



Reflective Account of Practice

RAP Exemplar - Research Focus

Introduction

I am a Fellow of the Higher Education Academy (FHEA) and I am committed to the UKPSF Areas of Activity, Core Knowledge, and Professional Values. The main principles that guided my teaching practice over the 15 years in Higher Education and that I have conveyed to my colleagues are the importance of "authentic learning" and the importance of promoting "creativity and innovation".

Authentic learning

The first person that inspired my teaching practice and from whom I appreciated the importance of authentic learning was my UG teacher of cognitive psychology, Professor XXXX XXXX. He was a very enthusiastic and unconventional teacher; for example, he liked, when possible, to deliver his lectures by the beach (I was studying at XXXX University, by the Adriatic sea). Most importantly, he put a lot of effort in trying to make the students to "experience" what he was talking about rather than trying to transmit theoretical knowledge in an abstract way. For example, to teach us that the perception of surface colour is relative and that the visual system adopts a "anchoring to the white rule" (quite an abstract concept) he brought to the lecture a wood box with two small pinholes. The inside walls were painted in black and dark grey. When the box was open we could clearly see the black and dark grey colours; but when we were observing the inside of the box through one of the pinholes (the purpose of the second pinhole was to shade light in the box), so that no other surrounding surface was visible, the dark grey looked clearly a white and the black looked grey. Colour relativity made immediately sense: this concept - that would have been otherwise just an artificial (or "inauthentic" using the terminology adopted, for example, by Herrington and Herrington, 2008) - became immediately an authentic and natural experience. When I became a lecturer I enriched this anecdotal experience with authentic learning model (Brown, Collins and Duguid, 1989) [A1]. In particular, Brown and his colleagues maintained that to maximize the learning experience, the thought content has to be embedded within the physical context within which it will be used. This model inspired me the design of innovative learning tools for students' engagement [A1, V2] that I have generated benefiting of modern technology (case study 1). According to Brown (1999) modern technological means favour authentic learning based on experimentation and

action. New technologies allow the visualization and the simulation of otherwise abstract concepts providing the opportunity to students to experience an authentic learning even in areas where direct experience was previously inconceivable (like, for example, the "visualization" of how galaxies expand or the "visualization" of the evolution of a particular species over millennia). This makes the learning experience much more concrete and therefore more accessible to all (K3, V2).

Creativity and innovation

What employers require are graduates who can create, innovate, and communicate in their chosen profession. The National Advisory Committee on Creative and Cultural Education defines creativity as the "imaginative activity fashioned so as to produce outcomes that are both original and of value" (NACCCE 1999: 30). As Hodges (2005) noticed, the word "outcomes" underlies that it doesn't need to be a tangible product but a creative process might give rise to different outcomes such as new ideas, or new arrangements for existing things or also new solutions to get similar results. Although the interest around creativity in education goes back since Plato's time, its importance has been acknowledged only relatively recently (Jeffrey, 2005). Still in 1982 Best felt the need to write a paper titled "Can creativity be taught?" (and answering "yes") to persuade the teaching community that there is no specific personality type associated with creativity and creativity can indeed be fostered. According to Robinson (2011), creativity is fundamental in education at the same level of teaching literacy and it is possible to learn to be creative. With this in mind, I have developed an innovative textbook [A1,K1,K4] for the community of tutors and students aimed at facilitating the creativity process in the designing of experiments (case study 2). Besides introducing the handbook into our Post Graduate courses, I have conducted training workshops for staff to support their own teaching [A2,K6].

Additional values that guide my teaching: Self-reflexion and Inclusion issues

During my PgCTLHE course I had the opportunity to learn in more details the educational process and to gain supervised teaching experience. I become familiar with different learning and teaching strategies as well as the importance of effective reflexive practice [A5]. According to Loughran (2002), self-reflection upon teaching is effective when it leads the teacher to make new meaning from the situation by restructuring it and understand the practice setting from a variety of viewpoints; this means questioning what could have been taken-for-granted. Looking back to that experience it was a gateway to my personal way of reflecting. When I was a more junior teacher, I used to ask the students to feedback after my teaching, for example asking them to leave a note on a box when the teaching session was concluded. Becoming a more confident teacher, I started involving the students "directly" in my reflexions [K5]. I share with them my own previous experience and my "on line" feeling. For example, I make them aware which topics are difficult for me and the reasons of why they are difficult to me; I share with them my analysis in real time [K2]. I have also learned how to make teaching accessible to a wide range of students; that is, how to take into consideration "inclusion issues" [V1]. According to Darcy (2014) "inclusion" in education can be intended in a narrow way: "the inclusion of specific groups of learners" or in a broader way that focus on the "diversity of all students and every other member of the school community". Particularly in xxxxx, the broader interpretation of inclusion is

important since students come from different backgrounds, with very different levels of competence [V4]. The challenge is to deliver lectures that are at the same time accessible to everyone and stimulating for the more experienced [K3]. Research methods and statistics (one of my areas of teaching) is a good example. Generally, students are not much interested to this topic because they do not see its relevance in the curriculum [K3]. Inspired by theories of experiential learning (Kolb, 1984; Beard and Wilson, 2006; Ravenscroft, 2009), in my teaching I stress why this topic is important [K2] (see Referee 1). In this way, I engage also those students that are already familiar with the lecture's content because they are now requested to reflected on the importance of mastering this type of knowledge [V2] ; adopting therefore of a meta-cognitive approach (Maudsley, 1979; Biggs, 1985).

Management and mentoring

In 2014, I became Reader in XXXX and I took several leadership roles. I am responsible for the support, leadership and mentoring of research and scholarship activities for academic staff and PhD students in the XXXX department [k1]. I support staff from across the department to submit to relevant units of assessment for the Research Excellence Framework (REF). For example, I advise my colleagues on how to apply for research funds; on the best way to disseminate research findings as well as methodological advice. I also involve my colleagues in my own projects; for example, I involved colleagues in my projects in xxxxx, in xxxxx and in xxxx. All these projects generated international peer reviewed outputs that improved their own CV (see referee 1). I support my colleagues and their students own research dissemination; for example, I was shown a dissertation made by an UG student supervised by a colleague. I recognized that this project had the potential of being published in a scientific journal and I advised my colleague on how to re-shape the dissertation for publication as well as which journal to target to maximise its impact [A3]. The paper has now been published and this contributes to the increase of the research profile of our department, as well as the CV of the student, enhancing their employability [V4] (see referee 1).

I volunteered in the Pathways Mentoring Program, which is a program ideated for senior members of staff to assist junior colleagues [A5]. At present, I am mentoring a colleague to progress with his career, providing methodological and strategic advices. As a difference from my ordinary mentoring activities, in this case I provide my colleague with a more structured guidance and I support the planning of new research projects.

When I firstly became a Reader, I took the role of Postgraduate Research Tutor for the xxxx Department [A1] and I sat on the Postgraduate Research Student Committee for SHU. This role involves operational and pastoral care in recruiting, organising supervisory teams, monitoring the PhD students' progression [K6], relationship with supervisory teams, developing, retaining and managing the PhD students [A4]. In harmony with my commitment of improving the research profile of our department, I implemented the initiative of "at least one peer- reviewed output per PhD student". I encouraged my colleagues to support their PhD students to generate research outputs prior to the completion of their PhD program [A2]. The implementation of this strategy has the following impacts:

- improves the research outputs of the department (the number of ref-erable outputs per year has more than doubled since 2014 compared to the previous years);
- improves the students employability by enriching their CV with tangible outcomes;

- by receiving feedbacks from the reviewers, they can improve their dissertation writing up.

New managerial role

More recently, I moved from Postgraduate Research Tutor to the role of Research Communicator [A5]. In this function, I am responsible for the dissemination of the research successes of staffs in my department. In particular, I encourage my colleagues to introduce their own research outputs in their teaching material [V3]. This raises students' awareness that their teachers are actively contributing to the development of their own discipline, and this is something that was missing before my intervention. The effectiveness of this improvement in the departmental teaching practice is evidenced by the positive feedback received from the students [K2]. Specifically, in the last Periodic Review of the xxxx department chaired by xxxx it emerged that "Students appreciated it when staff talked about their own research in their teaching, noting the passion that is evident when they talk about it"; and " Students appreciated opportunities to be involved in research, e.g. through focus groups" (quotes from the Periodic Review minutes).

In addition to these leadership roles, I am also the Principal Investigator of the project "xxxxxxx" funded by the SHU Strategic Investment Fund [A5]. Together with colleagues, we created xxxxxxxxxx fitted with sensors to react to physical handling (by lighting up, sounding or vibrating). After interacting with the objects, the over 700 participants that took part to the experiment were given a tablet to respond to questionnaire queries regarding each object. The rich data collected during the research were multi-modal comprising of response times, questionnaire responses and video recordings [V2]. I provided this material to my colleagues to be utilized within various undergraduate and postgraduate programs in xxxxx, xxxx and xxxxx. This enabled tutors to establish stronger connections between research and teaching and expose students to innovative knowledge as well as providing them with opportunities to gain insights into data collection and analysis as performed by senior researchers [K6]. Further impact of this project stems from the fact that 10 students have been employed as research assistants. This enhanced their employability skills and encouraged them to consider continuing into research as a potential career.

In conclusion of this section, I wish to add that I have consistently researched the current trends to identify emerging technologies and best practice to support my own and my colleagues teaching practice. In addition to the contributions that will be outlined in the case studies, I have conducted research interventions on how technology can support teaching [K4] that I have presented at SHU Learning and Teaching conferences. Specifically, together with colleagues, we conducted a project on how technologies can support the delivery and the understanding of assessments feedback (xxxx, xxxx and xxxx, 2014) [A3] and how dynamic visual information can be used to enhance the learning experience [A4,V3] (xxxx, xxxx and xxxx, 2014).

I have indicated that the focus of my teaching practise is around the use of technology, and so I have dedicated my case studies in support of this aspect of my expertise. However, I am also an enthusiastic classroom teacher. I have designed, developed and delivered many programmes of study; I have conducted training workshops for staff on innovative research tools; I have developed a number of pedagogical materials and innovative teaching techniques to create interest and understanding among students; I have supported and managed my colleagues' teaching practice by introducing a culture where teaching is

informed by research as this enables students to keep abreast of the latest developments in the field which is useful to maintain their interest and enthusiasm for the subject area. Students appreciate my approach: I have already been nominated twice for a Faculty Inspirational Teaching Award.

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