Journal Article

Aiming for outstanding: Action research from students of the MSc in the Teaching of Psychology

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Abstract

The first cohort of a new MSc programme is due to complete the course in August 2014. During the three-year online course students conduct several pieces of action research in their classrooms. There is little research specifically related classroom practice in the pre-tertiary psychology classroom. The following describes the rationale and context of the MSc in the Teaching of Psychology and reports on three students' final year research. The first considers the benefits of Psychology Applied Learning Scenarios (PALS) as applied to an A-level Psychology lesson. This is followed by research on the academic impact the flipped classroom can have on AS and A Level progress and the perceptions of this teaching technique learners have. Finally a plenary designed to develop critical thinking skills and meet the criteria for an 'outstanding' lesson is discussed. Conducting action research into one's own teaching produces reflective, self-critical practitioners and these skills are also transmitted to their own students.

Key words: Action research, PALS, flipped learning, e-learning, pedagogy, academic progress, CPD

Introduction

Professional Development opportunities for the post-16 psychology teacher are limited. Although teachers of any discipline may register for an M(Ed) and graduates in psychology may consider a masters or PhD in psychology, there is little that focusses specifically on the needs of the psychology teacher. When you add to this the fact that there are limited PGCE places for psychology teachers (30 this year, down from 60: see BPS (2012) for a more detailed discussion of this) and that many psychology teachers qualify through alternative routes, it is clear that there is a gap in the current provision. Such a gap seems all the more striking when you remember that those teaching psychology, of perhaps all those who are teachers, are most familiar with the need to base their practice upon empirical research evidence.

Glyndwr University, based in North Wales, runs a unique programme: a part-time online MSc Teaching of Psychology. This course was validated in 2011 and recruited its first students in the September of that year. Students are all current teachers of psychology in either schools, sixth form colleges or further education institutions and are located primarily in the UK but also in Thailand, Malta, Fiji and Spain. The first cohort are completing their dissertations at the time of writing and this seems an appropriate time to reflect on the success of the programme from the point of view of the student.

The aim of this programme is to support academic professional development for the post-16 psychology teacher through an advanced study of theory and research within the fields of psychology and education.

Specifically the course aims are:

- to equip students with the knowledge and critical skills required to teach effectively within the discipline of psychology.
- to encourage a critical consideration of a range of approaches to teaching psychological content and skills.

- to provide students with an up to date critical understanding of contemporary developments within both psychology and education
- to develop the research skills of students such that they are able to conduct and report on a piece of independent research to a publishable standard.

The MSc in Teaching of Psychology is part-time distance learning course. Course material is provided using the University's virtual learning environment, Moodle. Each module will be supported on a week-by-week basis with reading material, short formative assessments and peer group study. The peer group study will be conducted through Moodle using discussion forum and blogs.

In the first two years of the course students will complete six assignments. In the first year the first assignment involves the design, implementation and evaluation of a Psychology Applied Learning Scenario (PALS) originally designed by Lin Norton (2004), with their students. The second sets a Psychology Applied Learning Scenario for students in which they are asked to advise a colleague on the teaching of research methods and the third requires a consideration of how to develop the critical thinking skills of their students. In the second year students write a critical literature review of an area of contemporary psychology, design and justify a lesson to meet current OFSTED / ESTYN outstanding criteria and finally complete a professional development assignment in which they identify strengths, weaknesses and areas for further development in relation to the teaching skills. This leads into the dissertation which is a piece of empirical work conducted within their own teaching institution.

The assignments on this course, whilst not explicitly labelled as such, clearly fit into the action research or practitioner based research tradition. Students on this course are also teachers and are exploring and investigating their own work in order to check that it is 'how they would like it to be' (McNiff, 2002) and in order to improve their own practice. Given that such an approach inevitably involves the practitioner reflecting upon their own work it can also be referred to as a a form of self-reflective practice. Interestingly, the selections of assignments presented and discussed by students in the remainder of this article also focus on the development of such reflective practices in their students.

In this article, three students present a piece of research that they have completed as part of this course. The first is focusses on the PALS assignment as outlined above and demonstrates the successful application of a technique traditionally utilised in a higher education context to a post 16 environment. The second considers the flipped learning technique and how this can be used to embed Bloom's taxonomy into teaching. The third uses a plenary activity to triangulate the views of what makes an outstanding lesson. In each section, the writer will consider, not only the effectiveness of the technique being explored but also the experience of investigating and reflecting upon their own professional practice.

1. The use of Psychology Applied Learning Scenarios (PALS) in the pre-tertiary classroom

The use of problem-based learning (PBL) represents a shift away from more traditional teaching methods to a perspective that focuses on students' learning where student activities are constructively aligned to the desired learning outcomes (Boud & Feletti 1999; Biggs 2002). The core characteristics of PBL are the learning of knowledge in context, the use of social interaction to elaborate upon that knowledge and an emphasis on meta-cognitive reasoning. PALS are an adaptation of problem-based learning that involves using ambiguous scenarios or vignettes to provide students with the scope to apply their own knowledge to a contextualised problem and to define their own learning objectives. (Dahlgren & Dahlgren 2002; Norton 2004a).

The PALS designed here adopts the following principles laid out by Norton (2004a).

- Students build on their prior knowledge of psychology
- Encourage a real learning experience that can be applied to the work of a professional psychologist
- Promote self-directed and independent learning and meet the desired learning outcomes
- Stimulate student interest in psychology.

These characteristics provide the rationale for using PALS in A-level Psychology lessons.

An example of PALS

My students demonstrated a weakness in applying psychological theory to practice. This PALS activity was used to develop evidence of understanding in exam answers. The topic area of phobias linked itself to the Health and Clinical Psychology option on the OCR specification and a video allowed PALS to be extended to make use of technology-enhanced teaching in the classroom. The student objectives were to be able to provide theoretical explanations and treatments for the behaviour in the video. They had autonomy over the outcome eg: presentation or written report and which explanations and treatments to research eg: biological or cognitive.

Students watched the following video clip and made notes to help them discuss the group response: http://www.youtube.com/watch?v=co7BWWoF-5I.

Brief summary: The video follows the narrator Alan Alda looking back at a day in the life of Joanne who suffered from arachnophobia. She is described as being obsessed with spider avoidance and is seen wrapping herself in coat, hat and scarf as protection from spiders. The focus switches to Virtual Reality Therapy (VRT). The VRT provokes an anxiety of the phobia and patients have to rate their anxiety score and over several sessions they are helped to overcome the phobia using systematic desensitisation. The final scenes shows Joanne describing how VRT has allowed her resume a normal life. She is able to hold a tarantula as can Alda who also overcomes his childhood experience of a tarantula in a swimming pool.

Results

Students rated the benefits of PALS using a 5-point likert scale adapted from Perkins and Saris (2001), with anchors at 1 (not at all useful) and 5 (very useful). Percentages of students rating the usefulness of PALS as either 4 or 5 (the most positive choices) are shown in Table 1.

Table 1 here

Student overall perceptions of PALS were positive, especially as an alternative learning experience and importantly for understanding the application of theory to practice. Previous research (Dickson 2010, as cited in Jarvis, 2011) reported that students prefer exam focused lessons as they perceive them to be more useful and comments from weaker candidates supported this; "I don't think they [PALS] can help me much". Interestingly however stronger candidates recognised the value of PALS, "I liked that I could go away and find out stuff for myself" and "I found the PALS exercise a really useful experience that made me justify my answers". This highlights differences in student appreciation of PBL that needs to be overcome if PALS is to be a viable teaching and learning activity for A-level Psychology.

What is the rationale for PALS at A-level?

A pedagogical justification is supported by Biggs (2002) who advocates the importance of 'constructive alignment'. This concept here involves the creation of a learning environment where PALS are aligned to desired learning outcomes. Norton (2004b) suggests that to maximise alignment, the teacher must re-conceptualize assessment criteria as 'learning criteria'. The advantage of this is that students learn what they think will be assessed rather than what is in the curriculum (Biggs 2002). Therefore if curriculum outcomes, teaching methods (PALS) and assessment tasks are congruent then students will be drawn inextricably into learning.

The process of learning also involves students learning about learning itself. Metacognition involves situated cognition (Brown, Collins, & Duguid, 1989 as cited in Zinkiewicz, Hammond & Trapp, 2003) where cognitive skills should be developed in context. PALS allows students the scope to develop their own thinking by recognising and organising information and connecting it with what they already know to solve a real life problem. Advocates of problem-based learning argue that when students are actively engaged in their own learning, they develop independent learning skills and are intrinsically motivated to learn (Norton 2004b).

PALS allow teachers to create challenging tasks that stimulate students to develop different approaches to explain the issues within the vignette. The idea of delivering aspects of the A-level course using PALS means that students have valuable opportunities to understand that knowledge is contingent in nature (King & Kitchener 1994, as cited in Norton, 2004a). Learning should be an active process for students and is enhanced by social interaction. Students benefit from PALS by becoming active in researching the problem presented to them. It is this active learning where students have discovered for themselves how to participate in discussions and make the reflective judgements that lead to an in-depth understanding (Norton 2004a). Additionally, this type of active learning has been shown to improve overall learning, memory and performance (Baillie, Porter, & Corrie, 1996, as cited in Zinkiewicz, Hammond & Trapp, 2003) which is important for exams.

The assertion that PALS provide a secure environment for students to learn (Norton 2004a) is contingent upon each student having equal opportunity to contribute and feeling confident in doing so. Teachers should ensure that all students have the opportunity to practise discussion skills so they have access to the benefits of active learning.

All teachers will recognise that stimulating material is required in order to maximise the benefits of interaction in the classroom. PALS extends the use of sophisticated questioning to gauge understanding and for students to peer teach. Allowing students to actively learn from one another provides them with tremendous gains in academic interest and development (Guenther & Miller, 2011). Additionally, PALS can be used in seminars, as a means of delivering course content and as assessment through student explanations.

It is important that students appreciate how PALS can be used to improve their exam performance through developing an understanding of how to contextualise their answers to the question (Lee 2004, as cited in Liu & Carless, 2004).

Impact

The comments from some of my students indicated the need to spend more time with them explaining the benefits of PALS. My role in setting psychology in context is important not only for student examination success but also in their understanding of how professional psychologists work. I have learnt to construct and evaluate PALS that are personalised for my students and this type of action research has developed my own understanding of how PALS are most effectively used. Importantly, PALS have given me a framework to teach an outstanding lesson; PALS provide me with a varied choice of teaching and learning activities that can be matched to prior student learning; consequently I can demonstrate effective use of assessment indicating outstanding practice. Moreover teaching can be tailored to show impact on student progress, setting targets from feedback and questioning.

Teaching with PALS has raised the question of whether my schemes of work should incorporate more PALS activities to broaden student understanding of psychology. The answer is an emphatic "yes." Intrinsically PALS deliver the 'skills of the psychologist' however PALS also develop those skills required in the new 2015 A-level specifications where there is increased emphasis on applying psychological knowledge to novel source material. #PALS!

2. Flipping fantastic, bloom-ing marvellous: flipped learning and embedding Bloom's taxonomy.

It is apparent that there are individual differences as to what motivates and does not motivate a learner (Jones, Valdez, Nowakowski, & Rasmussen, 1994). The empirical support for active learning, generally defined as any instructional method that engages students in the learning process, is extensive (Bonwell & Eison, 1991). Further, there are increasing indications that learners' expectations of technology, and, as a result, of learning, are not being met (BECTA, 2008). Following on from this research, I considered an implementation of a 'flipped classroom' where students are primed with knowledge prior to the session. Flipped learning is a form of blended learning that encompasses any use of technology to leverage the learning in a classroom.

In recent years, learner-centered pedagogy has received considerable attention (Pierce & Fox, 2012; Findlay-Thompson & Saint, 2014; Warter-Perez & Dong, 2012). A learner-centered approach to teaching incorporates teaching strategies that focus on the needs, preferences, and interests of the learner. This approach is desirable because it helps learners to become actively engaged in the learning process, take responsibility for their learning, and enhances their skills to learn how to learn (Keengwe, Onchwari & Onchwari, 2009). Active learning is grounded on the constructivist theory that emphasises hands-on, activity-based teaching and learning during which students develop their own frames of thought (Keengwe et al., 2009).

The 'flipped classroom' instructional model was developed by Jonathan Bergmann and Aaron Sams in 2007 to provide instruction to secondary students who were missing class and therefore missing instruction. Using videos to support students' learning has attracted the attention of a large number of researchers (Young and Asensio, 2002) and a key concept within the idea of flipped learning is the use of new technologies to support learning; or as some would label: blended learning (Garrison and Kanuka, 2004). The 'flipped learning' method provides an opportunity for teachers to provide more personal feedback and assistance to students, but also to receive feedback from their students about the activities that they are undertaking and what they don't yet understand (Wiley and Gardner, 2013).

Student perceptions of flipped learning were considered by Bower (2013) who stated that a teacher no longer needs to provide a synchronous lesson to his or her students. The flipped classroom offers those educators looking to reinvent their practice a way to move from being the "sage on the stage" to the "guide on the side" (King, 1993). There are many examples of the use of a flipped classroom in contemporary classrooms (Pierce & Fox, 2012; Findlay-Thompson & Saint, 2014; Warter-Perez & Dong, 2012).

The fundamental idea behind flipping a classroom is that more classroom time should be dedicated to active learning where the teacher can provide immediate feedback and assistance. The learner completes a task outside of the classroom that will often involve watching a video clip, sometimes narrated by the instructor. This prepares the student with information that will be built upon in class. In relation to Bloom's Taxonomy, the

learners are developing their knowledge and understanding outside of the class which gives more time in class for the instructor to develop assessments, activities and tasks that build on this and develop the higher order skills (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). Some educators have claimed that assessment-related activities used in the classroom convey important information about what is valued there, and hence have an influence on students' achievement goals (Ames, 1992; Harlen & Crick, 2003).

Following on from this, the current action research considered an implementation of a 'flipped classroom' where students were primed with knowledge prior to sessions. Students completed a flipped task prior to the session that involved a reading task, watching a short clip, and completing an online quiz. The class resources and extension work was placed on the class flipped blog for use following the session. Therefore, embedding the technology into the session, both prior to, and following the session with the aim of creating a 'blended' learning environment. This method was sustained for a full term with students completing a flipped task each week prior to their first session.

Method

Initially the flipped classroom was developed on the Wordpress platform using a 'learning management' plugin developed by Woothemes called Sensei[1]. This flipped classroom (accessible at www.jamiesflipped.co.uk) consisted of two areas: the weekly resource blog and the weekly flipped task. Each week I would place the classroom resources on the site for students to make use of, download and complete the extension tasks, which were optional. The flipped task was uploaded each week to be completed prior to the first session the next week. This task would always compromise of a reading task, a short (~10 minute) video clip and a selection of multiple-choice questions. These multiple-choice questions allowed me to monitor the completion of the task for each learner and provided me with scores to measure progress, but it also gave immediate feedback to the student allowing them to reflect on their responses.

[1] http://www.woothemes.com/products/sensei/

Three classes of AS students taught by myself were selected to use the flipped learning approach. A comparison group of students who completed their AS course in the 2012-13 year were matched with the current students on sex and prior achievement for statistical comparison of value added scores. Qualitative responses from each of the current students were collected to contextualise any difference in progression over the course of the year and gain insight into the students preferred teaching style. Final measures of impact cannot be made until the terminal results of the AS examinations have been released in August 2014.

Results

Students' overall perceptions of flipped learning where measured through an online questionnaire that asked about student engagement with flipped learning, preferences for teaching style and feedback for future implementations of flipped learning. The results from the questions on perception of flipped learning over the first half-term of the year are shown in the table below.

Table 2 here

The overall perception of flipped learning were positive and suggest that the students found it more engaging as a 'homework' task than more traditional methods as well as allowing them more time with the instructor to develop this knowledge in class. Qualitative feedback from the class on open questions about their preference for flipped learning suggested supported the responses to the quantitative questions with students stating that they 'enjoyed' flipped learning and 'liked the ability to access the work anywhere'. One student even commented that 'the flipped tasks have given me something to do when I'm bored on the bus home'.

Impact

Research related to the potential impact of the flipped model is focused on the effects of preparing learners with direct instruction outside of the classroom, prior to receiving in-class instruction. Research on the effects of priming on memory indicates that when learners are exposed to particular stimuli their memory of that stimulus is improved

due to their previous experience (Bodie et al., 2006). By providing students with instruction outside of the classroom, learners are, in essence, 'primed' for the active learning tasks.

Teaching is not just about giving the students knowledge but also providing the learner with signposts to help develop their studentship skills and become a better learner in general (Dunlosky et al., 2013). Stretching and providing extension activities for all learners is a key theme that is embedded into any outstanding lesson, allowing students to move away from a restrictive activity and develop further awareness of an area or improve their skills. There is no doubt that Bloom's Taxonomy of Educational Objectives for the cognitive domain (Bloom et al., 1956) has had a considerable impact on educational thought and practice all over the world. If the taxonomy is embedded into the curriculum in the first weeks then students can use their meta-cognitive skills and consider with greater skill what a question is demanding of them.

Using the flipped method has allowed me to signpost different skills within Bloom's Taxonomy to them in a structured way. Learners are aware that the tasks that they complete as part of the flipped classroom give them a foundation of knowledge that will be built upon in class. The use of Bloom's stages within the taxonomy are further embedded within class through the use of learning tasks that used as consolidation tasks on the flipped activities. Each lesson is developed to build upon the flipped task and work up through Bloom's taxonomy using resources such as a 'learning ladder' of different tasks grouped into the stages within the taxonomy (Russell, 2014).

Angelo (1995) suggests that classroom learning improves when (a) students are personally invested and actively engaged, (b) they receive prompt and comprehensible feedback, and (c) they work cooperatively with their classmates and teachers. Students are actively engaged before they enter the classroom through the use of a flipped lesson. They know what they will be learning about, and bring an awareness of what the session is going to contain allowing them to interact with the starter activities immediately. Using the flipped method it gives more time in class to focus on activities, therefore, feedback is prompt and regular, from the embedding of consolidation tasks to the use of the AfL for whole class feedback and reflection. Finally, the students are able

to work cooperatively, supporting each other from the initial task based on the flipped session to group work and discussion throughout, with extension work following the session.

One issue that must be raised is the access to technology and individual preferences for the use of it as a learning tool. Technology can be engaging for some learners, but it is important to recognise that students are more motivated by opportunities to progress; they are motivated by opportunities to ask and answer their own questions; and they are motivated by opportunities to learn together with like-minded peers (Tucker, 2012). Aware of this the flipped classroom was implemented for the first half-term, and only once a week to allow a range of other activities to be used.

Outstanding teaching techniques are based on the goal of "students becoming the agents of their own learning rather than the object of instruction" (Hamdan, McKnight, McKnight, & Artfstrom, 2013b, p. 4), and these techniques are designed to get at the deepest levels of Bloom's Taxonomy (Anderson & Krathwohl, 2001). In a recent literature review, Hamdan et al. (2013b) recognised that teachers achieved increased student engagement, critical thinking, and better attitudes toward learning when active learning techniques, such as flipped learning were applied. This was reflected in the feedback from learners in my classes this year. The flipped classroom has given me more time in class to work with students rather than teach the entire class. This time has enabled me to differentiate between my learners better, give more one-to-one feedback to each learner and become aware of the strengths of each of my students. Flipping brilliant.

3. Traiangulation of outstanding; which side are you on?

Initiatives and innovations are passed down to teachers for incorporation into their daily planning and lessons and are duly integrated into classrooms practices. However, as psychologists we are trained to question and evaluate all claims and research before accepting them; this is why action research in the classroom is so vital. Empirically testing teaching methods is not without bias. Through the lenses of OFSTED, teachers should be 'outstanding'; the main focus of which should be demonstrating exceptional

progress in learning, the components of which include differentiation, engagement, developing independent learning, delivering skills and content for exams, challenging, using technology and Teaching Assistants, peer review, and sharing of success criteria (Beere, 2012). Through the lenses of senior staff, successful teachers may be judged by students producing exam grades above their target grades for positive ALPS scores. Students and teachers also have their own views of what makes a successful lesson. This research sets out to triangulate these views and produce a teaching activity that would be judged outstanding by OFSTED criteria, senior staff, students, and be solidly grounded in empirical evidence.

Method

The activity was a plenary involving different coloured jars representing different curry strengths to differentiate the 'heat' or difficulty of the questions inside. Each jar contained question stems to be answered in relation to the topic taught. Students selected their own level of question depending on their understanding of the topic. Once selected, students worked individually on their question before sharing it with the class who peer assessed their answer (See Table3).

Table 3 here

To maintain sustained attention and engagement it is vital that plenaries are short activities (Bunce et al, 2010); this is supported by neurobiological evidence suggesting that during adolescence the frontal lobe, which controls many executive functions including attention, self-control and abstract thinking, has yet to reach physical maturity, signifying that focus may not be maintained for long time periods (Conklin et al, 2004, Ronnie & Reynolds, 2005). This reflects what OFSTED typically expect to observe within a lesson: a starter, an activity, a mini plenary, another activity, a full plenary.

The questions in this plenary are designed to pinpoint the progressiveness of critical thinking skills echoed in pedagogical taxonomies such as Bloom and SOLO (Structure of Observed Learning Outcome, Biggs & Collis, 1982), with the choice of question (i.e. the heat of the curry) indicating a higher thinking skill. The curry questions offer no option for 'shallow surface thinking', as all students should have progressed beyond this by the end of the lesson. Students should be aware from their targets and progression over the

course, which question they need to select if they are to reach their goals (which links to OFSTED's outstanding criteria of all students knowing their individual targets and how to reach them[2]). However, they would always be encouraged to select a challenging question as research suggests students can become disengaged if they are not challenged enough (Marks, 2000).

Part of the current teaching culture is to encourage students to take responsibility for their own learning. Allowing them to choose the level of question they desire would achieve this. However, whilst this makes for a suitable strategy, research directly linking student responsibility to improved outcomes is not forthcoming. Research from the field of emotional intelligence could be used to support the idea of autonomy and choice in the classroom leading to improved performance (e.g. Chen & Dornbusche, 1998; Vansteenkiste et al, 2005; Fortier, Vallerand & Guay, 1995, etc).

Once students have selected and individually worked on their question, sharing and peer assessment occurs. The use of peer assessment is supported for a number of reasons. Firstly, agreement between student and teacher assigned grades has been shown to correlate well (Saddler & Good, 2006)Secondly, feedback is instant and the new material is still fresh in the students minds (Al-Barakat & Al-Hassan, 2009).Thirdly, students not only learn from grading others papers (Saddler & Good), but also learn to rely less on the teachers' grades and more on the feedback (Armstrong, 2012) which may lead to a better understanding (Liu & Carless, 2006). Furthermore, there is the metacognitive advantage of students seeing mistakes in others thinking, leading to them thinking more about their own response (Saddler & Good). Finally it has been shown that peer evaluation encourages students to work together for 'common intellectual warfare' which creates a cooperative atmosphere rather than one of competition for grades (Malehorn, 1994).

Impact

Figure 4 triangulates feedback on this activity, linking OFSTED criteria (constructed from Beere's success criteria, Beere, 2012), to formal observation feedback, student

[2] http://www.ofsted.gov.uk/resources/good-practice-resource-outstanding-individual-target-setting-highbury-college for further details

feedback (21 participants) and empirical research. As this activity was constructed based on theory and evidence, it was of interest to my teaching to see which activities were deemed to fulfil Breer's OFSTED linked components and what empirical evidence they were based upon.

Table 4 here This small piece of action research demonstrated to me that it is possible to base teaching activities in empirically tested research, whilst still meeting OFSTED criteria, expectations of senior staff and motivating students. I would not suggest that every activity used in a classroom be steeped in such analysis, but building up banks of activities based around action research is surely better than accepting the latest initiative on face value. My research into understanding what it means to be outstanding has raised me to question who my lessons should be outstanding for. For me personally, it is the students every time. Today's students appear extremely self-aware and their enthusiasm and willingness to participate is obvious to senior staff and OFSTED. Whether this meets *their* criteria of outstanding or not is negligible to the impact it is having on the students. A further question which I am left with is whether outstanding lessons lead to outstanding outcomes? Watch this space.

Discussion

Action research with both formal and informal feedback is a tool which provides reflection upon our practice as teachers, allowing teachers to systematically process their professional role, collect, record and analyse thoughts about the past and future; allowing them to identify the causes of their current role and practice and implement changes to improve and progress their teaching and career (Boud et al 1985; Boyd and Fales, 1983; Mezirow, 1981). As teaching is not a science, cause and effect are not always easy to establish: action research allows us to identify possible causes for the outcomes that proceed and as such it is vital to meaningful development.

As classroom practitioners with an awareness of psychological research we should be developing interventions and teaching strategies that monopolise on this and engage students in their learning journeys. Especially at A Level, teachers are often faced with teaching the content to heterogeneous groups of students who have a wide variety of academic backgrounds and knowledge (Porter et al., 2006). Psychology demands that learners be aware of scientific concepts and philosophies, statistical methods, research

literacy, as well as specific psychological terminology (Hayes, 1996). When you add to this the need to differentiate when teaching such a diverse range of learners it is clear that we must develop a wide variety of strategies to increase engagement.

The very act of student engagement adds to the foundation of skills and dispositions that are essential to gaining an awareness of a topic, both in knowledge and skills, therefore any strategies used by teachers should incorporate active and collaborative learning activities (Kuh, 2003). Shulman's 'Table of Learning' taxonomy makes the assertion that learning begins with student engagement, which in turn leads to knowledge and understanding. When the learner has gained this knowledge and understanding they become capable of performance. At this point reflection on ones awareness leads to higher-order thinking and awareness of your understanding (Shulman, 2002). Therefore, without engagement, active learning, or investment in ones learning the student will not progress and achieve.

Students are not just empty receptacles waiting to be filled with important facts, new and interesting concepts and practical 'tidbits' of information (as Bain (2004) suggests) but actively learning and inquisitive. The teacher, facilitator or whatever label is 'in vogue' at the time, plays an enormous role in learning through delivery and course design. The one element that seems to pervade all discussions of exceptional teaching is enthusiasm for a subject (Blair-Brokeker. 2003) and this must be shown consistently, both overtly in discussion and through creating exciting and engaging lessons for learners.

> "...students feel greater rapport when educators engage in conversations about topics beyond course-related material, refer to students by name, and take time to listen to suggestions." (Faranda and Clarke, 2004, p.279)

In education we work in a complex domain where there are infinite factors at work. This has been shown by research on achievement and retention in further education that identifies an array of factors that are involved (Martinez, 2000). The 'outstanding' is one who uses the most appropriate tools to not only scaffold student learning, but their engagement in the subject also.

Through this course the students have been challenged to examine the teaching methods they use and the evidence underpinning these methods. This process has resulted in an increased knowledge of the contemporary aspects of psychology and teaching as well as encouraging them to adopt a more experimental pedagogy. This has undoubtedly had an outstanding effect on their practice, both personally and professionally. As 95% of all interventions we attempt as teachers have a positive effect on student achievement (Hattie, 2003), we may conclude that not only has the course provided the students with an opportunity to examine and reflect upon their daily practices, but that their students, in turn, have benefited from having been participants in this process.

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Table 1.Percentages of students rating the usefulness of PALS as either 4 or 5 (the most positive choices)

PALS n=12	getting help	giving help	cooperation	alternative to normal	saving time	Understanding theory to practice	Mean	Standard deviation
%	62.5	56.2	62.5	75	50	62.5	61.45	8.31

Table 2 Overall perceptions of flipped learning

Question *All responses were on a 0-5 scale with 0 representing 'not at all' and 5 representing 'completely'.*	**Average (mean) response**	**N**
I have enjoyed the flipped method of learning over the course of the first term of the year.	4.2	62
I preferred the flipped method of learning to 'traditional' homework that involved building on content learned in class.	3.9	61
I would like all of my teachers to use the flipped method of teaching.	3.1	63
The flipped method has given me more time in class to complete activities, assessments and group work than other classes where the flipped method is not used.	3.6	62

Table 3 Differentiation of question types

Mild – Korma	Explain... Outline... Describe...
Medium – Tikka Masala	Argue for... Argue against... Evaluate the effectiveness or appropriateness of...
Hot - Madras	Predict what could happen with theories on... Reflect on how you feel ethically about... If what you had learnt isn't true how could you explain...

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765 Table 4 Differentiation of feedback

Breer's Criteria	Formal Observation	Student Feedback in quote form (p=21)	Link to empirical research findings
Differentiation	• Students confident and resilient to try harder questions, three options available	• These questions allow you to go beyond the basic information and viewpoint	• Questions based on pedagogical taxonomies (Bloom & SOLO)
Engagement	• Students immediately engaged in task, all students were fully engaged	• Puts our learning into context and it seems more relevant and interesting, makes learning more interesting, love these, I think they're fab! (curry questions, able to recap what I have learnt and use my brain to think.	• Disengagement from lack of challenge (Marks 2000)
Development of independent learning	• Students confident and resilient to make their own decisions about their learning • Some students show excellent independent thinking	• I think this is good as it allows you to reflect on the lesson and gives you an indication of what level you're working at	• Achievement raised in relation to personal goals (Gajic, 2013) • Emotional intelligence research suggests autonomy and choice improve performance (e.g. Chen & Dornbusche, 1998; Vansteenkiste et al, 2005; Fortier, Vallerand & Guay, 1995, etc).
Delivering skills and content for exam	• Clear links to exam	• Good conclusion as everyone teachers each other sentences	• Students code most information in isolation whilst revising for exams. However, people often code and retrieve memories in

		for essay paragraphs • Exam practice, answering an unseen question on the spot. • Made me feel prepared for the exam	the presence of others (Rajaram & Pereira-Pasarin, 2010), it follows then that there may be an argument for the sociality of using memory techniques in class. Having group members in the exam hall may serve a cross-cueing purpose as one student cues memories in another, thus enhancing the recall (Andersson, 2006).
Challenging	• Sees all students demonstrating progress, including quieter members • Turn taking ensures that everyone demonstrates progress, including more passive learners	• These allow you to go beyond the basic information and viewpoint	• Disengagement from lack of challenge (Marks, 2000).
Peer review	• Support within group when feeding back is really pleasing	• Good conclusion as everyone teachers each other sentences for essay paragraphs	• Student and teacher grades correlate well (Saddler & Good, 2006)Instant feedback proves advantageous (Al-Barakat & Al-Hassan, 2009) • Students learn more from grading others papers (Saddler & Good), and learn to rely less on the teachers' grades and more on the feedback (Armstrong, 2012) leading to better understanding (Liu & Carless, 2006) • Metacognitive advantage of students seeing mistakes in others thinking, leading to them thinking more about their own response (Saddler & Good) • Peer evaluation encourages students to work together for 'common intellectual warfare' which creates a cooperative atmosphere rather than one of competition for grades

			(Malehorn, 1994).

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