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The institutional repository as a publishing platform for undergraduate research

Dr Elena Menendez-Alonso, Research Repository and Curation Manager, University of Plymouth

This edition of The Plymouth Student Scientist (TPSS) is the first published solely in the University of Plymouth's open access (OA) research repository, PEARL¹. For me, as repository manager, that is a cause for celebration. Even though the surge of open access repositories started in the early 2000s (Novak and Day, 2018), and despite these systems being "designed to capture the scholarly output of an institution and to maximize the research impact of this output" (Chan, 2004), traditionally speaking, institutional repositories are not the first point of call for publication of academic journals, least of all undergraduate journals. Repositories are intrinsically linked to the open access movement, and yet, depositing content in an institutional repository is often one of the last steps in the research lifecycle, and not something all researchers do by choice, but more of a procedural requirement. For example, postgraduate students are required to upload their theses to comply with university policy, and in doing so, obtain their degree certificate. Equally, research staff deposit copies of their papers or data to meet funder policies, and in many cases, when they do, the research has already been published elsewhere, often in a traditional journal.

PEARL certainly has followed this model. Established in 2006 to archive and showcase the University's research theses, for over ten years, and aside from the theses collection, much of the content has been deposited by research staff looking to provide open access to their publications, in line with funders' policies. Of course, there is nothing wrong with this conventional use of a repository, quite the opposite. I am a firm advocate of open research (Vitae, 2019), and it is great to see the content in PEARL grow year on year, even if this is initially driven by policy. It is just that the old (and perhaps naïve) romantic in me feels it is a pity that, after nearly twenty years of discussion and advocacy about the benefits of making research open (Joseph and Davis, 2017), we still seem to do things because we must.

Is the purpose of research not to advance knowledge, and to use this new knowledge to solve problems, inherently helping to make the world a better place? If so, wanting the output of our research to reach the furthest corners of the planet should be the natural aim of the University and its researchers. Similarly, allowing our top STEM (science, technology, engineering, and mathematics) undergraduates to publish final year projects to share with the wider community serves a better purpose, which could have wide ranging impact, not only institutionally but even internationally, as PEARL's content is available to anyone with an internet connection. In this respect, it can be argued that a research repository can also play other roles that are much needed in academia (Kelly and Eells, 2016). PEARL is ideally suited to hosting small-scale home-grown open journals, particularly those publishing the work of our graduates and post-graduates, and especially well-established ones, such as TPSS. The journals are safely hosted in a well-used institutional resource which increases their dissemination and outreach. And of course, at a time of economic pressures and diminished resources, there are added advantages to institutions in finding ways to be more efficient and do more with less.

¹ PEARL stands for Plymouth Electronic Archive and Research Library (<u>https://pearl.plymouth.ac.uk</u>)

In 2017, the perfect opportunity to put these ideas into action presented itself. The repository team started to receive requirements from the research community to provide archival services for open access journals. These journals were already available on their own websites, but the institutional repository could address issues of service continuity and future preservation. It would also enable the journal to be indexed in the online library system and search tool, Primo² (making it more visible and discoverable to our student and academic users) and by Google itself, if that was not already happening. Lastly, it enabled the University to bring the content under its own management, instead of relying on external services over which our academics had no control.

The first journal added to PEARL was the '*Plymouth Law and Criminal Justice Review*', which again largely features work of recent graduates. For the admin team, bringing this publication into the repository was an opportunity to investigate requirements and create a template for future titles. The journal served as a pilot, in which we adapted PEARL to deliver the look and feel of a standalone journal site. This includes a journal home page, issue and contents pages, as well as individual article pages with their own identifiers and permanent links. The '*Plymouth Law and Criminal Justice Review*' systematically tops the PEARL usage statistics charts (Menendez-Alonso and Seller, 2018), and I hope that in due course, TPSS will be delivering healthy competition on that front! It was indeed a successful pilot, although it did flag issues of scalability and sustainability, as all the work was carried out by a small repository support team.

In order to absorb the ongoing growth and management of the collection, we have developed new workflows to enable internal journal editorial teams to self-deposit articles into the institutional repository within an issue-based journal structure. The new model has allowed us to scale out the service to accommodate more journals. Three more have been added since 2017, and another is being planned, an exciting new journal covering postgraduate science research also to be hosted solely on PEARL. So watch this space, as the future is indeed looking good for graduate research publications.

As the editor of TPSS puts it, the journal presents our students with a unique opportunity to polish their research and academic writing skills (Truscott, 2018). I would add that it does also enable them to dip their toe in the sometimes complex world of academic publishing, experiencing in a safe and nurturing environment, processes such as peer review, editing and copywriting. It also introduces the important concept of Creative Commons licences³ (TPSS articles are published under CC-BY licenses to maximise access and reuse). In short, it sets our students on the pathway to become open researchers, amplifying the reach and potential impact of their research and helping to make our undergraduates the researchers of tomorrow. Knowing that we are providing a platform in which students can practice the skills they will need in their future careers, is a source of great satisfaction to the repository team.

I am excited, not just to welcome our fourth open journal to PEARL, but also one that will be published exclusively in the repository as an undergraduate research journal. As a published researcher – and I am sure that for many who have gone through the process of publishing a journal article it would be the same – this brings back good memories. I would say that the feeling that you get with a new publication is something very different compared to simply 'depositing' a paper, or even a thesis. It is not about reposing or resting or reaching the end of the line. It is about new beginnings, particularly in the case of an undergraduate journal. For

² PRIMO can be found at <u>https://primo.plymouth.ac.uk</u>

³ <u>https://creativecommons.org/licenses/</u>

most of these students, their paper in TPSS will be their first ever publication. That is an achievement and a cause for celebration for each one of them.

In summary, we have found that our new journal collections have delivered many benefits, some unexpected:

- The content is now securely hosted in the University repository, enhancing its preservation and discoverability.
- We can easily report on collection usage, and benchmark against other research outputs within UK repositories. This provides our journal editors and librarians with information to support engagement and understand the impact of the research.
- We have extended the use of the repository and contributed to building a platform to support experiential learning of skills such us research, critical thinking, academic writing and publishing.
- We have provided an additional platform to evidence the benefits of open access and drive awareness of open scholarship amongst our students.
- We have built new links with the University's teaching and research community as a result of working together to understand requirements and deliver a suitable resource.

I wish all future TPSS published students well and I hope that their publications lead to successful research careers and potential collaborations with other research groups across the globe.

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