

The journey to undergraduate psychology

Christian Jarrett talks to those in the know, to get some travel tips

Savvy travellers check the latest information on where they're going: what to expect, what to pack and how to prepare for their new surroundings. This article is a guide for students considering making the journey to undergraduate psychology, a destination that lecturer Catriona Morrison says promises to transform you

into a 'literate, numerate and critical thinker, a very good graduate who will be exceedingly competitive in the job market'. Just how will this place compare with your pre-degree experience? What challenges will you face and what more could lecturers and we, the psychology community, do to make your move as smooth as possible?

Who is your guide?

More and more would-be psychology undergrads have a pre-degree psychology qualification even though most universities do not list psychology A-level or Scottish Higher as a prerequisite. It's a situation that marks psychology out from the more traditional sciences. If you wanted to study biology, physics or chemistry at university, you'd be expected to have an A-level or Higher in the subject.

One of the reasons some university academics have yet to fully embrace A-level and Higher psychology is they are concerned that school and further education psychology teachers often aren't qualified in psychology. This anomaly has arisen in part because there is a dearth of PGCE (teacher training) courses with psychology as the main subject.

'Lots of teachers coming through have to specialise in another curriculum subject and then switch to psychology, so they're not specialists,' says Dr Sara Berman, head of psychology at Claires Court School in Maidenhead. 'If a school believes you're capable, perhaps you have a biology degree or a sports degree, with a little bit of psychology, and you're very keen and enthusiastic, they'll take you, they'll let you, there are no criteria.' Berman says this is a real problem and she understands the concerns of university academics. 'There should be some way of saying you've got to have a psychology degree or some sort of academic qualification,' she says. 'A lot of people who teach A-level psychology don't have the academic knowledge in what they're teaching.'

Marc Smith at Guiseley School in Leeds has experienced this situation first-hand. Although he has a degree in psychology, he was unable to find a PGCE in the subject. 'I actually trained as an RE teacher, simply to get into teaching A-level in schools,' he says. 'And that is quite common - we have people doing business studies, RE, or this type of thing, teacher training and then coming straight in [to teach psychology]. There's a view in teaching at the moment that if you are a teacher you can teach any subject and it doesn't necessarily have to be the one you have qualified in.'

Fortunately this is an improving situation. Whereas in 2002, there were just two PGCE training courses with psychology as the main subject, today there are seven: two at Edge Hill, and others at Canterbury Christ Church University, Keele University, Manchester Metropolitan University, the University of Wolverhampton and the University of Worcester.

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On arrival

'The biggest challenge', says Paul Sanders, a lecturer at the University of Wales Institute in Cardiff (UWIC), 'is the change in culture. Most students come from the relative cosiness and safety of school to the big, open, almost dismissive atmosphere of university.' Class sizes will be considerably larger, perhaps into the hundreds, he explains. There'll be less contact with teaching staff and a shift from being nurtured and looked after to having to stand on your own two feet.

According to Peter Reddy, a former teacher and A-level examiner who now lectures at Aston University, the distinction between the two teaching cultures was first described by the great Prussian naturalist and explorer Alexander Von Humboldt in the 19th century. 'At school you are presented with material as if it's the facts,' Reddy says.

'Whereas at university, ideally you should be enrolled into some kind of joint enterprise where both you and the academic staff are trying to work on incompletely solved problems.'

Phillip Banyard was an A-level examiner for over 20 years and currently lectures at Nottingham Trent University. He too believes that new undergraduates will be struck by the change from the prescriptive nature of school or college psychology to the more creative demands of the degree. 'The biggest challenge is to think more widely, to be aware that many questions don't have answers, and to recognise that there are big disagreements between psychologists about what things mean,' he says.

What do current students think the biggest challenges were in their first year? Nicola Williams, now on her second year at the University of Chester, echoes Sanders' comments about the change of culture. 'At A-level I was taught in a class of around 10 pupils, and the teacher spent a lot of one-to-one time with us. All the information we needed was provided for us, and so I guess you can say we were very much spoon-fed at times,' she says. 'Studying at degree is very different - you have to be prepared to do a

lot of independent reading and researching. A-level required more knowledge-based answers whereas undergraduate psychology requires you to demonstrate your way of evaluating research in much greater depth.'

From a practical perspective, Williams says the main tasks during her first year were lab reports, five of them, oral presentations and essays. 'But the biggest challenge,' she says, 'was finding a balance between studying and socialising. This really is the most difficult thing in the first year, but it's so important to find that balance, as both socialising and studying are important.'

For Natalie Butler, currently on her first year in psychology at the University of Huddersfield, the biggest challenge will

be those oral presentations that she's been warned also lie ahead on her course. 'I am not looking forward to those,' she admits. Gemma Sweet at the University of Staffordshire points to the group work as one of the first year's main challenges. 'I had to work in a group to produce a poster – it's proving difficult because I don't know the people I am working with and we have a short space of time to trust each other.' For Loren Abell at the University of Central Lancashire, meanwhile, it's the strict word limits and the conventions of academic referencing that have been particularly hard to get used to.

Who should come?

If these are the main challenges, what kind of a student is suited to thrive in such an environment? Banyard says the ideal psychology undergrad is someone who engages, who has an interest, has their own ideas and the ability to look beyond the question. 'So if I ask them a question I'd like to get a question back,' he says. 'We're looking for people who ask questions, to have a sense of wonder and to be inquisitive.'

One question that prospective undergrads are bound to ask is whether or not they need to have studied A-level (or 'Advanced Higher' in Scotland) psychology. More and more students are taking the A-level/Higher such that it is now the fourth most popular qualification of its kind in the UK. But the official answer is: No, you do not need to have a pre-degree qualification in psychology to study the subject at university. The

experts are divided on whether this should change.

'It would make sense to make it mandatory,' says Banyard. 'If you were doing physics at university, you'd expect a student to have done A-level physics. If you see psychology as a science that builds on previous knowledge then it should have a curriculum pathway through school to university.'

Marc Smith studied for his psychology degree with the Open University and has been teaching A-level psychology at Guiseley School in Leeds for the last six years. He says that taking A-level or Advanced Higher psychology is the single best thing prospective undergrads can do to prepare themselves for a degree in psychology. 'It will make their first year so much more straightforward,' he says. 'They will have a grounding, a basis of what it's all about. Some of their teachers may not teach in the same way as their lecturers will, but they will at least have a theoretical background.'

The undergrads we contacted all agreed that having an A-level in psychology has helped them at university. 'You have to do a lot of independent study, so it's useful to know the basics to psychology first and build upon it,' says Butler. But for every lecturer, teacher or student who advocates the benefits of having a pre-degree qualification in psychology, there are plenty of others with the opposite view (see 'Who is your guide?' and 'Mind the gap' for further controversies).

'There's a lack of faith in some of what's taught at A-level,' says Morrison, who lectures at Leeds University. 'A lot of it is textbook stuff, and we know that inevitably a lot of that is going to be out of date and behind the latest research.' Morrison advises students with an A-level or Higher in psychology that what they understand to be psychology will probably be very different from what they'll get at university.

A-level and Higher students may think that they're covering the same ground, she explains, but in reality the approach at degree is very different. 'We teach from a research-led perspective,' she

Mind the gap

Even if you have a psychology A-level, you may be shocked to find just how scientific degree-level psychology can be. 'There's a big gap for many of them,' says Dr Catriona Morrison, a lecturer at Leeds University. 'Many students come in saying "Yeah, I've done A-level psychology, I'll be fine" but then they get here and it's a shock. I met one of my undergraduates the other day and she's saying "It's quite scientific!"'

One of the reasons the gap may appear larger than ever is because of recent changes to the A-level syllabus. When the new specifications in England and Wales were launched in 2008, the coursework component had been removed, and it was this component that had previously given students an experience of practical work (north of the border, students studying for Scottish Highers and Advanced Highers are still required to complete practical research investigations). 'When I first started teaching, students had to do five different practicals – an experiment, an observation, and so on,' says principal examiner Dr Sara Berman. 'Then it went down to two, one qualitative, one quantitative and then down to one, and now A-level students don't have to do any compulsory practical at all.'

The syllabus change has been motivated by the problems associated with marking coursework, including plagiarism. But it comes at a strange time given that A-level psychology was recently officially rebranded as a science by the QCA (the body that oversees exam boards in England). 'They've tried to encourage us to write exam papers that make the candidates answer with practical skills,' says Berman, 'and a good teacher will understand that their students will need to have done some practical stuff to do well in the exam. But it isn't compulsory, and that's my biggest fear. The greatest difficulty for students transitioning between A-level and university is this lack of practical skills.'

says. 'So you might recognise health psychology, but you'll also have to recognise that some of the people teaching you are international experts on health psychology and they are going to expect you to appreciate their "brand".' The most important thing for would-be undergrads to understand, Morrison adds, is that they will be trained as scientists. 'They should forget any notion of sticking to the softer side of psychology,' she warns. 'They will need to understand quantitative experimental methods. The few students who we do lose, we lose because they can't handle the science.'

But arts students shouldn't let this talk of scientific training put them off. 'We're looking for students who have an openness to learn,' Morrison says. 'Be open-minded, be prepared for a challenge and if you're smart enough, whatever

"We're looking for people to ask questions, to have a sense of wonder"

feature

your background, you can cope with psychology.'

Advice for visitors

We've heard about the culture shock, the lab reports, the independence, referencing, socialising, group work and oral presentations. We've heard that the world of degree-level psychology welcomes curious, inquisitive undergrads, with or without an A-level or Higher in the subject; people who are ready for a challenge and prepared for some serious scientific training. Is there any other specific advice our experts and students have for anyone ready to take the plunge?

Sara Berman is head of psychology at Claires Court School in Maidenhead and a principal A-level examiner. She says prospective undergrads should look very carefully at the different degree courses on offer and in particular at their varying content. 'They do vary considerably,' she says. 'Some are much more biologically based, science-based, stats-based whereas others are more social and health-related. Students need to realise that and choose something that matches their strengths.'

Morrison agrees. 'Degrees at different universities will be specialised as much as possible towards the research interests of the staff involved, so a degree from Leeds will be very different from, say, a degree at Manchester, Newcastle and Sheffield. Psychology departments want to teach to their research strengths, and it's important that students selecting a university to go to recognise this individuality and that they think about which brand of psychology they will be happiest with.'

Sanders advises prospective undergrads that they will need to plan their time and not leave work to the last minute. 'Where are the notes, what do I have to copy down? No, it doesn't work like that,' he warns. 'You may only have 17 hours of lectures, but this is a full-time course, so you have to ask yourself what are you going to do with the other 23 hours? Horror – you've got to read books, find journals and use internet search techniques.' Reddy, too, highlights the importance of time management, and also 'making relationships, feeling engaged with your subject and your department, avoiding feeling isolated – it's about enjoying what you're studying,' he says.

What's the advice from current students? Nicola Williams says new undergrads shouldn't expect to get high marks simply from reading their textbook. 'You have to be prepared to do a lot of reading around the subject,' she says. Also: 'Don't be tempted to skip

Make the transition from sixth form to university as smooth as possible – open days, school visits and introductory courses all help

lectures!' Even if you feel like you're covering old ground, she says: 'It's important to attend, as the lecturers always add to what you already know.' Butler recommends looking up journals: 'Try reading them and summarising them so you get a bit of practice in, and also start the essays really early so you get enough references.'

Welcome party

There's only so much that would-be undergrads can do to prepare themselves for the leap to degree-level psychology. University lecturers must also play their part in making the transition as smooth as possible. There are a range of ways that they can do and are doing this, including open days, school visits, introductory courses and more experimental schemes.

'We've started a shadowing scheme at Nottingham Trent,' says Banyard. 'Some of us are going to shadow a school teacher for a day and then they'll come into the university for a day. We also try to bring A-level students in to visit the university and then that has a knock-on effect on the people who are here.'

Another possibility, Smith proposes, could be for A-level or Higher students to act as participants in psychology research conducted at university. 'We have a lot of kids who'd love to go down to Leeds Uni and get involved in that kind of element,' he says. 'That would also give them more of a practical side to their pre-degree experience, which at the moment is very didactic.'

Sanders runs an Introduction to Psychology at UWIC module for all first years: 'We cover the student transition, the culture, epistemology, approaches to learning, deep and surface, academic confidence and self-efficacy, reflection and personal development planning and lots

more.' He and his colleagues are also planning to introduce video conferences for local schools, which will involve guided practicals. Sanders says it's all about trying to build local links. 'If every psychology department could have a champion, somebody to persuade his/her colleagues to get out, meet local school teachers, create more of a symbiotic relationship – I think that would make the transition for students much easier.'

At Leeds University, Morrison helps run a Psychology at Leeds course, part of which involves getting the department's 10 best research leaders to give a lecture each. 'In some departments students would be "protected" from these people. But we say "These are the best people, this is why we're a good psychology department and this is also why we're not always available when you need us because we're good researchers and we're going to bring you on as our research apprentices"'. Our students respond really well to this – they recognise that they're in a distinctive department, and that helps them appreciate what academics do. If you don't get them on day one, you've lost them.'

Invoking Maslow's classic work on human needs from the 1940s, Reddy says it's vital to provide new students with an environment in which they feel secure, valued and confident that they can contribute. 'I think university can feel emotionally cold after the warmth and familiarity of school,' he says. 'I want to allow people's abilities to emerge because they feel emotionally engaged and part of something – that's the most important thing.'

Dr Christian Jarrett is *The Psychologist's* staff journalist, and editor of the *Research Digest: a great free resource for students*. See www.researchdigest.org.uk/blog

The rough guide to studying psychology

Evidence-based tips for students and lecturers from the Research Digest editor, **Christian Jarrett**

Adopt a growth mindset.

Students who believe that intelligence and academic ability are fixed tend to stumble at the first hurdle. By contrast, those with a 'growth mindset', who see intelligence as malleable, react to adversity by working harder and trying out new strategies. These findings come from research by Carol Dweck, a psychologist based at Stanford University. Her research also suggests lecturers and teachers should offer praise in a way that fosters in students a growth mindset – avoid comments on innate ability and emphasise instead what students did well to achieve their success.

Sleep well.

A 2007 study covered on the Research Digest found that lack of sleep impairs students' ability to learn new information. Participants attempted to remember a series of pictures of people, landscapes, scenes and objects. Crucially half had slept normally the previous night whereas the other half had been kept awake. When tested two days later, after everyone had had two nights of normal sleep, Matthew Walker found that the previously sleep-deprived students recognised 19 per cent fewer pictures in a memory test.

Forgive yourself for procrastinating.

Everyone procrastinates at some time or another – it's part of human nature. In a 2010 study covered by the Digest, Michael Wohl and colleagues followed 134 first-year undergrads through their first two sessions of mid-term exams. Those who had forgiven themselves for procrastination prior to the initial mid-terms were less likely to procrastinate prior to the second lot of exams and tended to do better as a result.

Test yourself.

A powerful finding in laboratory studies of learning is the 'testing effect' whereby time spent answering quiz questions (including feedback of correct answers) is more beneficial than the same time spent merely re-studying that same material. In a guest post for the Research Digest, Nate Kornell of UCLA explained that testing 'creates powerful memories that are not easily forgotten' and it allows you to diagnose your

learning. Kornell also had a warning: 'Self-testing when information is still fresh in your memory, immediately after studying, doesn't work. It does not create lasting memories, and it creates overconfidence.'

Pace your studies.

The secret to remembering material long-term is to review it periodically, rather than trying to cram. In a 2007 study covered by the Digest, Doug Rohrer and Harold Pashler showed that the optimal time to leave material before reviewing it is 10 to 30 per cent of the period you want to remember it for. So, if you were to be tested eleven days after first studying some material, the ideal time to revisit it would be a day later. If it's seven months from your initial study of the material to an exam, then reviewing the material after a month is optimal.

Vivid examples may not always work best.

Common sense tells us that effective teaching involves dreaming up interesting real-life examples to help teach complicated abstract concepts. However, in a 2008 study by Jennifer Kaminski and colleagues, students taught about mathematical relations linking three items in a group were only able to transfer the rules to a novel real-life situation if they were originally taught the rules using abstract symbols. Those taught with the metaphorical aid of water jugs and pizza slices were unable to transfer what they'd learned.

Learn how to nap.

Numerous studies have shown that naps as short as 10 minutes can reduce subsequent fatigue and help boost concentration. It's only recently, however, that researchers have turned their attention to napping technique. Dayong Zhao and colleagues recruited 30 undergrad regular nappers and tested whether it makes any difference if you nap lying down or leaning forward with your head resting on a desk. Zhao's team found that a post-luncheon 20-minute nap in either position was associated with increased performance at an auditory oddball task (listening to a series of tones and spotting the odd one out), but only napping lying down was associated with an increased P300 brain wave signal during the

task recorded via EEG – a sign of increased mental alertness.

Get handouts prior to the lecture.

Students given PowerPoint slide handouts before a lecture made fewer notes but performed the same or better in a later test of the lecture material than students who weren't given the handouts until the lecture was over. That's according to a study by Elizabeth Marsh and Holli Sink, reported by the Research Digest, which involved dozens of undergrads watching video clips of real-life lectures. The researchers warned their results are only preliminary but they concluded that 'in situations where students' notes are likely to reiterate the content of the slides, there is no harm from releasing students from note-taking'.

Believe in yourself.

Self-belief affects problem-solving abilities even when the influence of background knowledge is taken into account. Bobby Hoffman and Alexandru Spataru showed this in 2008 in the context of 81 undergrad students solving mental multiplication problems. The students' belief in their own ability, called 'self-efficacy', and their general ability both made unique contributions to their performance. 'In learning situations,' the researchers concluded, 'there is a natural tendency to build basic skills, but that is only part of the formula. Instructors that focus on building the confidence of students, providing strategic instruction, and giving relevant feedback can enhance performance outcomes.'

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