

# Student representations of psychology in the UK

Philip Banyard & Karen Duffy

---

*Psychology is a popular choice for UK students in their secondary school curriculum. Policy makers and elite universities, however, express concern about the subject. The British Psychological Society (2013) commissioned a detailed study of the provision of school curricula in psychology and as part of this work a survey of students was conducted. There were 870 responses to an online survey which used similar questions to a previous survey in 2001. The quantitative data showed a consistent set of responses across the two surveys and confirmed the high regard for the subject held by students. The student representation of psychology in the UK is of a subject that is interesting, engaging, challenging and relevant. The risk for the continued high regard of students for this subject comes from a bias towards historical account in the syllabuses, the attitude to the subject of policy makers and the advice given to students about subject choice by universities.*

**Keywords:** *Assessment; eminent psychologists; learning for the test; psychological literacy; psychology curriculum.*

**P**SYCHOLOGY has the potential to create a sense of wonder in anyone who studies it. It is the personal science that explores how we make sense of the world, ourselves and others. It is about the gaps between sensation and perception. It is about the wonder of being alive. Could there be another subject that is more engaging, more relevant or more personal? But is this how our students view it? Do the demands of formal assessment take away that sense of wonder and make it just another dull educational activity?

In the UK about 300,000 students each year continue their schooling till the age of 18 and graduate by taking their General Certificate in Education (GCE) examinations which are nationally regulated qualifications. As part of their GCEs, students commonly take three or four subjects and their results in these examinations are the main selection criteria for university entrance. Of the subjects that students can choose from only English, mathematics and biology have more candidates than psychology (JCQ, 2013). The rise of psychology as a choice within a very traditional educational system created and continues to create tensions and controversy.

The first GCE examinations in psychology were offered in the early 1970s but restricted to just a few schools due to the perceived adult nature of the subject matter. Once the syllabus was released for general use the growth of the candidature was remarkable (Radford & Holdstock, 1996). This growth has been demand led by students who are allowed to make their own subject choices, though, of course, these are framed by availability. The early popularity of psychology put pressure on schools to introduce it to their curriculum and it is now available as a choice for the majority of students. One key impact of this has been that university applications for psychology have also dramatically increased in the UK. Psychology is now the third most commonly studied subject at university behind law and business. There are currently over 77,000 undergraduate students in the UK which is more than double the number of 10 years ago (Trapp et al., 2011).

The growth in demand for the subject has not been symmetrical across the demographic. The proportion of males taking a GCE in psychology currently stands at 25.7 per cent of the total entry and they perform less well than females with only 9.6 per cent

obtaining a grade A or A\* compared with 19.5 per cent of females (JCQ, 2013). The genderisation of psychology in the UK has attracted a lot of speculation (for example, Radford & Holdstock, 1995; Sanders et al., 2009) but it is not fully understood.

The growth in demand for GCE psychology has not always been positively received and there have been frequent comments in the press claiming that it is an easy option (Jarvis, 2011). For example, John Dunford, the general secretary of the Secondary Heads Association, claimed to BBC news that children were choosing subjects they thought were easier and he identified psychology as one of these subjects (BBC, 2003). The British Psychological Society (BPS) made a strong rebuttal of the claims (Morris, 2003) but the view of psychology as a non-traditional and hence less valid subject remains. The elite universities in the UK are known as the Russell Group and there is concern that the negative view of GCE psychology view informs the selection process of these universities (*Daily Telegraph*, 2011; Russell Group, 2011). The Russell Group have identified a core group of A-levels which they refer to as facilitating subjects and which they advise students to take if they wish to keep their degree options open if they wish to apply to Russell Group universities (Russell Group, 2011). Psychology does not feature as a facilitating subject and there is pressure on schools to move students away from psychology now that a further league table has been introduced by the UK Government that records performance on these facilitating subjects.

It is possible to make a robust rebuttal of the suggestions that psychology is an easy option. Evidence about the relative difficulty in achieving good results in particular subjects is systematically collected and commonly shows that psychology is at least as taxing as other equivalent subjects. For example, a comparability study by the Qualifications and Curriculum Authority (QCA, 2008) using expert judgements found that the assessment of psychology and biology at

GCE were of equivalent difficulty. Using a different method the Curriculum Evaluation & Management (CEM) Centre at Durham University monitors relative achievements in different A-levels. Using performance from previous national examinations as an indicator of ability, analyses are carried out to compare the average performance at these assessments for those students achieving a pass at GCE. This analysis places psychology around the middle of ranked subjects (Coe, et al., 2008).

### **Psychological literacy**

One consequence of the growth in psychology courses at all levels is the increasing proportion of the population of the UK who have taken a programme of study in the subject. It is estimated that for the last 15 years over 13 per cent of each cohort of 18-year-olds have taken a qualification in psychology (BPS, 2013) and if you add in the number taking psychology as part of their courses in health and social care, for example, then a picture develops of a population with a growing awareness of the basic ideas of psychology. For many students this is the only psychology course they study so these school-based courses are in a position to have a profound effect on the nation's understanding of psychological concepts.

The term 'psychological literacy' was first used by Boneau (1990) in a study to identify key concepts in psychology. Subsequently McGovern et al. (2010) used the term '*psychologically literate citizens*' to refer to the outcome of a degree in psychology that results in students becoming '*critically scientific thinkers and ethical and socially responsible participants in their communities*' (p.10). It is clear that in the UK the most common qualifications that students finish their studies in psychology with are schools-based such as the GCE. The psychological literacy of the UK will, therefore, be defined by these courses.

### **Assessment**

One of the challenges for teachers striving to create interesting and challenging courses is

the style of formal assessment for the GCE. Many GCE assessments are still conducted using traditional (i.e. pre-digital technologies) techniques, and focus on traditional academic skills. The origin of these techniques in UK education can be traced back through the University of Cambridge Local Examinations Syndicate (UCLES) to 1858 when a group of academics were invited by some Durham schools to develop assessment techniques for their pupils. The lessons were observed in order to capture how the pupils were being taught. Tests were devised to match the teaching and learning that was taking place (Banyard, 2010). The techniques for current GCE examinations are largely the same today even though the style of teaching and learning has moved on dramatically. A major change concerns digital technologies which have transformed the way we access information, the way we construct written work and even the way we think. Today's students are digital natives (Prensky, 2001) and their assessments do not reflect their new skill set.

A second issue of concern with assessment has been the drive towards tests that are easy to administer and easy to teach to. This approach makes it strategic to 'teach to the test' (Halonen et al., 2003) and in so doing minimise the more sophisticated and subtle aspects of student learning. The strategic approach to assessment can influence student learning (Conner-Greene, 2000) as it becomes strategic for the student to focus on the text and, therefore, not engage in more advanced kinds of thinking and learning because the assessments simply do not demand it (Bol & Strage, 1996).

### **Student perceptions of psychology**

The teaching of psychology in schools continues to attract mixed opinions from the press and from policy makers. But what do the students think of it? Surveys of psychology undergraduates (Linnell, 2003; Rowley et al., 2008) have revealed broadly positive attitudes towards GCE psychology, with those having taken the course judging themselves

better prepared for degree-level study than those without (Rowley et al., 2008), and over 90 per cent of respondents in the Linnell survey reporting that GCE psychology helped with their study skills and subject understanding. Interestingly, modelling the relationship between pre-degree grades and degree outcome (e.g. Betts et al., 2008) has shown that having a GCE qualification in psychology is not related to undergraduate attainment, and for those who take the course their final grade does not relate to subsequent attainment either.

Psychology is often perceived in the UK as a soft option (see above) but is this how students find it? The experience of the learner is a valuable addition to an analysis of the subject as it is taught. In the survey reported here we collected perceptions of the perceived difficulty, interest and relevance of psychology compared to other subjects that they had studied. This allowed us to examine whether student perceptions of the subject match the view of observers and commentators.

It is important to contextualise this data by exploring the combinations of subjects that students take at A-level. If psychology is, in fact, a soft option then we would not expect it to feature alongside traditional subjects such as biology, chemistry and history, for example. However, an analysis of A-level choices for all students who applied to study at a UK university during the 2010/11 application cycle and who obtained at least one A-level (Rodeiro & Sutch, 2013) showed the prominence of A-level psychology in mainstream choices. For example, of all students accepted onto university subjects allied to medicine, 25.3 per cent of them had completed an A-level in psychology and for degrees in biological sciences the proportion was 49.5 per cent. Students commonly take three subjects at A-level and analysis of popular combinations of A-levels finds that psychology features in the top 20 combinations of subjects with, in particular, biology and chemistry, English literature and history, and biology and mathematics (Rodeiro &

Sutch, 2013). These data indicate that students place psychology alongside these mainstream subjects and our comparison data below should be viewed in this context.

Student perceptions of the content of psychology are framed by the material they are taught, but do these perceptions then match with the view that the profession has of itself? Research into student misconceptions of psychological ideas (Gardner & Dalsing, 1986; Kowalski & Taylor, 2009) shows that ideas about psychology are commonly not based on evidence and often resistant to challenge. The measurement of these misconceptions, however, has been shown to be influenced by the structure of the questions and the language that is used (Hughes, Lyddy & Kaplan, 2013). In this study we chose to look at the judgement of eminence as an indication of student perceptions of psychology.

Who are the psychologists who are regarded as most eminent? A review of eminence using judgements from people in the profession (Haggbloom et al., 2002) gives us psychologists' view of themselves. Another measure of eminence and one that will have greater impact on student perceptions is the frequency of citation in textbooks (Gorenflo & McConnell, 1991; Griggs & Jackson, 2007; Griggs & Proctor, 2002). Our interest was to see who is judged to be eminent by UK students in 2012 and how that compared to their judgement in 2001, as well as to judgements by the profession.

The BPS commissioned a report into the future of GCE psychology (BPS, 2013) which built on previous reports on this issue (BPS, 1992; McGuinness, 2003). As part of this report research was commissioned into the experiences of teachers and students of this qualification. We report here the student survey.

## **Method**

The survey of GCE students in the UK was based on a previous survey carried out also for the BPS in 2001 (McGuinness, 2003). Similar questions were used to allow comparison and to track changes over a 10-year

period. The survey was created online at SurveyMonkey and responses were collected over a period of one month.

## **Sample**

The participants were recruited through e-lists of teachers of psychology and through the online facility psychexchange (now available at [www.resourcd.com](http://www.resourcd.com)). This sampling technique reached teachers of psychology who then forwarded the link to their students. The technique was similar to that used by the 2001 survey which also collected data online. There were 870 responses of which 75.5 per cent were female and 24.5 per cent male, which reflects the gender split observed in examination entries at GCE. It also mirrors the demographics of the 2001 survey (males 26.7 per cent, females 73.3 per cent,  $N=426$ ). The mean age of respondents was 17.2 years (17.5 in 2001) and the standard deviation was 0.79 (3.23 in 2001).

## **Questions**

The survey was brief in order to maximise participation and most of the questions were taken from McGuinness (2003). The questions asked for comparison of their psychology studies with other subjects they had studied (see Appendix A for the full questionnaire). Respondents were also asked to reply to four free text questions:

*The things I like BEST about my psychology course are...*

*The things I like LEAST about my psychology course are...*

*What do you think would make the psychology course better?*

*What advice would you give to a friend who was thinking of studying psychology?*

Finally, in order to get a picture of their representation of psychology, respondents were asked:

*Who do you think are the THREE most important or influential psychologists?*

## **Analysis**

Descriptives of the comparison questions are presented.

**Results**

Tables 1 to 8 show the percentage responses to the questions in 2012 and 2001. The results show a stability in response patterns over the two times. Tables 2 to 5 show the responses of comparison to other subjects being studied. Table 6 reports student expectations of the

course, and Table 7 reports the indication to continue further study in psychology confirming the response shown in Table 1 to the question about career ambition. Table 8 reports how much students endorse their original choice to study psychology.

**Table 1: Why did you choose to study psychology?**

	2012	2001
I want a career or further study in psychology	23.0%	18.5%
It sounded interesting	61.9%	64.1%
It is something different to study	8.7%	11.0%
Other	6.5%	6.4%
<i>N</i>	864	454

Note: There were more options than reported here but the others attracted few responses.

**Table 2: Compared to other subjects I am studying or have studied psychology is**

	2012	2001
much more interesting	47.0%	44.8%
a bit more interesting	29.1%	35.4%
about the same	13.7%	15.3%
a bit less interesting	7.4%	3.3%
much less interesting	2.8%	1.2%
<i>N</i>	868	454

**Table 3: Compared to other subjects I am studying or have studied psychology is**

	2012	2001
much more relevant to my life	34.8%	31%
a bit more relevant to my life	36.3%	38%
about the same	15.9%	21%
a bit less relevant to my life	10.1%	8%
much less relevant to my life	2.8%	2%
<i>N</i>	864	454

Table 4: Compared to other subjects I am studying or have studied psychology is

	2012	2001
much more difficult	14.9%	15.4%
a bit more difficult	34.9%	27.5%
about the same	33.3%	30.2%
a bit less difficult	14.1%	21.6%
much less difficult	2.9%	5.3%
<i>N</i>	866	454

Table 5: Compared to other subjects I am studying or have studied psychology is

	2012	2001
much more work	25.3%	22.9%
a bit more work	36.3%	26.7%
about the same	30.8%	38.1%
a bit less work	6.5%	10.4%
much less work	1.2%	2.0%
<i>N</i>	867	454

Table 6: My psychology course is

	2012	2001
very much as I expected	19.7%	24.2%
fairly much as I expected	52.1%	50.7%
different to what I expected	28.2%	25.1%
<i>N</i>	866	454

Table 7: Do you want to study psychology further when you have finished this course?

	2012	2001
Yes	30.6%	35.9%
Maybe	36.8%	39.0%
No	32.6%	25.1%
<i>N</i>	863	454

**Table 8: I am glad I chose to study psychology.**

	2012	2001
Strongly agree	50.9%	42.7%
Agree	31.7%	30.0%
Neither agree or disagree	10.6%	20.3%
Disagree	4.1%	4.8%
Strongly disagree	2.7%	2.2%
<i>N</i>	864	454

The request to name three important or influential psychologists attracted a total of 2278 responses. Table 9 shows the top 15 responses along with the proportion of respondents naming them. Data from 2001

are also presented (*N*=1009). Also included are the ranks in the list of 100 most eminent psychologists of the 20th century (Haggbloom et al., 2002) and the citation ranks in text books (Griggs & Proctor, 2002).

**Table 9: Important or influential psychologists.**

2012 rank	Psychologist	2012 % of respondents	2001 % of respondents	2001 rank	APA rank*	Citation rank**
1	Freud	78.5	83.8	1	3	1
2	Milgram	23.0	47.9	2	46	24
3	Zimbardo	19.1	36.3	3	-	-
4	Bowlby	17.5	5.9	9	49	-
5	Skinner	17.4	4.5	12	1	3
6	Bandura	16.7	22.9	4	4	8
7	Pavlov	10.3	3.0	15	24	6
8	Loftus	10.0	7.1	7	58	16
9	Ainsworth	8.4	<1.0	-	-	-
10	Rosenhan	5.1	<1.0	-	-	-
11	Asch	3.7	2.1	17	41	-
12	Baddeley	3.0	<1.0	-	-	39
13	Baren-Cohen	2.9	5.4	9	-	-
14	Money	2.6	<1.0	-	-	-
15	Watson	2.5	<1.0	-	16	12

\* Haggbloom et al (2002); \*\*Griggs & Proctor (2002)

We present here data from two of the free response questions. The further two questions attracted responses very similar to the first two questions and are not reported here. There were 819 responses to the request to identify *'The things I like BEST about my psychology course...'* The most common area for comment was the general nature of the learning experience with mentions of it being interesting (N=301), different to other areas of study (N=203) and being enjoyable and fun (N=45), for example, *'It's interesting and leads to fun debates. It's challenging and requires you to think, even after you leave the classroom'*, and *'The variety of different topics is interesting and it never gets boring'*. Many commented on the impact of their teacher (N=76), for example, *'The teachers are fantastic. Very interesting people, and engaging our minds.'* Responses also focused on the connection of psychology to their own experiences with mentions for everyday life (N=201), relevance (N=59) and the applications of the subject (N=102), for example, *'Learning the multiple theories of behaviour and how they contrast with one another, it helps me understand myself and other people better'* and *'It's really interesting and I have really engaged with the topics I've studied. I feel that I can apply what I've learnt in everyday life and not just in the classroom.'* Individual curriculum areas were identified such as biological psychology (N=22) and social psychology (N=43) and the greatest interest was shown in abnormal psychology (N=72), for example, *'The topics that cover abnormality or psychopathology, such as Eating Disorders and Phobic Disorders.'*

There were 804 responses to the request to identify *'The things I like LEAST about my psychology course...'* The most common area for comment was the structure of the assessment and the impact on the learning. There were comments about the examinations (N=155), the way they are marked (N=40) the quantity of information (N=118) and the necessity to remember material (N=171). Examples of these points are *'The content is very heavy and feels more like a memory test in the exam'* and *'Having such a large amount of infor-*

*mation to learn and knowing only a small section of this information is tested.'* There were a few negative comments about the course being boring or dull (N=31) though these were balanced by responses that said there was nothing in the course to dislike (N=29), for example, *'It is all theory and written work, it can be dull at times'* and *'Nothing. It's hard work but I enjoy it.'* There were comments about teachers (N=24), for example, *'The teacher's methods of teaching are extremely poor as is their attitude to our enthusiasm.'* The main curriculum area to attract negative comments was research methods (N=122), for example, *'It can be very challenging, especially research methods.'*

## Discussion

Student perceptions give valuable evidence about the impact and effectiveness of psychology courses. Most remarkable in the findings is the robustness of the data from the 2001 survey. The responses to the first eight questions show very little change between the two data collection points despite big changes in the structure of the GCE qualifications during that time and substantial changes in the syllabuses. Such changes in response as there are show a hardening of attitude in favour of psychology (interest, relevance) and perception of difficulty and work required.

The endorsement of the subject as more interesting (78.1 per cent) and more relevant (71.1 per cent) than other subjects is dramatic and confirms the positive position of the subject in student perceptions. This popularity and endorsement of the subject has been maintained even though the numbers taking the course have doubled since the 2001 survey (McGuinness, 2003). This growth has taken place in the context of a reluctance by the UK Department of Education to support the training of specialist teachers of psychology (BPS, 2013). Despite this challenge to teachers and teaching students further endorse the subject by confirming that they are glad they chose the subject (82.6 per cent).



The comparison questions about the load of the course found that psychology was perceived to be more difficult (49.8 per cent) and required more work (61.6 per cent) than other subjects. These perceptions challenge the notion that psychology is an easy option and one that is not valued by students (*Daily Telegraph*, 2011; Russell Group, 2011) especially given the finding that the comparison subjects are likely to be mathematics, chemistry, biology, history and English (Rodeiro & Sutch, 2013). A question that arises from this but is not considered here is why the perception of psychology as an easy option has developed in the UK despite evidence to the contrary. One speculation is that the subject is not part of the traditional school curriculum and as such does not feature prominently in elite schools.

Students predominantly choose psychology because they believe it will be interesting (61.9 per cent) and the majority experience it to be much as they expected (71.8 per cent). Given the scientific content of the GCE courses and its place in the national curriculum as a science subject these responses are surprising. It indicates that students have made an informed choice about psychology and not chosen it because they believe it to be easy. The second most common reason for choosing the subject is a wish to continue studying it beyond school (23.0 per cent) and this firms up during the course to the point where the majority say that that they may wish to continue with it (67.4 per cent).

The responses to the open questions confirm the quantitative data. Students viewed psychology as interesting, challenging and relevant to their everyday lives. The main focus for negative responses was the assessment of the course and its impact on teaching and learning. Although it is not surprising for students to view assessment negatively it is the specifics of these comments, such as the importance of remembering detail and of not being able to show what they know and understand that stand out here.

The response to the question on eminent psychologists gives an interesting picture of student perceptions of psychology. The survey confirms the place of Freud, Milgram and Zimbardo as the key figures of student psychology in the UK, though their endorsement scores have all slipped since 2001. Freud appears high in the citation list and APA eminence list as well though his ideas rarely form a part of the UK undergraduate curriculum. Milgram likewise appears on the other lists though Zimbardo's eminence appears only to be a student perception. The surprising loss from 2001 to 2012 is Piaget, though the other two losses from the top 10 of 2001 (Piliavin, and Gardner & Gardner) are associated in students perceptions with one key study each and these studies are not so commonly studied in 2012.

The list, as is often the case with eminence lists, is dominated by men though for 2012 Mary Ainsworth has joined Elizabeth Loftus in the student list. This perception of psychology as male dominated does not reflect the current output of research or the student demographic. Women are not the only group missing from the list and concern about the choice of example studies in curricula led the BPS to recommend in its report:

All students should feel included within the content of psychology. To ensure that as many people are included as possible it is necessary to place special emphasis on cultural, social and individual diversity. (BPS, 2013, p.16)

Furthermore, the list is largely peopled with historical characters and shift between 2001 and 2012 has been towards older researchers rather than seeing the introduction of more contemporary work. For example, Skinner, Bowlby and Pavlov have all trebled their endorsements and Watson makes it onto the bottom of the list as well. Even the arrival of Ainsworth in the list adds to the historical rather than contemporary content. It may be that this perception of eminence does not reflect the content of the courses, but as presented here, the psychology curriculum appears to be stuck in time.

## Conclusions

Psychology has an established place in the UK school curriculum and has maintained a strong response from students since the start of this century. Students clearly hold the subject in high regard as shown by its popularity, by the combinations of A-levels they choose and also by their perceptions presented here. This high regard has been maintained over the last decade despite a range of negative representations of the subject being put forward by the press, the UK Government and by UK universities. This high regard is something to celebrate.

Alongside this celebration there are causes for concern. The programme of study at A-level appears to have a historical bias that is excluding new ideas and contemporary psychologists. A further cause for concern is the continuing challenge to the subject by educational institutions and the pressure on high performing schools to steer their students towards the 'facilitating subjects' as defined by the Russell Group and away from psychology.

The message from psychology to policy makers is that the student representation of psychology in the UK is of a subject that is interesting, engaging, challenging and

relevant. It is the personal science that contributes to the community beyond the restraints of school curricula and assessment. It is core curriculum.

## Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This paper was supported by the British Psychological Society who facilitated and provided expenses for academic meetings.

## The Authors

### Philip Banyard

Nottingham Trent University.

### Karen Duffy

Manchester Metropolitan University.

## Correspondence

### Philip Banyard

Email: phil.banyard@ntu.ac.uk

## References

- Banyard, P. (2010). Teaching the personal science: From impeccable trivia to the blooming buzzing confusion. *Psychology Teaching Review*, 16(2), 38–44
- BBC (2003). *A-level results break records*. Retrieved from: <http://news.bbc.co.uk/1/hi/education/3147675.stm>
- Betts, L.R., Elder, T.J., Hartley, J. & Blurton, A., (2008). Predicting university performance in psychology: The role of previous performance and discipline specific knowledge. *Educational Studies*, 34, 543–556.
- Bol, L. & Strage, A. (1996). The contradiction between teachers' instructional goals and their assessment practices in high school biology courses. *Science Education*, 80, 145–163.
- Boneau, C.A. (1990). Psychological literacy: A first approximation. *American Psychologist*, 45, 891–900. Available at: <http://people.auc.ca/brodbeck/4007/article12.pdf>
- British Psychological Society (BPS) (1992). *The future of A-level psychology*. Leicester: BPS.
- British Psychological Society (BPS) (2013). *The future of A-level psychology*. Leicester: BPS.
- Coe, R., Searle, J., Barmby, P. et al. (2008). *Relative difficulty of examinations in different subjects*. Durham: CEM Centre. Retrieved from: <http://score-education.org/media/3194/relativedifficulty.pdf>
- Connor-Greene, P.A. (2000). Assessing and promoting student learning: Blurring the line between teaching and testing. *Teaching of Psychology*, 27(2), 84–88.
- Daily Telegraph (2011). *Willetts: Universities should reveal A-level blacklists*. Retrieved from: <http://www.telegraph.co.uk/education/educationnews/8235920/Willetts-universities-should-reveal-A-level-blacklists.html#>
- Gardner, R.M. & Dalsing, S. (1986). Misconceptions about psychology among college students. *Teaching of Psychology*, 13(1), 32–34.

- Gorenflo, D.W. & McConnell, J.V. (1991). The most frequently cited journal articles and authors in introductory psychology textbooks. *Teaching of Psychology*, 18(1), 8–12.
- Griggs, R.A. & Jackson, S.L. (2007). Classic articles as primary source reading in introductory psychology. *Teaching of Psychology*, 34(3), 181–86.
- Griggs, R.A. & Proctor, D.L. (2002). A citation analysis of who's who in introductory textbooks. *Teaching of Psychology*, 29(3), 203–06.
- Haggbloom, S.J., Warnick, R., Warnick, J.E., Jones, V.K., Yarbrough, G.L., Russell, T.M., Borecky, C.M., McGahhey, R., Powell, J.L., Beavers, J. & Monte, E. (2002). The 100 most eminent psychologists of the 20th century. *Review of General Psychology*, 6(2), 139–152.
- Halonen, J.S., Bosack, T., Clay, S., McCarthy, M., Dunn, D.S., Hill, G.W. et al. (2003). A rubric for learning, teaching and assessing scientific inquiry in psychology. *Teaching of Psychology*, 30(3), 196–208.
- Hughes, S., Lyddy, F. & Kaplan, R. (2013). The impact of language and response format on student endorsement of psychological misconceptions. *Teaching of Psychology*, 40(1), 31–37.
- Jarvis, M. (2011). Defending the honour of psychology A-level. *The Psychologist*, 24(9), 674–75. Retrieved from: [http://www.thepsychologist.org.uk/archive/archive\\_home.cfm?volumeID=24&editionID=205&ArticleID=1913](http://www.thepsychologist.org.uk/archive/archive_home.cfm?volumeID=24&editionID=205&ArticleID=1913)
- Joint Council for Qualifications (JCQ). (2013). *A, AS and AEA Results, Summer 2013*. Retrieved from: <http://www.jcq.org.uk/examination-results/a-levels>
- Kowalski, P. & Taylor, A. (2009). The effect of refuting misconceptions in the introductory psychology class. *Teaching of Psychology*, 36(3), 153–59.
- Linnell, M. (2003). Second-year undergraduate psychology students: Views on their study of post-16 psychology. In C. McGuinness (Ed.), *Post-16 qualifications in psychology*. Leicester: BPS.
- McGovern, T.V., Corey, L.A., Cranney, J., Dixon, Jr., W.E., Holmes, J.D., Kuebli, J.E., Ritchey, K., Smith, R.A. & Walker, S. (2010). Psychologically literate citizens. In D. Halpern (Ed.), *Undergraduate education in psychology: Blueprint for the discipline's future* (pp.9–27). Washington, DC: American Psychological Association.
- McGuinness, C. (Ed.) (2003). *Post-16 qualifications in psychology*. Leicester: BPS.
- Morris, P. (2003). Not the soft option. *The Psychologist*, 16, 510–511. Retrieved from: [http://www.thepsychologist.org.uk/archive/archive\\_home.cfm/volumeID\\_16-editionID\\_99-ArticleID\\_609-getfile\\_getPDF/thepsychologist%5Coc03new.pdf](http://www.thepsychologist.org.uk/archive/archive_home.cfm/volumeID_16-editionID_99-ArticleID_609-getfile_getPDF/thepsychologist%5Coc03new.pdf)
- Prensky, M. (2001). Digital natives, digital immigrants. On the horizon. *MCB University Press*, 9(5), 1–6. Retrieved from: <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>
- Qualifications and Curriculum Authority (QCA) (2007). *GCSE subject criteria for psychology*. London: Ofqual. Retrieved from: [http://www.ofqual.gov.uk/files/qca-07-3465\\_gcsecriteriapsychology.pdf](http://www.ofqual.gov.uk/files/qca-07-3465_gcsecriteriapsychology.pdf)
- Qualifications and Curriculum Authority (QCA) (2008). *Inter-subject comparability studies*. London: QCA. Retrieved from: <http://webarchive.nationalarchives.gov.uk/+http://www.ofqual.gov.uk/1551.aspx>
- Radford, J. & Holdstock, L. (1995). Does psychology need more boy appeal. *The Psychologist*, 8(1), 21–24
- Radford, J. & Holdstock, L. (1996). The growth of psychology. *The Psychologist*, 9(12), 548–560.
- Rodeiro, C.V. & Sutch, T. (2013). *Popularity of A-level subjects among UK university students*. Statistical Report Series no. 52. Cambridge Assessment. Retrieved from: <http://www.cambridgeassessment.org.uk/Images/140668-popularity-of-a-level-subjects-among-uk-university-students.pdf>
- Rowley, M., Hartley, J. & Larkin, D. (2008). Learning from experience: the expectations and experiences of first-year undergraduate psychology students. *Journal of Further and Higher Education*, 32, 399–413.
- Russell Group (2011). *Informed choices: A Russell Group guide to making decisions about post-16 education*. London: Russell Group. Retrieved from: <http://www.russellgroup.ac.uk/media/informed-choices/InformedChoices-latest.pdf>
- Sanders, L., Sander, P. & Mercer, J. (2009). Rogue males? Approaches to study and academic performance of male psychology students. *Psychology Teaching Review*, 15(1), 3–17
- Trapp, A., Banister, P., Ellis, J., Latto, R., Miell, D. & Upton, D. (2011). *The future of undergraduate psychology in the United Kingdom*. York: Higher Education Academy. Retrieved from: [http://www.bps.org.uk/sites/default/files/documents/the\\_future\\_of\\_undergraduate\\_psychology\\_in\\_the\\_uk.pdf](http://www.bps.org.uk/sites/default/files/documents/the_future_of_undergraduate_psychology_in_the_uk.pdf)