatly from this unit, along with the non-at-risk students, in terms of acquiring greater self-management skills, thus increasing their capacity to succeed at university. A current focus for us is to attempt to create an online version of this unit; disadvantages include the lack of face-to-face contact between students; advantages include the greater accessibility.

What do you recommend to others as a result of this?
Please contact us if you are considering integrating self-management strategies into your own units, or creating a unit on the science of self-management. We would be happy to consult. Meanwhile—see below for more details, and look out for our 'textbook' with Australian Academic Press (due to be published mid-2018).

Where can we see more details?

http://unistudentsuccess.com/olt-project-curriculum-resources/ provides some detail about the unit materials.
Thefridge.org.au provides resources for student self-management.

For the final report of the project as a whole, see: Cranney, J., Andrews, A., & Morris, S. (2016). Curriculum renewal to build student resilience and success: Phase 1 [ID12-2381]: Final report. Retrieved from http://www.olt.gov.au/resource-curriculum-renewal-build-student-resilience-and-success-phase-1-2016

For a copy of the unit outline, see: http://www.psy.unsw.edu.au/current-students/undergraduate/course-

Connecting Course Content to Real-World Experiences through Service Learning

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Key words
Group work
Reflection
Volunteering/Service Learning
Experiential Learning

Synopsis of the case study

This case study describes the integration of service learning into a Psychology of Women course. Although the examples of service projects provided are specific to Psychology of Women, the same type of assignment could be used in other psychology classes by identifying community service opportunities that align with course objectives. For example, Developmental Psychology students could volunteer with children in schools and Cognitive Psychology students could assist individuals with dementia in a memory care facility.

Service learning is a form of experiential education in which students work in collaboration with community organizations. The process is mutually beneficial as students provide needed assistance to members of the community, and in turn, are able to see the application of course material in a real-world setting. In this case study, I describe how students worked in groups to design and implement service learning projects that were congruent with the objectives of a Psychology of Women course. As recommended by the National Society for Experiential Education, students were provided with opportunities for reflection at all phases of the service project. Students reported that the service learning project broadened their understanding of course material as well as enhanced their own personal development.

What did you/ the participants do?

Students were organized into groups based on common interests. Each group was tasked with designing and implementing a service project that addressed a major issue to be covered in the course. The instructor provided students with a list of preapproved partnering agencies, but students were allowed to propose new partnerships.

Each group conducted a needs assessment by consulting with the community organization staff as well as by conducting a literature review. Based on their findings and interests, each group proposed a service project. In their proposal, groups described their partnering agency, explained the importance of their project, and detailed how the project aligned with the course. Groups submitted a written proposal and presented their ideas to the class. In this collaborative forum, students provided other groups with constructive suggestions for implementing their projects.

Once the proposals were approved by the instructor, each group carried out their project in the community. Groups were able to apply their creativity and tailor projects toward their interests. Several groups elected to work with a local emergency shelter for victims of family violence, and projects at this site included a spa day to encourage self-care as well as a workshop on resume building. Other groups worked with a school program, and projects at this site included teaching children about female scientists to encourage interest in science and reading and discussing story books with strong female leads.

Although students worked as a group, each student submitted reflection papers on the project throughout the semester. Prior to beginning the project, students reflected on their beliefs about the population they would be serving as well as their feelings about and hopes for the project. At the end of the semester, students were provided with additional opportunities for written reflection and presented on their experiences in class.

What happened/is happening as a result?

In their final reflection papers, students detailed how the service project experience related to the major theories and issues of the course. Students also reported on how they benefitted from the experience. Overwhelmingly students appreciated the opportunity to apply class concepts to the real world. This is exemplified by one student's comments that "After completion of my service project, I now have a more comprehensive understanding of several academic concepts addressed in this course… my service learning project made the course material relevant". Through this project, students also honed their writing, presentation, and collaboration skills. As one student noted: "my service project has benefitted many facets of my life including personally, academically, and occupationally". Students frequently reported that the experience furthered their own personal development. This is evident in the following student comment: "I encountered situations that were unfamiliar, and I was challenged to see life from a different perspective. I do believe this type of project should be required in all colleges". Furthermore, the experience helped shape some students' future career plans, and several students continued to volunteer after the course was complete.

What are your critical reflections?

The service project was a valuable assignment with benefits to both the students and community organizations served. Students were able to see the application of course concepts in real-world settings, which deepened their understanding of the material. In addition, students took away much more than they could from just reading the book or hearing a lecture. One of the students wrote: "we read the statistics, watch television news reports, hear a lecture, and then go on about our busy lives. This was an opportunity to stare reality in the face… broadening my horizons and giving me hope for future generations of women". As an instructor, it was extremely rewarding to see the meaning students took away from the experience as well as observe their growth throughout the semester.

The community organizations were also appreciative of the students' efforts. It was inspiring to the students as well as myself as the instructor to hear about the impact of the students' work. For example, the staff at the emergency shelter let us know that one little boy was constantly carrying a stress ball he had made with one of the service groups and even slept with it under his pillow.

Integrating service learning into my course was a time consuming process. However, the benefits to students and community largely help to balance this. Student reflection through writing exercises appeared to be a critical part of the learning process.

What worked/ what didn't?

Dividing students into groups based on common interests was an effective strategy. Students were able to draw on mutual interests to plan their project. Although I had been originally hesitant to allow students such a great extent of autonomy in designing their projects, I was impressed by the extent of students' creativity. Any projects that needed refinement were addressed as the instructor and other students provided feedback during the proposal process.

Students appreciated observing class concepts in a real-world setting; however, students were sometimes frustrated when things did not go exactly as they planned. For example, one group had wanted to paint with children at the emergency shelter, but there were no children at the shelter when they arrived. Although momentarily upset, these students revised their plans and enjoyed painting with adult residents. Moreover, students learned a great deal about the nature of an emergency shelter from this experience. As I continue with this type of project, I will remind students that they may need to adjust their plans given the complexities of outreach work.

What do you recommend to others as a result of this?
Service learning can be a valuable addition to psychology coursework. As students design and implement service projects, they broaden their understanding of course concepts.

Enterprise Challenges in Psychology: Enhancing Psychological Literacy Through Entrepreneurial Learning

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Key words
Employability
Group work
Entrepreneurial learning
Enterprise challenges

Synopsis of the case study

Psychology as a discipline and profession is not readily associated with what is commonly known as entrepreneurship, the process of designing, launching and running new business ventures. However, developing aspects of an entrepreneurial mind-set and attitude are pivotal for a fully psychologically literate graduate: this mind set includes the ability to draw upon resources such as psychological knowledge and skills, and then use these to realize psychological ideas in the real world, i.e. benefiting themselves, their community or society as a whole. Entrepreneurial learning processes provide an opportunity for students in psychology to apply their growing knowledge to a real world setting, and for enhancing and advancing their psychological literacy and employability. The Careers Service and School of Psychology at Newcastle University have developed a set of "enterprise challenges" and embedded them at different stages in the undergraduate psychology degree. These challenges ask students to use their subject –specific knowledge and skills to develop and then pitch an idea to support specific client groups. Our challenges so far have been developed in collaboration with local and national charities to provide realistic and authentic settings and to address real needs.

To date challenges have taken place over a single day or afternoon. Students are presented with a brief, which constitutes the main task of the challenge and then work in groups to develop their ideas. The tasks and brief represent real –life problems or issues and the challenge for the students is to develop a product, service or initiative that addresses these issues. In the process of developing the idea, students need to consider practical, financial and ethical constraints. The challenge culminates in a pitch given by the students to a panel of judges who evaluate the feasibility, and creativity of the idea.

What did you/ the participants do?

The first challenge was developed in 2015 in collaboration with a mental health charity (Thirteen Care and Support). Amongst many other clients, this charity supports veterans of armed conflict through sheltered housing and rehabilitation projects. Veterans as a group present a heterogeneous mix of social, clinical and physical needs. The challenge posed to our students was to "develop an idea for a service, initiative or product that addresses the challenges faced by veterans in the North East." Students were guided through a number of phases throughout the challenge, asking them first to generate different ideas (divergent phase), then hone in on one specific preferred idea (convergent phase), then consider the

specifics, including practical, financial, and ethical considerations. Members of staff, the charity and student peer-mentors (see Rosenkranz, 2012) were present to help with the various ideas and developing proposals. Finally, the groups recorded their pitch on 1 minute video and submitted them. The judging panel comprised representatives from charities supporting veterans, academic and clinical psychology, academic veteran studies, the Careers Service, but most importantly, the veterans themselves. The pitches were judged on the basis of their potential impact and capacity to reflect and address the needs of veterans.

Since this initial challenge, we designed and ran a number of further events, using different charities and psychological approaches as frameworks. In 2016 we ran "Forensic Minds" – again with Thirteen Group – here the challenge was to develop services to support young offenders. Students worked in groups to develop an innovative service idea. Each idea had to be unique, based on forensic literature in psychology, and be feasible. Unlike the 2015 challenge, each group was assessed by a panel of judges who attended on the day. Later in the year we ran a challenge with 1Voice – a charity supporting communication aid users. As with other challenges, students had to work together and develop a 'unique selling point'. Using their teaching from development and social psychology, students were asked to create practical solutions to the challenges faced by young children, adults and families who use communication aids. Similar to the 2015 challenge, students recorded themselves on video so that their presentations could be distributed to both academic staff and representatives from the charity partner.

What happened/is happening as a result?

The winning idea for this first challenge was a dog walking service termed PTSD – Puppies to Save the Day – in which dog shelters would pair with veterans for dog walking sessions (see the link to winning pitch video below). This idea was subsequently adopted as a proposal by Thirteen Group and plans to implement it through volunteers were put into place. The students of the wining team were invited to attend lunch at a veteran support centre a few months after the event. This allowed for further opportunity to learn about the experiences of veterans and the challenge they face within society. However, the main purpose of participating in the challenge was the experience of creatively applying subject specific knowledge to real-life problems and situations. When asked for feedback of their experience in our first challenge, 54% of respondents agreed that participating allowed them to develop their psychological literacy; 68% of respondents agreed that the challenge enhanced their experience of applying psychology in real world contexts and a 100% agreed that after the challenge they had an increased capacity to understand the needs of veterans. A further enterprise challenge is in development for 2017, this time focusing on pro-social behaviour using theory and application of experimental social psychology, behavioural economics, and evolutionary theory. Students will be asked to form a 'nudge' unit, similar to that employed by the UK Cabinet Office. Students will be asked to address a challenge that has both broad and local relevance, e.g. homelessness in the North East, and apply their psychological literacy to find a feasible and innovative solution.

What are your critical reflections?

As a teaching intervention, our model of enterprise challenges, allows students to creatively apply their psychological knowledge in a variety of real-life situations and addressing real needs. The collaboration with the charities and the involvement of diverse client groups is pivotal to this experience as these provide the authentic and necessary framework.

Furthermore, the competitive element of the challenge, as well as the requirement to solve it in small teams enhances the engagement with the task itself.

This form of entrepreneurial learning, e.g. assessing needs, taking financial and ethical constraints into account, making a business case for an idea, etc. corresponds directly with many of the aims that we set out to develop within psychological literacy. Moreover, framing psychological knowledge and skills with an entrepreneurial setting allows participants to take new perspectives on their "academic "experience of psychology, deepening their learning experiences and knowledge.   It also provides a relatively rare opportunity within traditional psychology degree programmes for creative thinking and problem solving outside of a research setting, which helps to cement these skills as they synthesise them during the enterprise challenge. Students should be actively encouraged to reflect on the skills they have developed and the experience the challenge has given them in the context of graduate skills. This can help to overcome the challenge of articulating the purpose of the task to students whose primary focus is on learning for assessment.

What worked/ what didn't?

What worked:
- Students enjoyed working in teams and competing against each other by producing their pitch.
- Applying psychological knowledge to real –life situations and needs enhances the engagement with the subject matter and develops social awareness.
- Students are able to develop entrepreneurial skills that enhance their employability and career development in various settings. This is relevant both for professional psychology pathways as well as other careers.
- The cross-disciplinary approach encourages collaboration cross-faculty as well as from local organisations.

Challenges:
- Students from different stages of the degree programme have different levels of knowledge.
- Students' primary concern is typically the learning of psychology specific content for assessment, the benefits of the development of broader skills such as those associated with psychological literacy are not always appreciated, particularly to students at the start of their degree. There are various logistical challenges, e.g. events tend to have more of a 'buzz' when they take place in a large hall with multiple teams competing in a positive learning environment. Such events can also span several hours making timetabling a challenge.

What do you recommend to others as a result of this?

Creating opportunities for entrepreneurial learning within psychology programmes can challenge students to apply their growing psychological literacy in a variety of contexts. Real-life settings that facilitate creative thinking and problem solving will cultivate knowledge and skills that can benefit the students, their community or society as a whole

Where can we see more details?

Presentations:

Dunn. A. & Rosenkranz. P. (2016). Enhancing psychological literacy through entrepreneurial learning. Presentation at HEA STEM 2016. (See https://www.heacademy.ac.uk/download/session-18-ms-alecia-dunn-and-dr-patrick-rosenkranz)

Upcoming workshop on enterprise challenges at HEA Annual 2017 (5th July 2017)

You Tube Video:
Puppies to Save the Day – Winning pitch of Enterprise Challenge 2015:
https://goo.gl/IwZ3vg

References:

Rosenkranz, P. (2012). Integrating Peer Mentoring into the Psychology Curriculum: from an extended induction to an academic skills course. *Psychology Learning & Teaching*, 11(2), 201-208. http://dx.doi.org/10.2304/plat.2012.11.2.201

How Problem-Based Learning Addresses Multiple Components of Psychological Literacy: The Case of Sexual Orientation Conversion Therapy

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Synopsis of the Case Study

A key component of psychological literacy is the ability to critically reflect upon and apply psychological knowledge to both individual as well as social problems (Cranney, Botwod, & Morris, 2012). Problem based learning (PBL), developed originally for medical education, addresses multiple components of psychological literacy including critical thinking, problem-solving skills, evaluating published scientific research, communicating research findings in a clear and comprehensible manner and appropriately applying psychological principles and empirical evidence to multiple social systems (McGovern., et al. 2010) including individuals, families, communities, as well as to regional and national governmental policies. PBL cases may be focused on individual clinical situations, organizational dynamics, and/or application of psychological knowledge to governmental policy. This case study is based on a PBL case in which parents are requesting sexual orientation conversion treatment for their 15-year-old daughter. Their request is supported with a published study (Spitzer, 2003) indicating that sexual orientation can be changed. In addition to requiring students to critically evaluate the quality and political use and misuse of psychological research, this case also includes an often overlooked component of psychological literacy – namely, the ethical implications of applying psychological knowledge (Murdoch, 2016). In keeping with psychological literacy as important for an educated citizenry (Cranney & Dunn, 2011), the case addresses how methodologically suspect research can be mis-applied to support questionable legislation and public policy.

Psychological literacy includes the ability to assess the quality of behavioral research applied to a "real life" clinical dilemma**.** Problem-based learning is a technique that was developed at McMaster School of Medicine in Ontario, Canada. Proponents of PBL state that students are much more likely to acquire and retain information if it is presented and discussed in an applied context (Barrows, 1996). PBL is a useful tool for addressing psychological literacy and its emphasis on application of formal psychological knowledge to a complex simulation of a realistic, applied" real-world" dilemma.

What did you/participants do?

This problem-based learning (PBL) activity was written to simulate clinical practice. The case, loosely structured according to the original PBL model developed at McMaster

University School of Medicine (Barrows, 1996; Searight & Searight, 2009) places the student in the role of a psychologist in independent practice in the United States. The case is written to simulate how clinicians receive information. The instructor writes PBL cases based upon a combination of clinical experience and the educational content that is being addressed in the course. Some license is taken to insert a reasonable amount of ambiguity into the case narrative to provoke critical thinking and discussion.

All students receive a copy of the case with the instruction not to read ahead. Between one and three short paragraphs of information are presented on each page. After each paragraph, the students and instructor discuss the available factual information, generate hypotheses, and discuss additional information that would be helpful for clinical decision-making. Additionally, questions may arise about criteria for diagnosis, risk factors, and/or evidence-based treatments of choice. If students do not possess this information, these questions can typically be answered through outside-the-class library research.

This particular case centers around parents seeking help for their 15-year-old daughter, Anna, who is reportedly open about her lesbian sexual orientation. While not explicitly stated by the parents until later in the case chronology, there are multiple indicators beginning with the initial phone call from mother requesting treatment, that the parents' goal is for the psychologist to change their daughter's sexual orientation.

About halfway through the initial clinical interview with Anna and her parents, conflict erupts around the young woman's sexual orientation. In addition to issues such as how to take a clinical history, the case raises a number of ethical and legal issues including:
a. If Anna does not want to participate in therapy is it ethical to see her?
b. From a legal perspective, can her parents coerce Anna into meeting with the psychologist?;
c. How does the therapist address the parents' issue regarding sexual orientation in a manner that is ethical and depending upon the state, legal?
d. Are there issues of significance within the family aside from Anna's apparent sexual orientation?
e. .How will the clinician handle the parents' agenda without alienating them?

In the U.S., this case is very timely since there is currently legislative activity to address the provision of sexual reorientation therapy. In California, Oregon, Illinois, Vermont, New Jersey and the District of Columbia, mental health practitioners have recently been legally prohibited from providing this intervention. At the same time, however, legislatures in other states such as Texas have attempted to pass laws specifically legalizing sexual orientation conversion treatment. The American Psychological Association his come out strongly against conversion therapy and views it as unethical (Anton, 2009).

In returning to the PBL case discussion, after obtaining some basic background information about family composition and Anna's school status, the psychologist is caught off-guard when Anna's 's father presents printed material from the internet site, "Focus on the Family," indicating that sexual reorientation conversion therapy can be effective. The internet information includes reference to a 2003 study by the well-known, academic psychiatrist, Robert Spitzer, in which formerly gay and lesbian adults reported that though therapy, they changed their orientation to heterosexual. The father then asks the therapist explicitly," When can you do this treatment with Anna?"

The students receive pages from the websites promoting gay conversion therapy that directly cite Spitzer's study. Students are also provided with the 2003 article from the *Archives of Sexual Behavior* and asked to prepare a response to the father's request based upon their critical analysis of the study. Students are told explicitly not to search the Internet for information about the paper but to use their own knowledge of test development and research design to critique the study.

The instructor suggests some guidelines for assessing published research including analysis of the sample, psychometric properties of the measures involved, as well as threats to internal or external validity including researcher bias and the generalizability of results .

Students are given a week to conduct their analysis and return with a critique of Spitzer's paper as well as a response to Anna's father.

What happened/is happening as a result?

Students readily detect many of the key flaws in Spitzer's (2003) study. A recent group of students found 15 significant research errors. Five issues concerned the participants, themselves: a. there was significant shrinkage from the original participant pool to the smaller group who actually completed the interviews; b. The study's requirement that respondents had to have been in reparative therapy; c. Atypical sampling, many respondents were from "ex-gay" religious organizations; d. The definition of "gay" and "lesbian" in the study; and e. Spitzer's report that one third of the sample were in heterosexual marriages.

Issues raised with Spitzer's account of the "treatment" provided included: a. inconsistencies in the treatment model; b. lack of clarity regarding therapy duration, and c. little information about the technical and conceptual aspects of the treatment, itself.

The survey and accompanying rating scale used in the study were seen as problematic by many students: (a) Spitzer designed a 10 point Likert scale to guide the interviews but does not report accompanying reliability or validity data; (b) The interviews were conducted by Spitzer via phone and all of the information gathered was by self-report; (c) The phone interview also asked participants to rate their experience of sexual attraction over a period of multiple years-there were concerns about accuracy of participants recall due to the time lag.

Finally, large numbers of students raised concerns about ethical aspects of the study. Some students argued that by presenting his findings as "treatment," Spitzer pathologizes gay and lesbian sexual orientations. Since many of the participants were referred by their therapists, there was also concern about whether the survey respondents experienced implicit coercion and did not provide genuine informed consent for their participation. It was also noted that Spitzer made no reference to the fact that many professional organizations such as the American Psychological Association do not accept gay conversion therapy as a recognized or appropriate treatment.

Occasionally, a student will note that Spitzer's paper had not been subjected to peer review. This observation leads to a useful discussion about the nature of peer review and the reasons that the *Archives of Sexual Behavior* may have made an exception and acquiesced to Spitzer's request for publication without peer review. At the outset of the discussion, students demonstrate a somewhat limited understanding of peer review and its significance. Once the

process has been discussed, students often indicate that Spitzer's paper, had it been blindly peer reviewed, would not have been published.

It was also necessary to provide a brief history of Spitzer's significance in the development of the DSM system as well as his support for the removal of homosexuality as a mental disorder in the mid-1970s Once students appreciated Spitzer's stature in the field, they understood, but did not necessarily agree with the absence of peer review and indicated that Spitzer was given preferential treatment.

As noted above, when give the Spitzer article to critique, the students were specifically instructed to avoid using internet searches to complete the assignment. Once the critical discussion is completed, the instructor describes Spitzer's later retraction and apology for the study (Carey, 2012). This information is deliberately withheld until later since it could influence students' analysis of the article.

What are your critical reflections?

Spitzer's article is a "goldmine" of easily identifiable research flaws. As such, it would be a useful standalone assignment in a research methods or related class. Psychological ethics often do not receive thorough attention in undergraduate psychology curricula. While students are exposed to basic research ethics (informed consent, use of deception etc) as part of their capstone research project, our university, like many in the U.S. does not have a specific undergraduate course in psychology's ethical principles. The case does provide an avenue to introduce APA's ethical code.

Another gap in undergraduate education is attention to gender and sexual orientation While most universities in the U.S. require coursework in diversity, the content of these courses is highly variable and often do not address issues of gender and sexual orientation.

This case study could trigger greater in-depth analysis if students were given the assignment to independently gather background information on the history of homosexuality in psychiatry as well as on the ethical and legal status of conversion therapy. Because of time limitations, the instructor provided a mini lecture on the history of gay rights beginning with the 1960s, through the Stonewall uprising and also addressed the status of homosexuality in psychiatry. A useful resource in this regard is a 2002 episode of National Public Radio's "This American Life" which is essentially an oral history of the removal of homosexuality from the Diagnostic and Statistical Manual of Mental Disorders. A link to this audio narrative is listed under "Resources."

What worked/what didn't?

Students readily recognized that interventions to change sexual orientation were "wrong." Most students appeared to hold an unarticulated biopsychosocial perspective ("There is nothing wrong with being gay; sexual radiation is something people are born with") While agreeing that homosexuality was no longer a mental disorder, students did not appear to have a grasp of the historical and political context of the de-anthologizing of homosexuality.

While American undergraduate universities count in interdisciplinary emphasis, students often appear to have somewhat limited knowledge outside their majors or concentrations of study. Students did, based upon their own beliefs that treatment designed to change sexual

orientation with a nonconsenting minor was wrong and should not be implemented, had difficulty using an ethical framework for their analysis. It may be useful to include broad ethical principles (autonomy, non-maleficence, beneficence, honesty and fidelity) as part of the discussion. As noted earlier, students were able to detect a number of research flaws in the Spitzer study.

What do you recommend to others as a result of this?

Since gay conversion therapy has been a frequent news item in the past several years, this case is very timely in the United States. However, the continued struggle for acceptance of persons who are gay or lesbian is likely to be a bigger issue in the U.S. compared with Canada and many Western European countries. Additionally, in the United States, opposition to gay rights often is associated with Christian fundamentalism. While an important dimension in the US, this factor may have varying significance in other countries. As a result, social and cultural norms might necessitate modification of the elements of the case discussion.

The case could also be used to explore ethics in psychology. In particular, since Anna is a minor, the case can provoke discussion of the tension between ethics and law. In general parents are able to seek treatment on their children's behalf. However, from an ethical perspective, the voluntariness of the adolescent or child client should be given serious consideration.

The exercise of critiquing Spitzer's study would have educational value in any introductory research methods class. Even if instructors are not using the paper in the context of PBL, it is very useful as a stand-alone assignment. The large number of overt research errors makes it likely that students would detect a fair number of the study's problems

In addition to addressing ethical issues in mental health practice, the case study highlights the value of critical analysis of research findings as a key component of psychological literacy. The case demonstrates how research findings can be "packaged" to support a particular value position. In this particular case illustration, students have detected a total of nine distinct problems with research supporting conversion therapy as well as five ethical issues that the case presents. This case study illustrates how a problem-based learning case can address multiple components of psychological literacy. These components include research methodology, ethics and professional conduct, and the political and public policy implications of research findings.

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Resources

National Public Radio –Talk of the Nation; "Spitzer's Apology Changes 'Ex-Gay' Debate." May 21, 2012. Available online at npr.org.

Chicago Public Radio--This American Life. "81 Words." January 18, 2002. Available from www.thisamericanlife.org/radio-archives/81words (This hour long program describes the process by which homosexuality was removed from the category of mental disorders)

Occupational Psychology Case Study
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Consultancy
Workplace behaviour
Well-being

Synopsis of the case study

The applied approach to student learning at Salford University encourages students in the Occupational Psychology module to engage with theoretical models by considering their use in real-world settings. The aim is to encourage improved well-being in a workplace of their choice. Whilst many choose this final undergraduate year module for its relevance to the workplace, it is recognised that only a small proportion are likely to be budding work psychologists, however this does not deter us from fostering an appropriately critical perspective of workplace behaviours, including those which many students have already encountered as employees. For those not yet in the workplace an increased awareness of some of the challenges ahead is no less an important asset. Class-based lectures and discussions about a range of topics, from bullying to work-life balance, each linked to well-being at work, mean that students do not experience this module at an emotional distance, but rather as living topic in which they are the key players.

This encourages the student to play the role of an Occupational Psychologist, using their psychological knowledge to inform recommendations which they develop as though they are the practitioner, utilising theory to inform problem-based solutions. By focusing on well-being and giving students the opportunity to personalise their learning in terms of job choice, it is hoped they can take ownership of the problems they identify and from there a sense of empowerment in relation to the workplace which can serve them well in the future. As having a sense of control is a key determinant of well-being at work, students are able to raise and consider meaningful issues and to develop a personal ethic around implementing change for the common good – arguably the key aspiration for psychologists and those wishing to apply psychological principles.

What did you/ the participants do?

Each student is encouraged to take a problem-based approach to their own job or one with which they are familiar, or even one to which they aspire, to research and analyse the key issues which impact on the individual carrying out that job. If they wish students can interview a person who carries out the job. Commonly identified problems are a lack of control, poor managerial practices, unreasonable workloads, work-family conflict, etc. However the assignment stipulation is that having been introduced to a range of models

previously developed by occupational psychologists, that they select one which will provide a theoretical basis for their analysis. A balance of situation- and person-centred models is covered so that the student can choose any one from more than six approaches in relation to their chosen job, e.g. Warr's Vitamin Model; Karasek's Job Strain Model; Affective Events Theory; Conservation of Resources. The permutations and variety are boundless. Having selected their model and job, the student must use their analysis to highlight recommendations for change in the workplace linked to the issues arising, e.g. improving employee autonomy via job enhancement strategies. Once again the research literature must be used to support their proposals which they should evaluate in light of the likely obstacles they feel their recommendations may face, e.g. resistance to distributing control across the workforce.

Past examples have included typical jobs carried out by students while earning money to keep them financially solvent, such as bar- and retail work, as well as careers in which they hope to work, or have previously worked, including teaching, health and social care. However this is also a forum in which students working in employment as diverse as healthcare, policing, international sports, hairdressers, estate agents and nightclub bouncers get to exchange views on improving their respective experiences of working.

What happened/is happening as a result?

'This is the most useful assignment I have ever done' one student told me. As an ex-nurse, she went on to say how the case study experience had given her the opportunity to evaluate the reasons underlying her emotions about the work environment she had left. Whether this serves a therapeutic function looking back, or as others have found an opportunity to learn about potential career paths, there are hopefully benefits in using the assignment to hone analytical and problem-solving skills, which facilitate growing confidence in dealing with often complex scenarios. With employability in mind, students have also found the exercise a successful selling point at job interviews, where they can demonstrate that they have not simply carried out relevant research about the role for which they are applying, but they can also talk in an informed manner about how they might approach it. If this helps to develop the kind of 'savvy' that employers of graduates call out for, then the feedback seems to be positive. Of course this is not to say that students need this assignment to develop job-related awareness, but the argument for including such an exercise within undergraduate programmes is a strong one. For students whose employers are also keen to learn this can represent a golden opportunity to impress.

What are your critical reflections?

As a Psychologist specialising in workplace matters, I consider the experience of encouraging students to think critically about the quality of their working lives to be highly significant. I feel confident that if students are encouraged to grasp real-world situations from a perspective of improvement then they are better equipped to deal with situations that not only they face, but others for whom they are responsible as managers or advocates will encounter too. I suspect we are really focusing on the politics of the workplace – we know it exists and shapes so much behaviour, but we are often reluctant to point it out and address it. Of course this does not mean that work is all bad news, but instead that students' expectations of work need not be unrealistic or indeed unnecessarily constrained. Some of the most memorable exchanges in class feature students sharing their experiences of previous job roles with other

students, debating why a situation arose and how they were able to deal with it. Naturally there are both happy and less happy endings, but always opportunities for learning. I am not shy about sharing my own work experiences as appropriate and by doing so I try to demonstrate that we should also take care to consider the anonymity of the organisations we choose to scrutinise – the development of a personal ethic is part of the process which some may call political awareness-raising. This type of consultancy comes naturally to many students, who will often refer to organisations and employees by fictionalised names and whose recommendations are rarely without substance.

What worked/ what didn't?

It can be tempting to bite off more than can realistically be considered in 2000 words, so students are encouraged to focus on a particular job, rather than a whole organisation – however this does not always channel enthusiasm away from attempting to solve big workplace challenges.   I sometimes fear that an individual may barge into their workplace and begin to 'lay down the law' with negative consequences for their employment, but we do talk about the potential pitfalls of trying to introduce change in the workplace and I am confident that nobody yet has landed in organisational 'hot water' as a result of this exercise. It is not always easy to evaluate the potential downside of one's own recommendations for improving well-being at work – especially after finding ringing endorsements for it in the relevant literature – but this critical reflection is one aim of the exercise and the second assignment in the module follows up on this, by asking students to consider their own personalities and preferred styles of behaviour. Students demonstrate they have gained the following: analytical ability in a workplace setting, skills in using the relevant literature to help build a business rationale, an awareness that alternatives to the status quo at work do exist and ethical and political capacity in considering how change can be implemented.

What do you recommend to others as a result of this?

I believe the case study approach to organisations can really help students apply psychological principles to real-world settings – by empowering students to choose workplaces important to them, it is possible to enable students to foster a sense of ownership over challenges faced and hopefully enhanced control in developing solutions. In other words, workplace scenarios provide fertile ground for growing the skills of would-be psychologists and valuable employees alike.

Where can I see more details?

Taylor, J. and Hulme, J. (2015). Introducing a compendium of psychological literacy case studies: Reflections on psychological literacy in practice. Psychology Teaching Review, 21 (2), 25-34.