

# Bridging the gap: Facilitating students' transition from pre-tertiary to university psychology education

Helen J. Kitching & Julie Hulme

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*The transition from school or college to university education is an exciting time for most students, but also one that is filled with new challenges. Students are faced with new styles of teaching and learning, and are required to be more independent and acquire new skill sets. For psychology students, there may be an additional challenge in the form of studying a subject that is novel to them, or they may need to revise their understanding of the nature of their subject from their perception pre-university. This article will review some of the current literature on student transitions, and on psychology students' preparation for degree-level study, and will recommend collaborative working and increased dialogue between the pre-tertiary and university sectors as one way to smooth the transition.*

**Keywords:** Transition; pre-tertiary; higher education; A-level; psychology; statistics; retention and success.

ISSUES relating to student transition from pre-tertiary psychology education to psychology within higher education (HE) have received considerable recent attention. Universities are increasingly concerned with improving student retention and success, especially in the context of the marketisation of HE, and pre-tertiary teachers are keen to ensure that their students are well prepared for the move to HE. Students are paying substantial tuition fees and looking for a return on their investment, and understandably expect that university education will facilitate their success and ultimately support their employability. Universities have a moral obligation to provide their students with a positive student experience, and transition is an important aspect of this. Within psychology specifically, students are not required to achieve a level three (A-level or equivalent) qualification in the subject prior to commencing their university programmes, and there may be issues regarding their skills and their expectations around subject content, as well as issues arising from more generic transition experiences. This article will review what is known about the experience of students transiting to HE psychology programmes from the pre-

tertiary sector, outline issues faced by pre-tertiary teachers in supporting the smooth transition of psychology students, and identify key factors that may put students at risk, or enhance their learning experience, once at university. It will draw primarily on the psychology teaching and learning literature, but will adopt a wider perspective where lessons can be learned from other disciplines. The article will conclude with some key messages and suggestions about how the psychology community can best support students through transition.

## **Transition, induction and skills**

There are a number of factors that are key to a successful transition to undergraduate study. Palmer, O'Kane and Owens (2009) state that the one of the main ways of promoting a smooth transition is to ensure that students make 'meaningful connections' to the university and develop a sense of belonging. Thomas (2012) elaborates on this, and suggests that this sense of belonging should focus on belonging to the student's academic department or programme, rather than the institution as a whole. She emphasises the importance of developing links within the discipline-

specific academic community, and argues that these should ideally be formed within the context of the curriculum, not through additional extra-curricular activities. This suggests that university departments need to embed support for transition and opportunities for students to develop relationships with each other and their departmental staff, within timetabled course-related sessions. This might include providing opportunities for students to work together in groups and enabling regular contact with personal tutors to help build student-student and staff-student relationships early in the undergraduate programme, as well as thinking carefully about how induction processes are managed.

Induction is an important aspect of managing transition and helping students to develop their sense of belonging. Both Briggs, Clarke and Hall (2012) and Laing, Robinson and Johnston (2005) argue that a week is not a long enough time to develop an effective social and peer support group. Laing et al. also remark that students are often quite passive during induction, which can limit the extent to which they can feel involved in the process. Within the context of psychology, Jones, Upton and Wilkinson (2013) have developed an innovative induction activity to develop students' relationships with peers and academic staff, and to provide a more interactive, less didactic induction experience. Based on psychological studies of cognitive mapping, students learned about how people navigate novel routes, and produced their own walking maps of the local area. The activity takes students out of the classroom, working in groups to familiarise them with the physical environment in which the university is located, and introduces them to some key types of learning, teaching and assessment activities through a psychologically relevant task. Students were positive about the relationship development they experienced during this intervention, and many said they felt more comfortable about starting university. Other psychology departments may be

well advised to explore similar interactive induction methods to support their students in transit to university.

Rowley, Hartley and Larkin (2008) investigated the factors that impacted on psychology undergraduate students' learning experiences. Some of these factors are likely to be influential in all disciplines, not just in psychology, and thus interventions need to be considered at university level, across all programmes. For example, students reported that homesickness and debt can influence their decision to stay on their course. They also claimed a decrease in support and guidance at university relative to their pre-tertiary learning experience, and said that the emphasis on independent study could be problematic for some students. This finding chimes with other research which suggests that undergraduate students acquire study skills and learning strategies appropriate for pre-tertiary education but that these are often at odds with the independent learning approaches expected in HE (Laing et al., 2005), leaving students with a perceived skills gap. However, Pampaka, Williams and Hutcheson (2012) found that students, in their interviews, reported that they expected to be more 'grown up' in their learning when starting their degree and some actually seemed to relish the idea. This is echoed in the findings by Drew (2011). It may be that students look forward to learning independently, but do not fully appreciate what is involved or how challenging they might find it in reality.

Psychology undergraduate students report finding other aspects of the nature of university study surprising, including teaching in lectures, and the emphasis placed on referencing in their assessed work (Black & Mehta, 2012). Williamson et al. (2011) found that students on a three-year psychology undergraduate programme were quite realistic, when questioned at induction, about their expectations of university life and study. However, their responses to how they would actually make adaptations were brief and non-reflective, suggesting that

whilst students may acknowledge differences between pre-tertiary and university learning, they may not fully understand the implications of these differences and their own need to make adjustments to their learning behaviours. University lecturers, when supporting students transiting from pre-tertiary education, may need to develop ways of addressing students' lack of expectation and understanding of the differences in modes of learning, teaching and assessment, to help them to adjust to their new learning environment. This might include explicit dialogue with students about the new expectations and responsibilities placed upon them in a university setting, but might also involve lecturers adapting teaching in the early parts of the programme to a more pre-tertiary style, and then supporting them in progressing to an independent style as appropriate for undergraduate level. Some psychology programmes already incorporate 'learning to learn' activities in first year, whilst others rely on central support services to support struggling students. Embedding support within the curriculum to facilitate transition for all students would seem to be preferable.

Cranney et al. (2008) concur that in order to achieve a successful transition, students need to 'grasp the expectations of the university', feel a sense of belonging and develop the necessary study skills. Cranney et al. (2008) approach first year undergraduate courses by scaffolding learning with innovative teaching and learning programmes that assist the students in becoming independent learners. They focus particularly on developing information literacy and team-work skills, with an emphasis on learning to 'think like a psychologist'.

Many psychology programmes in the UK now include study skills training in the first year, at least. For example, Reddy et al. (2008) evaluated a study skills intervention that had been implemented at a pre-1992 university. The intervention addressed issues of poor first-year undergraduate literacy, including referencing, expression, grammar,

punctuation, plagiarism and collusion. They found that students who attended the study skills training intervention were better prepared for assessment, had more realistic expectations about study, learned valuable skills such as referencing, had better relationships with peers and staff, and achieved higher grades, as well as being more likely to persist with their course (although they do note that these outcomes may be confounded by motivational factors). The research seems to suggest that any transition programme that is aimed at improving study skills needs to be an integrated part of their study and credit-worthy so that students will be more motivated to be involved and see its importance in their learning journey (Norton & Crowley, 1995; Johnston & Webber, 2003). Taking this approach, however, can be an effective way to ensure that students are equipped to deal with the changed learning environment that they encounter on entering university.

### **Psychology curriculum**

Alongside the need to prepare students for the nature of learning in HE, there may also be a need to consider their expectations about the content of psychology degrees. According to Banyard (2008), the number of students studying on pre-tertiary psychology courses is in excess of 180,000 per year. In 2009, psychology A-level beat biology into fourth place and amongst girls it is the second most popular subject after English (Walker, 2010). The Quality Assurance Agency (2010) describe psychology at undergraduate level as 'the most popular science subject'. As psychology continues to grow in popularity, an increasing number of psychology students are likely to have had some experience of studying the subject prior to their arrival at university, although this is certainly not the case for all. Although the statistics vary from university to university, almost 60 per cent of psychology undergraduates have studied A-level psychology prior to commencing their degrees in the UK (UCAS, 2012), and others will have

studied the subject at level three for other qualifications (such as AS, Scottish Highers, International Baccalaureate and Access). However, the lack of requirement to have studied psychology prior to university means that universities typically teach a broad curriculum to introduce the topic in first year. This can have two main implications. Firstly, students may not be aware of the nature of psychology and may have false expectations of the nature of the content they will be learning. Secondly, for those students who have already been exposed to psychology education, there may be an element of repetition.

The literature generally suggests that prior study of psychology does not confer any advantage in terms of student achievement and degree classification. Huws, Reddy and Talcott (2005) found no significant differences between the grades of students who had studied psychology previously and those who had not at the end of their first year, second year or in their final degree grade. This is supported by the findings of Betts et al. (2008), who also found that psychology A-level grades affected performance at first year undergraduate level but not subsequently. The research by Betts et al. (2008) is consistent with the claims of psychology undergraduate course providers that the first year is intended to bring all students, regardless of previous study of psychology, up to a similar level of understanding. We might expect differences in performance during the first year, with the gap closing subsequently as students who have not studied psychology previously 'catch up' due to intensive teaching in first year. Therefore, one would not expect pre-tertiary psychology experience to be a predictor of overall degree performance.

However, in some regards the repetition of material previously studied in a pre-tertiary context may in fact be problematic. Rowley et al. (2008) compared the experiences of students who had studied psychology at pre-tertiary level to those who had not. Some students reported that they

found the first year of undergraduate study 'boring', because it was too repetitive of what they had covered during their A-level psychology studies. Rowley et al. (2010) also reported a student comment that the first year of undergraduate study was 'extremely boring and repetitive' (p.406); this student's prior experience of studying psychology was not acknowledged, resulting in a negative experience of the first year of undergraduate study.

Undergraduate psychology providers may, therefore, need to make explicit their reasons for covering similar content to pre-tertiary courses where this cannot be avoided, and also to find ways of engaging students in new ways with familiar material, whilst still allowing an entry-level introduction for those students who are new to the subject. In addition, it is important to include at least some curriculum elements which are not familiar to students who have taken psychology at level three, and to identify some appropriate content that is not covered in any of the level three qualifications. Consideration of these issues in curriculum planning may have a strong impact on student satisfaction with psychology programmes.

It is worth noting that a large proportion of students choose to study psychology at university because their interest has been engaged at pre-tertiary level. Assuming that the psychology they have studied is representative of that which is taught in degree programmes, regardless of the lack of effect on achievement, they are likely to be enthusiastic, motivated to learn psychology, and have realistic expectations regarding the subject material with which they will be engaging at university. Indeed, Harackiewicz et al. (2002) found that students who were rated as having high interest and had achieved high grades in pre-tertiary psychology were more likely to continue the subject at a higher level. Satisfaction with post-16 psychology is generally very good with up to 80 per cent of students rating it as more interesting than their other subjects

(Hirschler & Banyard, 2003). However, Trapp (2007) and Jarvis (2007) comment that despite high levels of satisfaction and the high grades that some students have achieved, they can 'appear to be of little value' when they start their degree. Jarvis suggests that this is because the emphasis at A-level is on knowledge and content, rather than developing students' transferable skills, which continue to be of use in the undergraduate context. On the whole, however, it seems that prior study of psychology should aid the transition process, at least to some extent, particularly if universities can address the repetition issue.

It might be argued, therefore, that psychology should be made a pre-requisite subject for entrance to a psychology degree. This would remove the requirement for universities to teach content already covered at level three, as all students would enter with some prior knowledge of the subject. This approach has been proposed by Toal (2007) and Banyard (2008). However, Rowley et al. (2008) observe that this would restrict student entry, and thus may not fit with the UK government's widening participation agenda, by excluding students with 'atypical entry qualifications'. The same could be said for the many disciplines that do insist on prior study at level three, such as mathematics and physics (Banyard, 2008), but these subjects are taught in the majority of schools and colleges, as national curriculum subjects, whereas this is not always the case for psychology, meaning that the option to study psychology is not always available to students. Making psychology a pre-requisite subject could potentially impact on numbers applying for psychology degrees, which is unlikely to be popular with universities. Toal's (2007) view is that not making A-level (or equivalent) psychology a pre-requisite for studying it at undergraduate level weakens the academic status of psychology, but it should be noted that psychology is not the only subject in this situation (others include business studies, sociology, criminology and law). Given the incentives to attract

maximum student numbers, it is unlikely that universities will change their policy on this in the near future.

In fact, given the diversity of A-level and other level three curricula, it is not clear that requiring level three study of psychology would enable universities to address the issues of repetitive content in first year. There are five A-level specifications, from four different awarding bodies, as well as Access, Scottish Higher, International Baccalaureate and other level three qualifications including psychology, and this will always make it difficult for university lecturers to judge the knowledge and skills of even those students who arrive at university with a pre-tertiary qualification (Green 2007). Thus there is still a need for a wide ranging introduction to the subject in first year. Trapp et al. (2011) suggest that this diversity among the pre-tertiary curricula is confusing for academic staff, and leads to them ignoring, rather than accommodating, students' prior learning. This could be an argument for standardising the A-level syllabus, but Rowley (2008) also makes the point that this would not help those students who have taken other psychology qualifications such as Scottish Higher, International Baccalaureate or Access. Rowley et al. (2010) found 'marked individual differences' in those students with A-level psychology, in response to the question 'to what extent had A-level psychology prepared them for research methods classes at university' (p.408). They suggest that some of this discrepancy may be due in some part to the differences in specifications between the A-level exam boards.

Despite the heterogeneity of A-level psychology qualifications, they do not lack academic rigour. Jarvis (2011) reports that according to the Curriculum Evaluation and Management (CEM) Centre at Durham University, which monitors relative achievements in A-levels, in 2008 ranked psychology 16th out of 33 subjects in terms of difficulty. It was rated below the traditional sciences but above English, geography and law. It will

be interesting to note how this changes following the 2008 introduction of the 'How Science Works' element to the specifications, bringing psychology into line with other science subjects at A-level. *How Science Works* (Department for Education, 2012) was designed to be integrated into the National Curriculum in order to help pupils develop as critical and creative thinkers and become flexible problem solvers. It requires pupils to 'understand how evidence comes from the collection and critical interpretation of both primary and secondary data and how evidence may be influenced by contexts such as culture, politics or ethics'. It is, therefore, directly relevant to psychological enquiry, and could help students to develop skill sets which are central to achievement in psychology at degree level.

Currently the A-level specifications differ greatly in their emphasis on practical work. Edexcel (2013), for example, requires students to undertake five practical investigations in the first year, one tied to each of the psychology core topics. These investigations are assessed by examination, where the questions may be specifically about the student's own work or they may be given a scenario to which they need to apply the research skills that they have learnt. They also have to understand, but not carry out, inferential statistical tests. In year two students are required to plan a study of their own, including how they would analyse the data, and be able to evaluate it. The specification does not state explicitly that they have to conduct this experiment. In contrast, for AQA's (2013) specification A, students are examined on their understanding of research methods concepts in year one (linked to the cognitive module) and will have a discrete research methods module which comes at the end of the two-year course in which they are expected to undertake a piece of small-scale research. If the students do not continue on to the second year of the course, they will have limited opportunities to gain research methods skills. This has implications with regard to

both students' realisation of the centrality of research methods and statistics within psychology, and their preparation for engaging with these topics following transition to university psychology courses.

Psychology A-level also differs from other sciences in not requiring students to complete assessed coursework (Smith, 2010). As psychology at university focuses heavily on research methods, it could be argued that by removing the practical component of the A-level, students would be less prepared for studying psychology at HE.

There were many issues with the previous forms of assessed coursework in psychology, including those of grade inflation and in many cases it was not fulfilling its role as a key tool for developing skills in research methods (Green, 2007). The popularity of psychology has led, in many cases, to large class sizes, and with limited teaching time teachers were forced to 'lead' rather than guide their students through the coursework. This in turn led to a high degree of conformity even though individual students' reports were written up independently, and so coursework was rarely a good discriminator of student ability (Green, 2007). However, hands-on experience of carrying out a range of practical investigations can be argued to be crucial in preparing students for studying psychology at university, and it is vital that this is incorporated within the pre-tertiary classroom for students wishing to progress to degrees in the subject, even if this aspect is not formally assessed. It is also worthy of note that, according to Pampaka, Williams and Hutcheson (2012), very few students are well prepared to continue their studies in mathematically-demanding courses at university, not just within psychology.

Many students report that statistics and SPSS are new to them at degree level, while university lecturers rated students' level of preparation in data analysis and statistics as the lowest of all the areas of psychology (Black & Mehta, 2012; Mehta & Black, 2012). This is interesting in light of the fact that all current A-level specifications require

students to have an understanding of non-parametric inferential statistics, although most specifications do not require it until the second year of A-level, with the AS level focused on descriptive statistics. It is possible that the students in Mehta and Black's (2012) research were unable to make the connection between the non-parametric statistics taught at A-level and the parametric tests taught at university. Teachers in schools and colleges do not generally have access to SPSS and may not have been trained to use it, so it is unlikely that the majority of students will have had experience of using SPSS prior to university. University psychology lecturers may not realise this, given the commonplace use of SPSS in HE, and it is certainly worth bearing students' lack of familiarity in mind when introducing them to the software. University psychology lecturers also need to ensure that the statistical content of psychology degrees is explicitly signposted to students prior to application, through open days and similar activities, to try to reduce the surprise encountered following entry. Lecturers need also to be sensitive to the anxiety experienced by some students when working with statistical content (e.g. Field, 2010).

Rowley and Dalgarno (2010) also observe that difficulties with statistics are often reported by undergraduates. They noted that less than 50 per cent of first-year undergraduates at a UK university had expected the element of statistics within their degree course. However, it is not clear how many of these students had studied psychology prior to university and whether it was those who had not studied the subject before who were most surprised by the statistics content.

Beyond the context of research methods and statistics, students may feel unprepared for other scientific content within their psychology degree programmes. Students entering university said that biopsychology and cognitive psychology were also new concepts (Black & Mehta, 2012). This is surprising, given that all of the A-level specifications feature both topics, but perhaps

reflects students' difficulties in perceiving psychology as a science or simply that sub-topic areas are covered that are not on the A-level specifications and, therefore, perceived as new. Mercer et al. (2013) report that psychology can be perceived by male students as a 'sort of' science, with expected content largely relating to topics such as emotion. If there is an issue of students failing to perceive psychology as a science then psychology degree programmes face the challenge of revising this perception as part of the transition experience.

An additional challenge within the pre-tertiary psychology curriculum relates to helping students to develop an up-to-date understanding of the subject. Morrison (quoted by Jarrett, 2010) remarks 'there's a lack of faith in some of what's taught at A-level. A lot of it is textbook stuff... going to be out of date and behind the latest research' (p.715). Whilst there is currently quite a large element of historical psychological perspective within the specifications, the boards did attempt to introduce more recent research into the 2008 specifications. However, the vast majority of psychology teachers do not have free access to journals and, therefore, even if the specifications allowed it, would struggle to provide their students with current research in the way that universities can. This may mean that students are experiencing a somewhat dated view of psychology at level three, which gives them a distorted view of the discipline and so false expectations prior to commencing their degrees. It is hoped that this concern may be addressed to some extent by revisions to the A-level specifications in 2014. There may be a further opportunity here for collaboration between the two sectors, with university psychology departments offering their pre-tertiary colleagues access to research. The British Psychological Society's (BPS) *Research Digest* is also a useful resource which can be used within the pre-tertiary psychology community to raise awareness of topical issues in psychological research.

Psychology A-level has been criticised

more generally for failing to develop student transferable skills and relying on students' ability to rote learn. Whilst A-level examinations aspire to assess critical thinking through the 'Assessment Objective 2' or 'AO2' marking criteria, the understanding of critique at this level is somewhat different from that expounded by university lecturers. For example, rote learning three strengths and weaknesses of a piece of research is usually sufficient to capture good 'AO2' marks, whereas at undergraduate level, tutors can be frustrated by students' inability to show genuine evaluative and analytical critique. Green (2007), an A-level examiner, criticises the 'cookbook' approach to teaching where the textbooks tell students and teachers what is necessary to pass the exams at the expense of ignoring important evaluative and analytic skills, which are highly valued at university. He does, however, acknowledge that some A-level candidates are 'absolutely brilliant' and demonstrate an 'awareness that the material does not need to be just learnt but understood' (p.611), and it may be that at least some of these candidates are those who will go on to study psychology at university. However, for those following the 'cookbook' approach, the lack of emphasis on critical evaluation and analysis in A-level psychology may well provide poor preparation for tackling the subject at degree level. This differing approach to critical evaluation in the pre-tertiary compared to the HE psychology curriculum is likely to be confusing for students, and lecturers in universities may be well advised to make the differences explicit early in the undergraduate psychology programme.

Jarvis (2011) agrees with Green on the issue of pre-tertiary psychology and its ability to develop students' transferable skills. He suggests that pressures of league tables have led to teachers being strategic in their preparation of students for the examinations, perhaps at the expense of 'non-assessed transferable skills'. In particular, he argues that pre-tertiary psychology may not foster

essay writing skills in the way that some other subjects do. This is in part due to curriculum changes which have reduced the amount of extended prose within the A-level. These skills can directly support the transition process for students as many assessments in universities are essay based, both for exams and coursework. Therefore, lacking these skills can increase the challenges faced by students experiencing transition. One of two responses is required. Either the level three curriculum needs to include extended writing and other transferable skills, which places a responsibility on the examination boards to find ways of reliably and validly assessing them, or university programmes need to take into account students' lack of exposure to such assessments, and support their students in developing the necessary skills, rather than presuming that they already have them.

### **Psychology teachers**

Teachers in the pre-tertiary sector are themselves aware of the need to support skills training in their students; Rowley and Dalgarno (2010) found that teachers were frustrated that the A-level course was so content heavy. When the specifications were changed in 2008, and teachers were required to teach fewer modules, this did not actually decrease the course content as those modules were required to be taught in greater depth. Having increasingly limited teaching time means there is little flexibility within the syllabus and teachers are forced to focus on curriculum content and assessment, rather than delivering skills to aid a smooth transition to university.

There may also be issues for some teachers in relation to their own understanding of psychology, and particularly its more traditionally scientific content. Qualitative feedback from the students in Rowley et al.'s (2010) study suggested a difference in teaching quality with some teachers having delivered the statistics and research methods aspects of the syllabus extremely well and others less so. This would suggest the need



for more continuing professional development on teaching statistics to be made available to teachers.

Maras and Bradshaw (2007) conducted a survey of A-level teachers, finding that 62 per cent of the teachers agreed or strongly agreed with the statement that 'psychology is a science', with just three per cent disagreeing. However, 28 per cent remained neutral on the question of whether psychology was a science, despite it having been designated as a science subject at A-level in 2006. Rowley and Dalgarno (2010) followed up on this research following the introduction of the *How Science Works* element to the psychology specifications in 2008 and found a change in perspective regarding the scientific status of the subject, with 87 per cent of the teachers now agreeing that psychology was a science. Some (but not all) pre-tertiary psychology departments may also have been moved from the humanities to the science sector of their school or college, which in itself may have resulted in a shift in their perception of the subject. The perception of teachers is important in terms of transition because teachers will influence their students' views, and therefore expectations, of the subject. Rowley and Dalgarno (2010) also found that many teachers agreed that students should get plenty of practical experience and agreed with the importance of learning how to apply statistics to analyse the data.

However, Smith (2010) suggests that the reclassification of psychology as a science subject has done little to improve the preparedness of students for undergraduate study. Smith suggests that this may be due in part to the failure of some schools to fulfil the criteria set by the Qualifications and Curriculum Authority (QCA) for science subjects to employ subject specialists. Conway and Banister (2007) raise the issue that 'many' of the people teaching psychology in schools and colleges do not have degrees in psychology. However, Rowley and Dalgarno (2010) found that whilst 29 per cent of the teachers they surveyed who

were teaching in schools did not possess an undergraduate degree in psychology, this compared to only three per cent of those teaching in colleges/sixth forms. Thus a majority of teachers in both pre-tertiary sectors have a subject-specialist background; however, for those who do not, or are seeking updating, obtaining appropriate training within the school sector is becoming increasingly difficult, leading to calls for government intervention and policy change to support increased provision (Ansell, 2013). There are very few psychology-specific postgraduate certificate in education (PGCE) courses available and these numbers have been cut recently, making it difficult for psychology graduates to qualify as teachers within their own discipline. There are also no bursaries available for psychology PGCEs as it is not considered a priority subject, adding a further barrier to training. The impact of the subject specialism (or lack of it) on level three teachers and their students merits further research, and, if found to be detrimental to students' achievements, continuing professional development will need to be provided to teachers to help address the deficits.

There is widespread consensus over the need for provision of conversion courses for teachers with a non-psychology background as well as subject-specific continued professional development for both subject and non-subject specialists. To some extent, this is already in place. The Association for the Teaching of Psychology (ATP) holds an annual conference, and both the ATP and the ATP-Scotland hold continuing professional development events aimed specifically at their members in the pre-tertiary sector; both types of event include a mixture of sharing good practice in terms of teaching and learning and the opportunity to update on current research. The National Science Learning Centre (2013) also offers conversion courses for non-subject specialists, and some universities are offering Master's courses to facilitate improved subject-specialist teacher training within psychology. Jarvis (2007) suggests that

there may also be a role for local BPS regional branches to help integrate psychology teachers more into the psychology community, perhaps by helping to facilitate opportunities for collaborative research.

Rowley and Dalgarno (2010) argue that statistical content may be particularly difficult for non-specialist psychology teachers. A-level teachers who lack confidence about statistics could in turn pass this on to their students. There is an opportunity, then, for universities to offer support to pre-tertiary teachers who may be less confident with teaching statistics. Conway and Banister (2007) and Trapp (2007) suggest that more university-based resources and training for teachers would not only help those who are not qualified in psychology but would, in turn, help with transition, as teachers would have increased awareness of the expectations of their university colleagues, which could then be communicated to pre-tertiary students. This could be on a local level, or nationally by developing podcasts or short videos for use in class, for example. Enhancing pre-tertiary teachers' understanding of psychology is particularly important because undergraduate students may have limited understanding and unrealistic expectations of psychology degrees based on their teachers' knowledge and beliefs.

### **Preparation of students**

Students themselves, despite the reported perceptions of their teachers and lecturers, are generally more satisfied with A-level psychology as a preparation for degree-level study than might be expected from this discussion. In terms of preparation for HE, Black and Mehta (2012) found that 66 per cent of undergraduate students felt that A-level had prepared them well or very well for university, but this was compared to only 10 per cent of the lecturers questioned. When asked which parts of the A-level specification the students had found irrelevant, 68 per cent responded that there were no irrelevant topics; the rest of the answers were so broadly spread as to make no one answer

score above four per cent, suggesting that there is no consensus amongst students regarding irrelevant content at A-level. Black and Mehta do not clarify at which stage in the undergraduate degree students were asked these questions, and it may be that their perception of the subject might alter as they progress from first year through to final year.

Rowley et al. (2010) investigated students' perceptions of academic expectations and experiences on a single honours psychology undergraduate degree course, comparing those who had studied psychology at A-level and those who had not. They surveyed the students three weeks into their course and again at the end of their first semester. They found that students who had studied A-level psychology were more likely to say they had been well prepared to study psychology at both time points. They were also more likely to agree that their pre-university course had given them a good grounding for their degree course.

Psychology is not the only subject to face challenges with regard to the extent to which an A-level acts as solid preparation for university study. Ballinger (2003) examined the transition issues facing students studying A-level English literature going on to study the subject at undergraduate level. She observed several A-level English literature classes, and concluded that the gap between A-level and degree was not as large as some of the students had led academic staff to believe. She also noted that there were clearly many similarities between A-level teaching and that at first year undergraduate level, although students were not afforded as much guidance and support towards their exams and assignments at university as they were at A-level. Ballinger comments: 'Teaching is never easy and unchallenging, but reflecting upon our own teaching practice and the extent to which it fulfils students' needs at the transitional stage is essential in ensuring that they have a positive experience of higher learning' (p.107).

Ballinger's observation that the gap between A-level and degree was not as large as some students had led them to believe is worthy of further attention, as research has shown that over the summer holidays students do forget a substantial amount of information that they have learned throughout the previous academic year (Kerry & Davies, 1998; Cooper et al., 1996). This has clear implications in psychology, as students who have been well-versed in research methods and ethics and the fundamentals of psychology may appear less competent due to knowledge lost over the summer holidays. This, alongside possible teachers' preferences about which parts of the syllabus are taught and emphasised, may in part explain why students claim that statistics, cognitive psychology and biopsychology are novel when they enter university (Black & Mehta, 2012). A pre-university assignment to be completed over the holiday may be a way of helping to minimise this loss of learning, as might introductory summer schools, and these methods could also be useful for students who have not previously studied psychology. This approach has been trialled with chemistry students at Bristol University, who developed a week-long maths summer school workshop aimed at students without A-level maths. They have found a massive improvement in algebra and calculus skills which has translated into around seven per cent improvement in year one physical chemistry marks. Similarly, at Loughborough University, a first-year introductory module has been designed specifically to 'mesh' the first-year undergraduate learning with previous experience at A-level. The psychology education community may have much to learn from other disciplines with regard to support students through transition.

### **Moving forward**

Much is changing in pre-tertiary education, and the future of psychology A-level is uncertain at the time of writing (BPS, 2013). New A-level specifications are expected in time

for teaching in September 2015, and it can be hoped, perhaps, that the revisions will facilitate the development of transferable skills, including critical thinking, research methods and extended writing, that might ease the transition experience for students progressing from psychology A-level to psychology degrees.

Meanwhile, the HE psychology community could be taking action to bridge the transition gap from their side. Trapp (2007) suggests that university psychology departments should be more creative in how programmes are designed to encompass the wide range of pre-tertiary psychology experience that the students have. This would require universities to be flexible enough to interest and motivate students who may have had up to four years prior knowledge of psychology as well as those coming onto the course with no prior knowledge (Trapp, 2007). A report from the Higher Education Academy (HEA) on *The Future of Undergraduate Psychology in the United Kingdom* (Trapp et al., 2011) found that HE staff need to be more aware of what skills students possess on arrival at university, including existing knowledge and their needs and expectations. A survey conducted for the report showed that 57 per cent of respondents from the HE sector either strongly or partially agreed with the statement the 'Given many students entering psychology higher education have prior knowledge of psychology, the relationship between pre-tertiary and tertiary psychology education is unsatisfactory' (p.49). Addressing these issues within the context of psychology in HE will involve an innovative approach on the part of academics and course developers (Trapp et al. 2011). The report recommends that there is a need for a 'genuine and concerted dialogue between staff at HEIs, pre-tertiary exam boards and teachers'.

Communication across the sectors has been recognised as crucial for supporting transition in a range of disciplines. The HEA Centre for Bioscience (2008) transition guidelines recommend that institutions accu-

rately portray any information about an institution; promote good communication between schools and colleges and HE; and provide students with a smooth transition, which includes an understanding of previous learning experiences. Likewise, the HEA geography, earth and environmental sciences (GEES) transitions special interest group (Miller & Brace, 2012) also reported a greater need for communication between schools, colleges and the HE GEES discipline community. They also comment on complaints about poor study skills, and have highlighted the importance of social transition for students as well as academic transition.

The Royal Society of Chemistry (2008) produced a flyer, *Easing the School-to-University Transition*, that maps out the different transition programmes run by universities across the country. The University of Warwick, for example, has forged links with local schools to promote contemporary science to pre-university students via experimental research, publication of a science review and a biennial national conference. Each academic year, they also offer six work experience placements of one week's duration for students aged 16 and over who wish to learn more about what life as a research scientist is like.

Within psychology, the requirement for cross-sector dialogue has in some part been addressed by a BPS-commissioned two-day retreat at Chicheley Hall which brought together representatives from schools, colleges and HE to discuss the future of A-level psychology (BPS, 2013). The HEA is running a series of events, 'tackling transition in psychology', where teachers and lecturers in different parts of the UK are being brought together to discuss possible solutions to the issues of transition. The HEA has also commissioned a project looking at statistics teaching within university psychology courses, as well as other subjects, with a particular emphasis on supporting students through transition with regard to mathematical and statistical learning, to be published later in 2013. Meanwhile, several A-level

examination boards are consulting with both pre-tertiary and academic psychologists with regard to the forthcoming specification revisions.

There are also examples of existing collaboration between university and pre-tertiary psychology providers. For example, Nottingham Trent University have a scheme whereby pre-tertiary teachers and university lecturers can shadow each others' job roles (Jarrett, 2010). The Staffordshire Psychology Network was set up by school and college psychology teachers in Staffordshire, with the initial support of the Local Education Authority, but also involves invited representation from Staffordshire University and the University of Derby. These examples of good practice could be used as models for cross-sector collaboration elsewhere in the UK.

There are good arguments for involving students themselves in supporting transition. University College London (amongst others) has introduced a peer-mentoring scheme for all first year students to make transition smoother from both an academic and social perspective. The student mentors, who are second years and above, are chosen from the same programme of study so that they can provide better support. This type of peer support can make all the difference. Reddy (quoted in Jarrett, 2010) highlights the importance of having an environment where students can feel 'secure, valued and confident... university can feel emotionally cold after the warmth and familiarity of school' (p.716).

Clearly there are many issues with transition. The way forward certainly seems to be to have increased dialogue between the pre-tertiary and HE sectors so that both sides have greater awareness of the demands and issues that both encounter. Although some issues are not easily resolved, such as preparing students for being independent learners, increased collaboration with universities so that students have more opportunity to understand the demands and realities of studying at university, prior even to applying, can only aid transition.

Whilst many academics may not know the content of the A-level specifications, it is likely to be a similar picture with schools. The number of universities within the UK is large, and the courses diverse in nature, so equally it is difficult for teachers to offer the support necessary to aid transition. However, closer collaboration with local universities can help improve clarity on both sides.

Smith (quoted in Jarrett, 2010) recommends engaging A-level students in research at their local university. This idea could be extended so that first-year A-level students could potentially participate in third-year undergraduate research projects. This could be beneficial on both sides – for the undergraduate students to provide them with participants and for the A-level students to have the opportunity to participate in research, get an idea as to what they could do at university and have the chance to talk with the undergraduate students about their experience on their degree course.

## **Conclusions**

There are a multitude of issues associated with the transition from pre-tertiary psychology courses into psychology degrees. Some of the challenges arise as students need to adapt to different approaches to learning, teaching and assessment, and need to develop a new skill set. Some of the challenges are personal and financial. There are also possible problems associated with students' understanding of psychology as a scientific discipline, and with the potential for repetitive content during the first year of an undergraduate degree. There is a responsibility for pre-tertiary psychology teachers to endeavour, within the bounds of the specifications, to prepare students for university, but to some extent, this can only happen if the HE sector are willing to collaborate and inform their pre-tertiary colleagues and

exam boards about what they need to see. Likewise, there is an obligation on university providers to take into account the prior learning experiences of students entering their courses, but this can only be achieved through dialogue with the pre-tertiary sector to facilitate their understanding of those prior learning experiences. Certainly undergraduate curricula need to be designed with these in mind.

Further research would be helpful with regard to the impact of level-three psychology teachers' qualifications on their students' achievements and level of preparation for HE. There is a clear role for both universities and the BPS to increase the continuing professional development opportunities available to non-specialist teachers if indeed lack of a background in psychology is found to be detrimental. Likewise, increasing the number of places for specialist teacher training provision in psychology may be required, especially given the recent growth in popularity of the discipline.

There is an urgent need for co-operation, collaboration and dialogue between pre-tertiary teachers, HE lecturers, level three examination boards and teacher training providers, which should also engage students, to find new ways of working together to create a smooth transition. Ultimately, students have the best insight into their experience of transition; involving them as partners in discussions about possible reforms and interventions can only increase our understanding of the issues and facilitate innovative solutions.

In the current political and financial climate, there has never been a better time for pre-tertiary and HE sectors, including students in both sectors, to work together and support each other to ease the transitional journey and to 'bridge the gap'.

## About the Authors

### Helen J. Kitching

University of Sussex,  
School of Psychology,  
Pevensey Building,  
University of Sussex,  
Falmer BN1 9QH.

## Correspondence

### Helen J. Kitching

Email: [helenjkitching@gmail.com](mailto:helenjkitching@gmail.com)

### Julie Hulme

Discipline Lead for Psychology,  
The Higher Education Academy,  
Innovation Way,  
York Science Park,  
Heslington,  
York YO10 5BR.

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