Teaching the personal science: From impeccable trivia to the blooming buzzing confusion

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The argument presented here is that the teaching of psychology in the UK is focused on the learning of technical skills and is missing the opportunity to enthuse and inspire students in the personal science. This focus mirrors a general educational drive in the UK towards achievement at external examinations which are assessed by narrow cognitive tasks. The modern tools of education such as Virtual Learning Environments have largely been used to track and monitor students rather than to widen their ideas about learning. Assessments have likewise gravitated towards simple tests while also retaining the redundant task of the unseen essay. This paper considers these developments and discusses alternatives.

Keywords: *Assessment; Digital technologies; Education policy; Learning styles; Personalisation; Play; Teaching; Virtual Learning Environment; Web 2.0.*

PSYCHOLOGY 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?

And yet, somehow we have managed to create curricula that are worthy, technical and, frankly, dull. We seem to miss the bigger picture and lose the sense of wonder. In this article I will look at how we teach, what we teach and which tools we use to teach with and consider how we can reinvigorate the personal science and boost that sense of wonder in our students.

How we teach

The big idea in UK education at the moment is to personalise learning. For example, David Milliband, then UK Minister of State for School Standards outlined how:

> *'…personalised learning might become the defining feature of our education system; to provide an education to every child, which is tailored to their unique learning styles, motivations and needs.'* (Becta, 2005, p.1)

The development of personalised learning is not just a matter of making readjustments to curricula or pedagogic practice but requires a shift in the social dynamics and practices of all partners including learners (see Pollard & James, 2004). This vision of personalisation sees the learner as having more autonomy over what they learn and how they learn it.

> *'The foundation of a personalised education system would be to encourage children, from an early age and across all backgrounds, to become more involved in making decisions about what they would like to learn and how.'* (Leadbeater, 2004, p.16)

A brief reflection on the main vehicles of assessment in the UK, GCSE and A-levels, highlights that the ambition for personalisation does not match the reality. In fact the reverse is happening and autonomy and choice are continually being eroded from the learner. The measure of a school's success is recorded in terms of the performance of its learners at these national tests. The goals for each learner are, therefore, fixed – achieve as many examination passes as possible at the highest possible grade. Assessment has become more important than learning.

So what of this personalised learning? The rhetoric is still used but it refers not to the goals or the content of education but only how you chose to deal with those goals and that content (Banyard et al., in press).

The interesting distinction here concerns control, and hence power. The critical discourse analyst, Norman Fairclough (1989) describes the process of synthetic personalisation where people are given the impression that they are being treated as individuals when they are in fact being treated en masse. Examples of this include the computer-generated individualised messages we receive from financial institutions or from politicians, and also the cheery but vacuous *'have a nice day'* we receive from an airline steward. I receive many e-mails directed to me personally from all sorts of people I have never met and who clearly have no knowledge of me. The illusion given is one of engagement and control over your environment when in fact there are very few options for response. The power is with the designers of the interaction and the sense of control in the user is illusory. In our everyday life we see through this power relationship and recognise the personalisation as synthetic and it would be reasonable to assume that learners can also see through this 'personalised' learning.

We have the added irony in psychology where we provide an opportunity for people to study this personal science in a restricted way. The learners are not given problems to wrestle with or the opportunity to explore the issues they find interesting and relevant. They are not involved in decisions about what they would like to learn or how. Instead they are asked to learn the orthodox cannon of psychology and respond to questions where the answers are already known and they are required merely to regurgitate the information they swallowed previously. It is the impersonal teaching of the personal science.

In his Presidential Address to the British Psychological Society, the much missed Tony Gale (1990) challenged us to apply psychology to the teaching of psychology. He painted a negative picture of the way psychologists deal with their own knowledge. In a delightful rant he argues that:

> *'…we produce passive learners, respecters of authority, and students whose primary purpose in learning is negative reinforcement and the removal of anxiety…'* (p.483)

Gale also looks at the concept of power, and argues that the role of the teacher is to liberate the learner's mind and to shift some of the balance of power from the teacher to the learner. The problem is that we have created all-powerful assessments where the most strategic way of achieving success is to adopt a passive role and learn and reproduce the set answers. The economics of education mean that class sizes are large in schools and colleges and massive in universities. The dynamics of large classes are that the teacher inevitably adopts a more powerful role – 'I have the knowledge, you will listen and take notes.' And the dynamics of assessment mean that the examinations become the purpose of the course rather than a necessary addition. The students, therefore, see themselves as taking the course in order to get an A-level or to get a degree. The absurdity of this becomes even more pronounced when we consider the nature of these assessments later in the article.

Gale's solution to some of these issues is to radically change the focus of laboratory classes. Commonly these are seen as the opportunity to drill learners in the techniques of research and the precise way to write up research reports. An alternative view would be to try and recreate the primary school class in the laboratory.

> *'My way of learning how to be a psychologist is to provide students with a playroom and appropriate resources. Every student should be able to sample, at their leisure, the principal approaches to measurement and their application within substantive areas.'* (p.486)

This approach focuses on the intrinsic pleasure of finding things out by doing them and of illuminating the wonder of psychology for our students.

Play is a complex concept to define and

in part it is a matter of self-definition (Wood & Attfield, 2003), but for our purposes here lets see it as a contrast to work. If we see work as serious, purposeful, useful, and worthy, then play is fun, and not necessarily purposeful, useful, or worthy. And yet it is clear that children develop cognitive and emotional skills through play and probably rather more than they do through work (Wood & Attfield, 2003). The value of play can be seen in the new technologies that are being introduced into schools such as the interactive whiteboard. Children describe how they enjoy using this technology and describe some of the learning activities as play (Hall & Higgs, 2005). It is this approach that we can bring to our teaching in HE and if we follow Gale's idea we will turn all laboratory sessions into play-time.

Teaching tools

If we are to personalise our teaching perhaps we can use the new technologies to do this. One of the major innovations in teaching over the last decade has been the roll out of digital technologies. This has been achieved with considerable investment by the UK Government. And with that investment has come an expectation, and maybe a demand, that the technology will bring measureable improvements in educational performance. Each new major development, for example, the roll out of broadband in the early part of the decade, was seen as the technology that would kick start major improvements in performance. In a keynote speech, Ruth Kelly, Secretary of State for Education and Skills said:

> *'I see ICT and its potential to transform how we teach, learn and communicate as crucial to our drive to raise standards.'*
> (Kelly, 2005, p.2)

More recently Ed Balls (then Secretary for Children, Schools and Families), commented on his website that:

> *'Computers are no longer a luxury for the few, but these days are just as essential a part of education as book, pens and paper.'*
> (Balls, 2010)

While policy makers have taken it as given that digital technologies will enhance education and the general economy they have struggled to obtain the evidence to support this optimistic-rhetoric (Reynolds, Treharne & Tripp, 2003). It became clear that the introduction of digital technologies could have negative as well as positive effects. The reanalysis of the internationally comparative data on educational performance PISA (Programme for International Student Assessment) in a number of OECD countries found that computer availability at home could actually be detrimental to educational performance, while computer availability at school was found to show no discernible positive effect (Fuchs & Woessmann, 2005).

Research programmes carried out at Nottingham Trent University over the last 10 years (e.g. Underwood et al., 2005, Underwood et al., 2008a) have looked at the level of IT activity and embeddedness in schools and compared this with the performance of these schools on standard academic indicators. These standard measures of performance, such as SATs and GCSE have resolutely resisted the impact of technology and largely failed to show any major effect. Technology alone was not the answer.

Virtual Learning Environments

The focus of educational technology in the UK at the moment is on the roll-out of virtual learning environments (VLE). It is a requirement for all schools to have one. The VLE is a self evidently good idea but does it deliver as much as it promises and what are the key benefits and also the key barriers to success? The VLE offers the potential for interactive learning and could empower the student. In reality this is not how the VLE is used.

When we examine the VLE as an educational tool we can observe different layers of control. Verpoorten et al. (2009) defined four types of 'control' within VLEs:

> *System control,* which includes what a VLE looks and feels like as well as how it works.

Organisation control, which includes the ways that the VLE is customised by the organisation and the restrictions placed on use.

Teacher control, which includes the educational structure of the VLE such as the files and tools that are made available.

Learner control, which includes the ways that the learner can take control of their own learning.

The learner has only limited control in this hierarchical set-up. Our research at Nottingham Trent University (e.g. Underwood et al., 2008b) over the last 10 years has witnessed the initial stuttering introduction of VLEs before the current mass roll-out. In surveys, interviews and focus groups with teachers, learners and managers we have recorded the varying responses that these groups have to the technology. While it is clear that the VLE is an excellent medium for tracking student performance and for providing access to resources it is apparent that it does not deliver the more personalised and interactive experience that the social networking facilities such as Facebook provide.

Not everyone is signed up to the VLE experience, and it is argued that the VLE can not create a truly personal learning environment (Holah & Davies, 2009). In fact, by being so controlled the VLE restricts the options of the learner and is also in danger of deskilling teachers by providing routine and limiting structures within which to teach. The question as identified by Holah and Davies is whether one-size-fits-all. The VLE effectively defines a limited path through the new technologies and does not empower learners to facilitate their own learning using the new technologies.

This gap between the learning and formal educational technology is also noted in the Harnessing Technology Report (Smith & Rudd, 2008):

> *'Levels of access to and use of technology are high among young learners – especially out of school. However, their experience of technology in formal education generally differs from that at home and there are increasing indications that learners' expectations of technology, and, as a result, of learning, are not being met. Learners commonly report that they enjoy learning with technology, and increasingly use a range of tools and approaches to support their learning, including the use of Web 2.0 technologies, which may not be recognised and supported in formal settings.'* (p.23)

An alternative to the VLE is to enable learners to make best use of all the technologies available in Web 2.0. The opportunities to communicate, collaborate and publish that are available in cyberspace can expand the opportunites and ideas of the learner rather than restricting them. An example of the power of this approach is a facility created by Holah and Davies for teachers of psychology. Psychexchange (www.psychexchange.com) allows teachers to upload and comment on teaching resources, ideas and videos. Since it was created in 2008 it has created a large and active community of psychology teachers. It has over 24,000 users of which 7000 have been active in the last month (accessed July 2010). There are 4200 files uploaded and these have been downloaded over 1,000,000 times. A community of practice has been created within a short time that allows teachers to share resources and good practice.

Assessment

One of the other key tools in education are assessments. These assessments are still largely conducted in the UK using traditional (i.e. pre-digital technologies) techniques, and focus on traditional (i.e. pre-digital technologies) 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. The techniques for external examination are largely the same today even though the style of teaching and learning has moved on dramatically. There is a clear need to create assessments that better measure the shifts in learning activities that accompany effective use of digital technology. For example what form of assessment best captures the move from essay to story boarding or the rise in visual as opposed to verbal presentational skill.

The examination essay is seen as the untouchable gold standard of assessment. When I was at university this assessment mirrored how I might create a written piece. I would do the research, prepare the notes and then write the essay as a single and final piece. At coursework and at examination the process was similar. Today I would never construct a piece like that. I draft and edit, draft and edit. And our students will never have experience of this traditional process except when they are being assessed in examination. For their coursework they are required to create their work digitally using the technology of the computer and the writing style of draft and edit. This in part mirrors their learning. In their examinations however, they are assessed using the technology of the Biro using a writing style that is unique to the assessment process. What validity can we claim for this process? The assessment does not match the learning and does not even relate to anything that they will be required to do when they leave school or university. It is indefensible but constantly defended.

In addition to the validity issue about the examination there is a reliability issue. The reliability of essay marking has been seriously questioned for a long time (e.g. Jones, 1938; Newstead & Dennis, 1994). One solution to the reliability issue has been to introduce double marking and this has been found to be increase reliability (Brooks, 2004) but the dramatic increase in UK psychology undergraduates during the last decade has made this process impracticable in many universities. So in summary we are basing the key assessment of an individual on a measure with poor reliability and questionable validity.

The solution is to stop defending the indefensible and instead struggle with the difficult task of devising assessment that are valid measures of the learning we require our students to do.

The difficulty in addressing assessment is that it performs two major functions. First it provides an indication to the student of their progress and allows them to reflect on their work and adjust their learning. Secondly, performance on assessments is used to examine the perceived effectiveness of teaching at the level of the individual teacher and also at the institutional level. This second point makes it strategic for teachers to provide assessments 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 will influence the student learning (Conner-Greene, 2000) as it becomes strategic for the student to focus on the text and we end up with a spiral into meaningless assessments where …

> *'students may not engage in more advanced kinds of study skills because the course exams and other assignments simply do not demand it… Teachers may verbalise the need for students to develop more sophisticated study strategies but do not provide the demands and practice that would promote this development.'* (Bol & Strage, 1996, p.159)

What we teach

Psychology's greatest contribution is arguably the education it provides to millions of people that allows them to reflect on their behaviour and the behaviour of others. Research in psychology has illuminated our understanding of a number of issues but it has not delivered great insights or innovations in the way that the other sciences have. A good exercise is to try and list the great

findings and innovations of the last 100 years of psychology. Better still, ask delegates at a research conference to do the same.

Psychologists might have developed psychometric tests, conditioned reflexes, factor analysis and psychoanalysis but they hardly match up to the transformational developments in other sciences such as gunpowder, the steam engine, computers, atom bombs and the contraceptive pill. The common response to this charge is that psychology is a young science, but we are now over 150 years old. Not so young anymore. There are also other young sciences that have produced transformational ideas or technology, for example, from electronics we now have the microchip which has transformed our daily lives and from genetics we have the human genome.

Despite this lack of great findings our courses and teaching concentrate on data and techniques. The search for ever greater scientific rigour has led to curricula that focus on precisely doing meaningless tasks to come up with idiosyncratic findings. This focus of teaching mirrors the research process where we witness:

> *'the fetishisation of psychological method, or […] the impeccable trivia that consume so many journal pages.'* (Reicher & Haslam, 2009, p.469)

Psychology has the potential to produce a Wow! factor. Some curriculum designers acknowledge this. Look at the subject criteria for psychology courses at GCSE level published by the QCA. The first learning outcome they identify states:

> *'[Courses in psychology] …must encourage learners to be inspired, moved and changed by following a broad, coherent, satisfying and worthwhile course of study and to gain an insight into related sectors such as science. They should encourage learners to develop a personal interest and enthusiasm for psychology and prepare them to make informed decisions about further learning opportunities and career choices.'* (GCSE subject criteria for psychology, QCA, 2007, p.3).

Further learning outcomes are to *'develop an awareness of why psychology matters'* (p.3), and *'develop and understanding of the relationship between psychology and social, cultural, scientific and contemporary issues and its impact on everyday life.'* (p.4).

This document goes on to outline the essential components of courses at this level gives clear guidance about the core content of psychology. Syllabuses based on these principles will provide a basic introduction to the subject with a challenge to explore the wonder of psychology.

Big questions

At the heart of psychology are the big questions such as 'Who am I?, and why do I think, feel and behave like this?'. What bigger challenge can we give to our students than to start from these questions as they begin to explore psychology?

One of those big questions, framed for us by William James concerns how we make sense of the 'blooming, buzzing confusion'. Our students are also faced with a blooming buzzing confusion in the information in front of them about themselves and about psychology. We can encourage their sense of wonder and their skills of exploration and discovery or we can teach them to be precise in their reporting and to know what kurtosis is and how to look for it. I fear that for our students, what starts as a 'blooming, buzzing confusion' ends up as a dull recitation of 'impeccable trivia'.

This article is a homage to Tony Gale and I hope he would appreciate the ranting element of it. He inspired many students and psychologists including myself, and when I look at my own career I like that I have tried to provide inspiration and challenge to my students. I lose no sleep at all about whether they know what kurtosis is or if they can explain the usefulness of Roy's Largest Root (see your ANOVA outputs). Despite the Macdonaldisation of our education system (Ritzer, 1993) there is still room to allow our students to personalise their study of the personal science and to dive into the blooming, buzzing confusion of psychological knowledge.

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