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Teaching research ethics: debates, discussions, and difficulties

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1. Introduction

Psychology is a research-based subject. As such, students of the subject need to engage with and understand research ethics. This understanding needs to cover two main things:

- Students need to understand on a theoretical level what is acceptable and what is not. This understanding helps them to critique research studies, and to answer exam questions on ethical issues.
- Students need to have an awareness of the guidelines that they should follow when conducting their own practical work, even if submission of written-up report is not mandatory for their course.

As well as understanding research ethics within their course, students in your psychology classes will begin to develop an awareness of issues which will serve them later in life, too (Hulme, 2014; McGovern, 2010). Indeed, Psychology as a school/college subject is one of the best vehicles for learning about key ethical debates and principles which are relevant throughout society. Their competence with and sensitivity to these issues will serve them well in a great many future pathways, including research careers and further study but also careers in medicine, law, politics, and many other areas (BPS, n.d.).

The present chapter explores some of the main techniques that you can use to teach research ethics with your class. It draws heavily on principles of learning and memory from cognitive psychology, considering the issue of what makes learning meaningful, well remembered, and transferrable.

After all, the learners need to be able to remember what you have taught them and need to be able to access this knowledge and apply it in future situations (Bransford et al, 2000). If this is achieved then research ethics in psychology could be one of the most valuable things that they learn at school or college.

1.2 Objectives

At the end of this chapter you should be able to:

- Explain the role of the BPS and ATP ethical guidelines in psychology teaching.
- Be aware of engaging ways of teaching ethics in the classroom.
- Consider and apply techniques for making this learning stick through the use of 'desirable difficulties' based on spacing and story.

TASK 1: Check the requirements for your initial teacher education (ITE) programme to see which of them relate to this unit. Use these to identify gaps in your knowledge.

2. The practice of teaching research ethics in Psychology

2.1 Why teaching ethics matters

Teaching ethics is part and parcel of good psychology teaching, just as ethical practice is fundamental to good science. Students need to know that ethical behaviour is not an add-on or extra – it is a part of the subject itself, and one that psychology researchers take very seriously indeed. We cannot conduct good psychological science without observing ethical

practices (Rosenthal, 1994).

While this is true for many subjects, psychology has particular pressures that make ethics even more important. Firstly, our research is largely carried out on people rather than objects or chemicals, meaning that the ethical guidelines are wider and stricter, and the potential fallout of breaking the rules would be more harmful. In addition, in psychology, we often have to fight for our subject to be respected as a legitimate science (Jarvis, 2011). It is the newcomer in terms of the natural sciences, and is frequently not treated as a science subject at all.

This is unsurprising in a way, both because the subject is relatively new in comparison to the likes of Physics and Chemistry, and because of its broad scope which overlaps greatly with social sciences such as Politics and Sociology. Nevertheless, it is important that we as psychologists can demonstrate that we understand the scientific method and are meeting the strictest standards.

For practical purposes, many of the activities that you do with your students (such as those found throughout this book) rely on a code of ethics. This is often put into place by you as the teacher; you wouldn't set up a task that required students to do something harmful and dangerous. But as time goes on, students can learn to make these ethical judgements for themselves. Building in a discussion of ethics before starting a classroom practical can be a great way to develop ethical awareness among the class – and this is a skill that can transfer well to exam situations.

A failure to abide by standard ethical guidelines in our research and practice would stand to bring the subject into disrepute. It would also reflect badly on the teaching of the subject at school level. One example of this was a 2020 headline in The Times newspaper which claimed that Scottish school teachers were running unethical experiments in psychology classes, including (according to the journalist) "Lord of the Flies" experiments.

In reality, the claims were probably greatly exaggerated and reflected at most the ill-advised choices of tiny number of teachers, but it is a good example of how even a few cases of bad practice can reflect badly on the profession and the subject as a whole. Over the long term, this could make students and their parents wary of taking the subject.

TASK 2: Discuss with a peer what emphasis you would place on teaching ethics, and at what point in a Psychology course you would cover it. If you haven't yet started your course, you could engage with Psychology teachers on social media to chat about this issue.

2.2 BPS guidelines

A code of ethics is a set of general guidelines that are followed by practitioners in a field. You are probably already aware of the British Psychological Society (BPS) from your previous studies; this is the professional organisation for psychologists in Britain, and is closely affiliated with other professional organisations elsewhere in Europe around the world. The BPS provides a set of ethical standards for psychologists to follow for such activities as therapy, research, and professional practice (e.g. as an educational psychologist). As a professional psychologist yourself, it would be useful to be aware of these (alongside the professional standards and guidelines specific to your role as a teacher).

BPS also provide a set of standards which are specific to research (BPS, 2014), and it is these that we will focus on here.

Your role as a psychology teacher includes both setting up activities in such a way that research activities in your classroom meets these standards, and also ensuring that students themselves come to learn the ethical standards such that they can critique their own work and that of others.

For example, students need to be able to:

- Identify ethical flaws in classic research studies such as the work of Asch and Milgram;
- Identify flaws in their own research plans if they are engaged in practical/experimental work;
- Analyse ethical issues that are presented to them in tests and exam situations, for example via scenario questions;
- Show an ethical awareness as part of their broader psychological literacy.

The BPS 'Code of Human Research Ethics' is quite long and I won't reproduce it here; see the end of the chapter for resources (and ensure that you download and read the current version as it is updated every few years). However, the key points can be summarised as follows:

- Participants must consent to take part in research activities, and this consent should be *informed* – that is, they must understand what they are consenting to. In the case of children, parental consent is usually required.
- A briefing should be given before the start of the research task, and participants should be debriefed at the end.
- Participants in research activities should not be harmed (any risk of harm should be no greater than it would be in everyday life).
- Participants have a right to withdraw, even after the data gathering has finished.
- Participant data must be stored securely, avoiding any data loss or breaches.
- Participant data and related findings and conclusions must be kept confidential

and anonymised such that it is not possible to identify individuals.

Most of these principles probably seem straightforward and self-evident, especially for new teachers who already have an Honours degree in Psychology. However, there are issues that arise that may not be as simple as all that. Whether our behaviour is ethical or not can be quite subjective; sometimes, one teacher may *believe* that they are behaving ethically, but another might disagree.

TASK 3: For the following examples, consider whether the research described is acceptable. If not, what improvements could be made?

a) A group of psychology students have been carrying out experiments into the capacity and duration of working memory as a classroom practical. The teacher inputs the findings into a spreadsheet and saves this on the desktop of her school computer.

b) One student carried out a survey on relationship preferences among the school staff. Demographic questions were asked about a participant's teaching subject, age, and gender.

c) A group of senior students are concerned about homophobia, and feel that awareness should be raised among younger age groups. To gather evidence, they carry out a survey of younger students (with a mean age of 12). Questions including asking how comfortable they would be having a sleepover with a gay classmate.

d) A group of student researchers have designed a study based around an intelligence test. However, their psychology class is too small to study, and they also want naive participants. They therefore go to the classroom the English teacher next door, and he agrees to let them carry out the test on his GCSE class of 25 students.

Feedback on task 3

a) The task itself is relatively harmless, but the data has not been stored in a secure way. Remember that data protection and security is part of research ethics.

b) There could be concerns about investigating this topic within a school, where there are existing working relationships between students and staff. In particular, the demographic questions make it relatively easy to identify individuals, breaching their right to anonymity.

c) While the student researchers' intentions are laudable, there is considerable potential for upset and repercussions of this research. The participants are at an age where they may be feeling vulnerable or insecure about their sexuality, and may feel upset if questioned about it. A questionnaire that was not well designed could do more harm than good (for example by reinforcing homophobic stereotypes).

d) Teachers should not give consent on behalf of students, especially younger students; parental consent should be sought in advance. Presenting an experiment to the class without warning could make them feel pressured to take part. In addition, an intelligence test produces sensitive data that should be handed with considerable care if done at all.

Case study 1

In a university, there is outside scrutiny of research activities by an ethics board, rather than practitioners making the call about whether their own choices are ethical or not. However, in a school, such decisions are often made by the teachers. Freud High School recognised that there could be an issue with subjectivity when judging whether research projects carried out by a Psychology class were acceptable or not. To recreate the benefits of an ethics board, they decided to set up a panel to review ethics decisions, which included a psychology teacher, members of senior management, and an invited academic.

Feedback on Case Study 1

Consider the example above. Is there an issue in your school whereby you and the other teachers are responsible for both suggesting and approving student research projects? If so, would an outside voice be helpful? Perhaps you could look at setting up a formal or informal system whereby an independent colleague scrutinises these choices and provides feedback. This could be done as a partnership with another school.

2.3 ATP application of BPS guidelines in schools and colleges.

The BPS ethical guidelines discussed above are a central reference guide for psychology teachers in the UK, but because of the broad nature of Psychology as a discipline, they do not delve into all of the issues that school-based research faces. For example, they do not suggest research areas that should be avoided, and do not provide specific guidance for parental consent and data protection when gathering student data in a school setting.

Furthermore, they often assume that researchers will be adults and have at least a modicum of expertise in their area. Things are a little different when the researchers themselves are children or young people.

As a school teacher, you probably want and need to set some limits on what your students can research. Some of the specific major issues for school research studies include the following:

- Could the materials included in the study be distressing to students, or distract them from their school work?

- Are students responsible enough to manage the sensitive data of their peers in a secure way?
- Could questions (e.g. in surveys) be too invasive for a school-aged group of participants?
- Is there a danger of coercion to take part, for example if an entire school class are used as participants in a study?
- How much information should be provided to parents in order for them to consent to their child's participation in an activity?
- Can teenagers who are in full-time education give informed consent for themselves?

To deal with these and other relevant issues, the Association for the Teaching of Psychology (ATP) have produced a guide which supports and extend BPS guidelines.

The ATP guidelines restrict certain things that would be acceptable for professional or degree-level psychology students. For example, school students should not carry out research on participants under the age of 16 at all, according to this code.

TASK 4: Consider the following question; discuss it with classmate or fellow teacher if you can, or note down your own response.

The ATP guidelines rule out experimentation on under 16s, but sometimes Psychology is taught to students of age 15 or younger. Does this mean that the class cannot do practicals which involve testing their classmates, for example administering a test of the capacity of working memory?

Feedback on task 4

There should certainly be limits placed on what is done with under 16s, and this is a case where it is important to use your professional judgement. However, doing practicals is part of psychology as a subject, as with any scientific subject. Also, there are certain things that are difficult to do by oneself – it is hard to self-administer a test of reaction time, for example. Remember that doing a classroom practical to help demonstrate a psychological phenomenon is a quite distinct thing from carrying out research where students are participants and data is gathered and published. Ethical practice is still important during practicals, but the context must be taken into account.

Case study 2

A school teacher is very interested in the psychology of sleep, and is covering this topic with a class of students aged between 13–14. He finds that the students are very keen to try out a practical that looks into their own consumption of caffeine and their sleep patterns. To do so, he gives each student a form to fill out on which they should fill in their consumption of caffeine and their bedtime/waking time each day for the following week. A few days later, a parent contacts the school to complain that their child was awake for most of the night as part of a school project after drinking several cups of strong coffee, and they demand an explanation.

Feedback on Case Study 2

Case study 2 helps to demonstrate some of the pitfalls of ethics in a school context.

Students' enthusiasm to investigate new psychology topics can lead to unforeseen consequences. In this case, the teacher did not intend for the students to drink a lot of caffeine and stay awake late into the night. However, the students themselves interpreted the task as a chance to experiment with their own sleep cycles. This could have been anticipated and avoided. It is important for a psychology teacher to be crystal clear at the outset about what students can and can't do as part of one of their class projects. Remember that even discussing topics such as sleep could cause students to change their behaviour. For this task, it would have been better to gather the data retrospectively – that is, to ask students how many hours of sleep they got the night before. Your classroom activity can't affect something that has already happened.

2.4 Suggested teaching activities

Many of the ideas discussed so far are worth raising with the students themselves. The psychological literacy that they will develop through discussing moral and ethical problems. Here are three activities to try:

1) Set up a roleplay where one group of students act as an ethics board, and another group provide suggested experiments for them to evaluate.

Divide the class into groups of 4–5. Each student should write a short summary of what their experiment would involve, focusing on materials and procedure.

The summaries of one group should then be swapped with those of another group (it doesn't matter if the groups have slightly different numbers of members). Each group then looks at the proposals and rates them, referring to BPS guidelines.

If you have time, students could write a short report as feedback on the proposals.

To vary the activity, you could ask groups to write some proposals that they consider ethical and others that are clearly unethical!

Alternatively, they could write proposals for studies that they actually intend to carry out.

An optional follow up would be for the students to respond to feedback by giving a short talk to the class, acknowledging the ethical weaknesses of their proposal and explaining how they would talk to it. The class could then take a vote on whether it would be accepted or not.

2) This activity involves showing students example studies in the form of a slideshow, with a one-sentence explanation of each one. In every case, there should be something unethical about the study – but it won't always be obvious. Students then have to decide for themselves what is wrong with the study (a bit like a 'spot the deliberate mistake' task).

It can be good to start with a few easy/obvious ones and then have the flaws become progressively more subtle. The task could be done in pairs or individually, and it might be better to write answers rather than having students call out. It could even be done as a form of test or quiz. If you like, real studies could be used (key studies from your course or recent examples from the BPS Research Digest), or alternatively you could devise fictional ones.

3) Presenting a range of ways to tackle a research problem, and asking pairs or groups to discuss and then pick one of the options. A good choice would be to discuss different methodologies for investigating the use of highlighting as a study strategy. This could be done in multiple ways, for example a lab experiment where one group uses highlighter pens and one does not, an interview study to find out about preferences, an observation of students at work in the school library/study area, and many others. Groups could discuss and debate the ethical pitfalls of each approach, and then make a collective decision about which option they would choose (this task could be tied together with a pre-exam lesson on effective study

skills. The evidence suggests that highlighting is a popular but ineffective strategy; Dunlosky et al, 2013).

Some other ways that you could consider presenting information about research ethics to the class include the following:

- A matching task where students have to pair up terms (e.g. informed consent, debriefing) with their definitions. A dictionary of psychology terms is a useful resource, here.
- A mini-lecture with slides that take learners through the process from a researcher's point of view, from planning a project and applying to an ethics board right through to publishing a paper. This could be supported with a short video interview of a psychology researcher.
- A presentation that makes use of 'think-pair-share' to address how a researcher would tackle a specific set of research questions or dilemmas.

3. Making learning stick

It's all very well to tell learners about research ethics – but will they be able to remember and use what you teach them? If they don't retain the information in long-term memory there is little point in doing it. To achieve this, it is important that new learning is consolidated. We will now consider ways of making sure that what your class have learned about research ethics 'sticks' in the sense of becoming useable knowledge that they can draw on over the long term.

3.1 Timing of practice

Initial learning is followed by a period of forgetting in long-term memory, as can be seen from Ebbinghaus's (1885/1964) forgetting curve.

A popular assumption among educators is that consolidation should happen as soon as possible, before forgetting becomes too severe. And while that is true to an extent, there is an important caveat, drawn from cognitive psychology – a period of forgetting actually makes learning better in the long-run (Bjork, 2011).

That is to say, it can be better to delay consolidation than to do it too soon. This phenomenon is known as the spacing effect. Essentially it means that spacing out one's practice over time is more effective – it will lead to better learning.

Researchers have been able to specify this further:

- It is important to consolidate the material well in the first study session, ideally with learners recalling it correctly at least three times in the short term (Rawson & Dunlosky, 2011).
- After that, spacing can be gradually increased (e.g. one day, followed by one week, followed by one month), but it is also effective to employ a 'fixed schedule' of spacing, such as a review activity once per month (Küpper-Tetzel et al, 2014; Roediger & Karpicke, 2011).

How to do it: The spacing effect is a natural choice to apply to the study of ethics, not least because ethical issues crop up throughout any Psychology course. It is probably best not to worry too much about the exact timing of each practice session, as long as you ensure that the original material had been studied and practised thoroughly, and that subsequent delays

last for at least a few days.

If, for example, ethical principles are raised and practised within every topic that you study, then students will be returning to these and consolidating them once every few weeks. This would be a highly suitable delay to build in for practising this material.

3.2 Ensuring a meaningful narrative

The spacing effect is often studied via laboratory experiments with sets of unconnected facts. What difference might it make if we apply it to richly meaningful and interconnected materials? Richly meaningful information is more slowly forgotten. As such, the forgetting that occurs after initial learning will typically be less rapid, and therefore consolidation can happen a bit later and still have the same effect.

Consider how easy it is to remember a story or anecdote that a friend or colleague tells you. Even if you don't remember the words (which quickly decay from working memory), you retain the gist (stored in semantic long-term memory). And the more interesting, funny or peculiar the story, the easier it is to remember.

Stories have been described as "psychologically privileged" information, (Willingham, 2004), more likely to gain our focus and be remembered. They are easier to understand and retain than simple lists of facts for a number of reasons:

- Their richly interconnected structure makes the information easy to organise.
- Memory for the information is supported and scaffolded by our existing schema knowledge about the world.
- They prompt us to make predictions and inferences, leading to better recall. As Bartlett (1932) put it, we make an *effort after meaning*.

- Surprising and emotional information is also easier to remember than neutral information, as shown by the phenomenon of flashbulb memory.

How to do it: It's actually quite easy to utilise stories as part of your methods of teaching ethics. Perhaps you are familiar with the vignettes used by Kohlberg (1963) to test children's level of moral development. In one example, 'the story of Heinz', participants had to consider the case of a man who stole from a pharmacy in order to get medicine for his wife who was severely ill. They were then asked to consider whether this was morally justified. A variation of Kohlberg's vignettes could be used in class, asking students to discuss and debate whether in the case of studies like Milgram's obedience experiments, the end justified the means.

Discussion of moral ideas can help learners to take in and consolidate the new knowledge. Why? According to Mayer's (2009) select-organize-integrate (SOI) model, the processing of new information in working memory provides opportunities for learners to integrate the information with what is already in LTM. Note that this is a similar to the classic Atkinson-Shiffrin 'modal model', but with a key difference – learning happens by actively and meaningfully connecting information to older learning. The SOI model is more sophisticated and up-to-date than the modal model, and better reflects what actually happens in a classroom.

[Eds - if another chapter talks about story-based methods, long-term memory, the 'war of the ghosts' research or schemas, there could be a cross reference here]

TASK 5: Find (or compose) a short set of ethical vignettes to debate with a class. In each case, the research should provide clear benefits, such as finding out something previously unknown, but should have breached ethical principles in some way.

3.3 Variation and transfer

It's not enough for learners to simply retain what they have learned in their heads. They also need to be able to *transfer* what they have learned to new situations which are subtly different. For example, students may need to apply an ethical principle learned in the context of a classic psychology study when reading a newly published piece of psychology research.

This ability is what psychologists call transfer of learning. As described by Barnett and Ceci (2002), transfer is easier to do in the original learning context, and harder when out of context. But 'context' includes several elements, and there are therefore several things that can make transfer easier or harder. These include:

- The subject domain – it is harder to transfer learning to a different school subject than within the same one.
- The physical surroundings – it is harder to use what you have learned when in a different location (e.g. in the workplace).
- The framing/phrasing of the task – transfer is harder when tasks are framed in a novel way, and easier when it they are superficially similar.

It may seem to make sense to make transfer as easy as possible for students, and this can certainly be helpful during initial learning. However, presenting challenges and variations can help learning to become more flexible. Do we want students who can only use what they have learned in the classroom? Clearly not; we want them to be able to apply what they have learned at home, at work, and in the exam hall!

Keeping tasks similar (low variability) is good for short-term performance, but high

variability helps with long-term learning and transfer (Soderstrom & Bjork, 2015). As a teacher, we should aim to extend and vary tasks once our learners have mastered the basics. Some ways to do this could include the following:

Practice tasks in a different physical location, such as via homework or by using ‘outdoor learning’.

Change the context by unexpectedly asking questions about research ethics in the middle of a content-based topic such as Memory or Attachment.

Gain responses in an unpredictable way by varying the order and wording of tasks.

Have students connect what they have learned to another school subject. For example, they could be asked to write about the psychology of obedience in the context of Physical Education.

Have students debate a psychological principle as a roleplay connected to a real-world scenario. For example, they could role play a group of politicians who are considering how to use insights from the psychology of prejudice to reduce racism in society.

Set up a role play, where a controversial figure from psychology such as obedience researcher Stanley Milgram is put ‘on trial’ to defend and justify their research. Students can take the role of defence, prosecution, judge, jury, reporters, and so forth.

While these tasks are more difficult than simply going over the material in the same format as it was originally studied, they make the learning more accessible and useable over the long-term, and therefore help to build practical ethical awareness among our students.

TASK 6: Drawing on the above examples, write down a page of notes outlining how you could increase the level of variability in your lessons such that students are required to

practice their ethics knowledge in multiple contexts.

4. Overview and conclusions

This chapter has explored the value of ethics in psychology, the application if the ethical codes of conduct produced by BPS and ATP, and looked at some helpful ways of teaching research to classes.

It has also drawn on the cognitive psychology of spacing, narrative and transfer to show how important it is for lessons on ethics to be well remembered and for students to be able to apply them in future situations. Good teaching practices such as the ones exemplified in this chapter will help you to achieve that with your own students.

The teaching of ethics provides opportunities for discussions that can be highly stimulating to students, and can serve them well not just for the psychology studies but for their future careers as well. What's more, it helps to establish a foundation of scientific and psychological literacy that is valuable for any young person.

You should now:

- appreciate the centrality of research ethics of psychology to the teaching of psychology;
- have ideas for how to teach research ethics in an effective and engaging way;
- understand how the principles of spacing, narrative and variation can be applied to your teaching of research ethics to boost long-term retention and application.

4.1 Further reading

- BPS and ATP guidelines can be downloaded from the societies' websites: bps.org.uk and theatp.uk
- Smith and Firth (2018) 'Psychology in the classroom' includes detailed coverage of how to apply the spacing effect to teaching practice.
- Perkins and Salomon (1992) provide a valuable and detailed explanation of the role of transfer in education. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.24.369&rep=rep1&type=pdf
- Daniel Willingham writes a compelling short article on the benefits of story for educators: https://www.aft.org/periodical/american-educator/summer-2004/ask-cognitive-scientist

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