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In celebration of students as researchers and peer learning leaders

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In celebration of students as researchers and peer learning leaders

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It is a great privilege to have the opportunity to write this editorial as it has encouraged me to look back through previous editions of this journal – by now a mature publication with 15 back issues. I have benefitted from the inspired ideas and wide experience of those editorial writers who have championed it since its inception. All of their ideas are as relevant right now as they were when they were written so I draw on some of them here.

We can be in no doubt of the ambition and capability of very many Plymouth students:

"I am a committed student striving to be the best that I can be"

(Marine Biologist, 2nd year PALS Leader)

Being a student researcher is a vital element of the experience of university. It has been suggested that learner resilience can be built by '…making difficulty more interesting and confusion less shameful' (Claxton, No Date). Claxton is speaking very directly to the context of the determined nascent researcher who learns to pick herself up when things don't turn out the way she expects, dust herself down and start all over again! Research is never easy and it is often confusing! Working in the muddle of what is not known in the discipline can be a tough and uncomfortable challenge (Kneale, 2010) and contrasts with secondary school culture where learning is firmly situated within the domain of the known (Zahra, 2011).

Peer-led learning is another way in which students can build resilience by confronting difficulty and confusion in a safe and friendly environment. This is true at Plymouth University where there are approximately 400 highly-motivated and empathetic undergraduate Peer Assisted Learning (PAL) leaders across all faculties who care a great deal about the conditions being right for their less experienced student colleagues to thrive and learn. So much so that they train and then plan and deliver regular study sessions in their programme. They understand that the value of peer learning extends to themselves and their own learning as well as the students with whom they work.

"I am interested in how people learn. To aid my own learning I have read about teaching and learning theories"

(Environmental Scientist, 2nd year PALS Leader)

The introduction into universities of the Teaching Excellence Framework (TEF) alongside the Research Excellence Framework (REF) reflects the efforts being made

to achieve balance between the two. Hopefully the TEF will have a positive impact on the REF, which is described by Jenkins (2008) as 'the Lord Voldemort of the academic world'. In reality teaching and research need to be symbiotic, as Sleight (2015) so vividly articulates when she draws on her own experience of being an undergraduate Marine Biologist, both are done best when woven coherently together.

In PALS we regularly see scientific rigour being applied to the successful design and management of peer learning sessions led by science students. Thus, the attitude of enquiry, so valued by employers (Crust, 2012) can also be flexed in a pedagogic context:

> *"I enjoy exploring engineering concepts with people … … to help students gain the right tools to be able to solve problems themselves."*
>
> (2nd year PALS Leader in Robotics)

This has led to PALS leaders in science starting to engage in pedagogic research in their own contexts, challenging the "narrow definitions of research" (Jenkins, 2008) and normalising a culture in which students input into the practice, pedagogy and curriculum of their academic school.

So is it too far-fetched to envisage a university community in which the majority of students are actively engaged in progressing their own learning, through the twin activities of research and peer-led learning? Where students have the chance to encounter the edge of what is known – not only through their lectures and the research of their academics but also through their own research? Where they not only attend lectures but also contribute to learning through a PAL scheme?

Universities cannot accurately predict what will be the specific element of learning that triggers a transformative experience for a particular student but by providing as wide a range of experiences and opportunities as possible they can seek to offer the fertile ground in which germination of new ideas can occur. This journal and peer learning both have the potential to inspire creativity and originality, to build resilience and to enrich the precious years of undergraduate study.

This issue of The Plymouth Student Scientist contains a wealth of evidence of Plymouth undergraduate scientists' commitment to learning and to being the best student researchers they can be. They follow their passion, often into domains beyond my understanding – laser therapy; pro-inflammatory cytokines; synthesis of alkyl xylenes, as well as within contexts more easily understandable to the general reader – how to optimise safety on puffin crossings and impacts on parents of children with autism. The variety of topics researched demonstrates a breadth of imaginative endeavour and combines theoretical science with projects that have practical applications. These could lead to improvements in both human and natural world settings. I am so impressed by the quality of the discourse through which the writers succeed in engaging the reader – it is indistinguishable in my view from the highest standards that academic journals typically achieve and I congratulate every one of the writers whose work is included in this edition.

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