Creating Institution-Wide Awareness of, and Engagement with, Open Scholarship

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INTRODUCTION Strategies for how, when, and why to communicate on the topics of Open Scholarship (OS) are many and varied. Here, the author reflects on how a small, regional university library went from a low knowledge base of OS to having OS more thoughtfully and thoroughly considered across many aspects of scholarship. **DESCRIPTION OF APPROACH** The author discusses how, over a three-year period, the library turned OS from being seen as a topic only the library deals with, to a nuanced conversation present across many levels of a university. This was done in three broad stages: first, upskilling librarians; second, reaching out to others working in this space and creating conversations across campus; and third, broadening conversations to different audiences whilst beginning to embed OS in institutional practices. **NEXT STEPS** Collaborative engagement across various levels has worked well for this university. The library will continue this approach to further embed OS in the culture of the institution while looking to further collaborate across the institution, and working with colleagues and OS advocates in other organizations, groups, and bodies.

INTRODUCTION

Stemming from three Open initiatives in the early 2000s,[1] the topic of Open Scholarship (OS) has been discussed, argued, embraced, and denied across higher education. For many of these years, tertiary libraries globally have been central to this discourse, often leading change in their institutions.

The University of New England, NSW, Australia (UNE) is a small, public teaching and research university in regional Australia, where the teaching of undergraduate and post-graduate students is predominantly online. Research strengths of the university are tied strongly to agriculture and there are well-established partnerships between the university and local agricultural industries, and state and federal government departments. Recent experience has highlighted that various departments must collaborate on projects with shared outcomes to maximise the institution's potential to improve research outputs. The topic of OS is no exception. OS has traditionally been considered a "library topic," with roles and teams driving the OS agenda based in the libraries of many Australian and international tertiary institutions. This approach, in which the library is seen as the "holder of all knowledge," is not necessarily the best approach at UNE. This article reflects on how UNE Library has taken steps to lead the development of institution-wide awareness of, interest in, and commitment to OS through continual communication, outreach, and engaged education from mid-2017 to early 2020.

An increase in OS engagement and outreach was a consequence of numerous factors. These include the ties UNE has with industry and the need for industry partners accessing research beyond subscription databases, the cost of textbooks for students, the changing dialogue around public access to publicly funded research, and the interests of individuals in the library. Overall, much of this communication, outreach, and education was not planned, strategized, or theorised. Rather, it evolved. Only upon reflection did the clear approaches, drivers, and phases become apparent. While "there is no out-of-the-box program that can be implemented by libraries seeking to address the crisis in scholarly communication" (Corbett, 2009, p. 130), it is hoped that the reflections in this paper will provide guidance for others seeking ways to approach OS at an institutional level. This paper discusses the challenges encountered and how these were overcome to achieve a more integrated and cohesive approach to OS, not only for UNE Library, but also for the entire institution.

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[1] Budapest Open Access Initiative (2002), Bethesda Statement on Open Access Publishing (2003), and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003)

In this article the term "Open Scholarship" is an umbrella term to cover a variety of topics including, but not exclusive to, Open Access (OA), Open Data, Open Educational Resources (OER), Open Educational Practices (OEP), Open Software, and Open Code. When discussing a specific topic, the author refers to it as such, and the use of the term Open Scholarship, is in reference to the topic more generally. The term "tertiary" is also used throughout this article to refer to universities and libraries in the higher education and academic sector.

LITERATURE REVIEW

The literature around OS focuses heavily on the outreach done by librarians to better educate and engage with, predominantly, researchers. Open Access (OA) requires both outreach and education, yet many existing misunderstandings are major obstacles for individuals and institutions to overcome (Goger, 2015; Dawson, 2018). Further research highlights that these misunderstandings often relate to misconceptions, lack of familiarity with the topic, preconceived notions of what OA is, and a lack of time which all contribute to a resistance in engaging with library staff around these topics (Otto, 2016, citing: Yang & Li, 2015; Creaser, 2010; Swan & Brown, 2004; Swan & Brown, 2005; Suber, 2012). Coupled with this potential resistance to engage with library staff is the growing disengagement with physical library spaces. With more online resources, library users may believe they never need to visit a library or engage with a librarian to find what they seek. Postgraduates and academics are the most likely to "escape" from libraries, with some believing that they no longer need library services as they have access to everything they need via Google Scholar (Kaatrakoski & Lahikainen, 2016). This has led to librarians adapting services from collection-centric to user-centric, which allows them to be more proactive and integrated in their roles, to feel empowered to leave the physical library, to forget the jargon of scholarly communication, and to create innovative services where their users need them (Kaatrakoski & Lahikainen, 2016).

Outreach and scholarly communication as it relates to OS is as much about addressing the "why" of different audiences as it is about how librarians communicate with them. As summarised by Otto (2016), while many people have recommended outreach programs, little has been said on how the specific messages of OA should be disseminated. Often, too, when the OA message is delivered, it is considered too general and not applicable to the audience in question (Kenney, 2015). Knowing the "why" is key as "often, negative factors and positive factors coincide; one person's motivator is another person's barrier" (Otto, 2016, p.3). The importance of addressing the audience in a meaningful way is also noted by Cirasella (2017), Goger (2015), and Dawson (2018). When looking at the broader term of OS it is even more critical to address the audience in an engaging, clear, and informed way.

To offer some examples, for academics, OS incentives may be associated with their ability to pay Article Processing Charges (APCs), their field of study, a sense of public good, or the point they have reached in their career (Heaton, Burns, & Thoms, 2019; Olejniczak & Wilson, 2020), whereas a student's engagement with OS may initially occur when struggling with the cost of textbooks (Senack & Donaghue, 2016). As is expected, the driver for engagement with OS for research administration staff and university senior executive is institutional visibility and prestige (Cirasella, 2017) as well as the need to meet funder requirements (Otto, 2016).

An important factor to acknowledge when discussing all forms of library outreach is the potential pushback librarians may face when conducting educational outreach on scholarly communication. Corbett (2009) and Dawson (2018) both note that academics may resent librarians or library programmes for trying to educate them on processes with which they believe they are already familiar. A further factor in the Australian landscape is that most librarians are not embedded in Schools or Faculties in the same way many of our North American colleagues are. Librarians are classified as professional staff and, while sometimes assigned a School or Faculty, librarians are usually based in the library building. Further, in personal experience, librarian roles are determined by workplace structure and often result in individuals working outside their personal academic interests or employment experience. According to Dawson (2018), a way for librarians to become better embedded in the disciplines they are assigned is to establish good, working relationships that are more conversational than directional. Further, librarians could, create individual champions within school and faculties who can deliver the library message on our behalf (Dawson, 2018). Using the library and librarians to champion and advocate for OS within academia is a well-worn path to achieving success. As Otto (2016) notes, having faculty champions is a key to success and uptake. Experience at UNE has found an institution-wide approach with engagement across all staff levels and roles, from postgraduate students to executive-level staff, academics to administration officers, at times led by UNE Library, has been a successful practice for UNE.

APPROACHES

Three clear stages for awareness and engagement with OS have emerged at UNE. Our scholarly communication and outreach with regard to OS has targeted different audiences at different times and in different ways, yet always with the same intention of creating institution-wide awareness, consideration, and engagement with OS. Outlined below are these three stages, noting the timeline of events, the audience, how and why UNE Library engaged with them, and the challenges that were encountered.

Part 1- Open Scholarship is an issue for the library to deal with

UNE Library underwent a restructure with new librarians commencing employment from late 2016 to mid-2017. Roles were divided into research support librarians, who supported academics and post-graduate students with their research needs, and learning and teaching support librarians, who supported academics with their teaching requirements and under-graduate students. A period of upskilling and engaging librarians on OA and Open Data was commenced by the acting manager of the research support librarians. This took the form of conversations with individual librarians about key issues within copyright, OA, and Open Data, as well as using recognised events, such as Open Access Week, to further engage colleagues within the library on these topics and issues.

Throughout 2018, UNE Library's efforts were placed on outreach services and engagement that centred on topics of librarianship such as archiving research data, developing online library content, and migrating to a new institutional repository. While OS can be part of many of these conversations, in this instance it was not the focus. Challenges throughout this phase included having an almost entirely new team and defining roles and a service catalogue. With regard to OS, challenges were broadly addressed with library staff engaging through activities such as Open Access Week, and the development of resources in the broader areas of scholarly publishing, data management, and the new repository that increased understanding around OA and Open Data. Overall, 2017–2018 was very much about the library focusing on capacity building and growth of library staff.

During the same period, the Learning and Teaching Transformation (LATT) Directorate, which sits in the same portfolio as the library, was also in the process of a restructure. LATT provides teaching and learning support for staff and students through collaboration, scaffolded learning design, and course renewal. The staff changeover and role refocusing in both areas meant that each area was more inward focused than they would normally be. Reconnecting across the directorate took time and one of the main drivers across teams was a shared emerging interest in OS in the teaching and learning sphere. While there were many factors that contributed to reconnecting the two areas, many of the events and activities discussed in Part 2 contributed to this.

As mentioned, a significant event at this time was the migration, by the library, of UNE's institutional repository to a new software platform, which took place over a 6-month period in 2018. In the 18 months that followed, this provided librarians and repository staff with opportunities for focused outreach and communication to the academic community. Discussions about these repository changes, and relating them to OS, simultaneously served to both embed and expand librarians' understanding of the topics. This was the beginning

of the second, and largest, of the three phases, broadening the OS conversation to include people outside UNE Library.

Part 2- Engaging with established communities

The second phase of the expansion of OS focused on reaching out to others because, as noted previously, in an era of user-centred librarianship, librarians need to be proactive and integrated into the work of researchers (Kaatrakoski & Lahikainen, 2016). In the first quarter of 2019, the role of Research Relationships Manager was created. This role drives relationships and projects of interest to the entire UNE Community from a library perspective. With the creation of this role, the topic of OS could be more formally recognised by UNE Library, thus allowing more time and resources to be dedicated to it. This position also opened up channels of communication between the library and UNE's Research Office. The Research Relationships Manager has regular meetings with the Director of the Research Office and hot desks out of the Research Office one day a week. This more continuous communication, in both formal and informal settings, allowed for topics such as OS to be spoken about more frequently, and in relation to broader topics, for example; the relationship between OS and the institutional repository, strategic approaches to research, and analysis of publishing and citation patterns.

At this time, UNE Library joined the Australasian Open Access Strategy Group (AOASG). The AOASG is a group of individuals from numerous tertiary institutions across Australia and New Zealand/Aotearoa who meet to discuss opportunities, experiences, and outreach in the OA and copyright space. UNE Library organised a visit from the director of the AOASG in mid-2019. A 2-day event was held, centred on information sessions, workshops, and meetings. The information sessions were open to the entire UNE community and people joined in-person and online. To increase interest, the Research Relationships Manager communicated with a number of individuals across campus to inform them about the sessions, provide background information, and explain how the topic of OA intersected with and informed their roles. As a result, attendance was adequate and a number of different areas of the institution were represented. The event was catered for and, as UNE is situated in a rural town, the willingness of people to travel to talk on this topic did not go unnoticed. Most attendees were professional staff members from the library, research office, and some of the Faculties, and content covered by the AOASG included a timeline and summary of OA in academia, the drivers for different audience's engaging with OA, and the advantages of publishing OA. A specific workshop was held for library staff (though open for anyone to attend, and some academics did) to brainstorm how to engage the wider community with OA and how to advocate in different ways.

The following day, meetings were held between UNE Library, the AOASG, and targeted groups across campus. These groups included the senior executive team, early career researchers, and staff from the Research Office and Office of the Deputy Vice Chancellor for Research. This allowed for targeted discussions around the state of OA at UNE, what each of these groups knew about OA, what they needed more information on, and the ways in which they wanted to engage with others in this space. As a university, this event signalled a change in how UNE Library opened the OA dialogue to be a universal theme across many facets of university teaching and research. It allowed us to use this groundswell of interest to collectively start forming a Community of Practice.

As a way to maintain the momentum of this event and to further involve people throughout UNE, a Community of Practice (CoP) for those interested in OS was formed. This group meets monthly and topics of discussion are varied. The Research Relationships Manager, as the administrator for the group, has deliberately avoided making this a "library" space, with meetings scheduled in different areas across campus and online spaces. Regular attendees include academics, librarians, staff in LATT, repository officers, and postgraduate students. Meetings last around 60 minutes and, of the 30-odd people on the group's mailing list, about a dozen often attend. There is no set agenda, and discussions are influenced by who has come along and what they have been working on, and many have found this group useful in engaging with people through specific topics and questions. For example, the Research Relationships Manager and Senior Copyright Advisor presented the group with a Capability Maturity Model (CMM) to assess how the CoP thought the library was performing with regard to outreach, services, and information on OS. This CMM was adapted from a data management framework model used by the Australian National Data Service (see Appendix A). The feedback from this exercise went on to inform outreach activities, especially with regard to the institutional repository and library services for academics and students, and highlighted the need for more advocacy about OS in institutional policies and procedures. The group has provided feedback on a series of OS, copyright, and Creative Commons outreach materials. Others in the group have asked for advice on selecting Open Educational Resources, using Open Data, have presented Open materials they have created, and have discussed their experiences in creating and/or using Open Scholarship materials. The CoP allowed individuals who were very enthusiastic about discussing various elements of OS to talk with other like-minded people while also allowing others to learn more about the OS environment and keep up-to-date.

Throughout 2019, outreach concerning UNE's institutional repository, Research UNE (RUNE), was also increasing. The Research Relationships Manager and repository team provided various outreach and training sessions to academics on how to use RUNE and why they needed to use it. These outreach sessions were done in person and online and

were often discipline-based. As is well noted in the literature (Otto, 2016, citing: Mark & Shearer, 2006; Jantz & Wilson, 2008; Salo, 2008; Covey, 2011; Cullen & Chawner, 2011), engaging with academics about using an institutional repository can be quite challenging. UNE Library realised that highlighting the importance of the institutional repository as a way to achieve OA assisted in addressing questions around Open publishing and APCs, as well as engaging with academics on using RUNE outside of citing institutional policy mandates and annual reviews. When the conversations changed to focus on this, and not just using the repository because it is an institutional requirement[2], researchers were much more interested, actively asked questions, and often reached out to the library afterwards.

The key challenges throughout this phase included maintaining interest in OS discussion and events across campus, competing institutional and library priorities, and academics' reluctance to engage with the institutional repository beyond seeing it as an additional administrative burden. To address these challenges, UNE Library used some of the skills we had learnt over the last 18 months, namely being able to have more nuanced engagement with people across campus. By tapping into the "why" of each community we were communicating with, we could further drive discussions around OS. Adapting our language when discussing the repository away from policy to how academic's may not need to pay APCs suddenly had a lot more people—in many different academic and professional roles—paying attention.

The challenge of competing priorities is difficult to overcome and sometimes refocusing on a different element of OS or type of outreach was the best approach. While library staff was ready to discuss OS, many audiences we were addressing were not interested in this topic in and of itself. During presentations on OS to academic groups, often the interest and attendance was low. We refocused this outreach into assisting academics on their priorities and brought OS, where applicable, along. For example, assistance in bibliometrics and analyzing potential academic impact is a heavily requested service. Librarians began mentioning how OA publications and Open Data publications are more available to more people, with one study showing, on average, OA articles receive 18% more citations (Piwowar et al., 2018). As OA publications are not behind subscription journals or databases they are accessible to people beyond academia, such as people working in industry or policy. Given UNE's research disciplines, both of these non-academic audiences are of interest to many academics and they were more likely to engage in conversation about Open publishing when this was mentioned. A document that assisted us at this time was Brian Nosek's approach to change management (see Appendix B). Nosek's (2019) approach to changing the research culture

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[2] At UNE, academics are required to submit research outputs to the institutional repository for internal (promotions) and federal (Excellence in Research for Australia) reporting purposes.

of an organisation in different stages highlights that there will always be innovators and early adaptors, as well as those who will not change until forced to by requirements. Once an idea is culturally 'the norm', the majority of people will change their behaviors to fit in. The last group of people— "the laggard"— will change their behavior because it is required. Referring back to this simple diagram helped put outreach into perspective. If an individual or group was not interested in discussing OS, that was okay; perhaps they are not part of the "early majority" we were currently targeting and we can reconnect with them when UNE has entered the "rewards" stage of cultural change.

Part 3- Including Open Scholarship in the UNE conversation

The third phase the library entered, mid-way through 2019, was marked by a broadening of the OS conversation and a shift in the approach from sporadic, one-off events to a more continuous, business-as-usual approach. This involved liaison librarians speaking to schools and faculties about various types of OS more often, increasing conversations with the senior executive team and the Research Office, and embedding OS updates in outreach that was being done at the strategic level. This phase corresponded with the academic community as a whole becoming more aware of OS through international movements such as cOAlition S' Plan S[3]. The senior executive at UNE was made aware of OS through the work of the Council of Australian University Librarians (CAUL) and the AOASG at key national planning days. The release of the 2018 Excellence in Research for Australia (ERA) results[4] brought further attention to OA. Conversations following this allowed the library to highlight to Executive staff how UNE's repository can be used to make research outputs open. This information, presented alongside the potential savings cost of not having to pay APCs, provided a large buy-in point for Executive staff.

In mid-2019, three new positions were filled at UNE Library, all of which would prove pivotal to the progression of outreach and broadening the Open Scholarship conversation. The Manager, Academic Services and Outreach was able to unify and direct the work the liaison librarians were undertaking. Clearer roles, Key Performance Indicators, and goals allowed liaison librarians, who have regular conversations with academics with regard to both teaching and research, to more fully advocate for OS. Further, two Digital Experience Librarians were employed, with one focusing a large part of their role on Open Educational Resources (OER) and Open Educational Practice (OEP). Having someone dedicated to

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[3] cOAlition S is a Europe-based consortium of research organisations driving the adoption of Open Access. Currently, their main campaign is Plan S. For more information- https://www.coalition-s.org/

[4] ERA is a national level assessment of research conducted at higher education institutions as led by the Australian Government's Australian Research Council. It is often likened to the UK's REF.

these elements of OS opened up conversations with academics about incorporating OER and OEP into their teaching. Part of this outreach plan included LATT staff who, under the guidance of a new director and a new Programme Director for Academic Development, were also looking to the OS space through such initiatives as a university-wide curriculum renewal project. A major project for LATT at this time was course and unit renewal and a key component for the Programme Director was the inclusion of OER in curriculum renewal and redesign.

At this point in time, librarians felt more confident answering questions from academics and students around a variety of OS topics and we felt there was more on-the-ground support. For Open Access Week in 2019, we conducted outreach across campus that included running pop-up information booths at campus cafes, commissioning an OA inspired artwork, installing a chalkboard in the library asking people what "Open" meant to them, and hosting an "Open in October" campaign, which highlighted the use of UNE's institutional repository to achieve Open for publications, datasets, code, and software. Further to this, in the last quarter of 2019 an institution-wide policy and guideline renewal was announced that allowed UNE Library to highlight the need to update the institution's policies regarding OS.

In early 2020 UNE Library joined the Australian chapter of the Open Textbook Network (OTN) to assist UNE with incorporating OER into course and unit offerings. An event was facilitated by the library and LATT to discuss what each area was doing with regard to OER and OEP and to see where and how the two departments could better inform and support UNE's academics and students on these topics. This event included a guest presentation on OER and OEP advocacy by the Manager for Open Educational Practice at the University of Southern Queensland. Similar to the OA advocacy workshop led by the AOASG some 8 months before, this event served as a catalyst for UNE Library to begin to solidify our engagement approach and outreach initiatives. The library is also advocating to have Open Scholarship—particularly Open Access publications, Open Data, and Open Educational Resources—considered as a marker of excellence for UNE's internal academic promotions rounds.

LESSONS LEARNED

Listed below are some of the lessons learned throughout this time period. The author has provided a statement with a reflection for each point. These lessons will likely inform how UNE Library approaches the next phase of our interactions with OS.

Start talking about Open Scholarship all the time, even if OS isn't the main topic – Discussing OS can be done regularly, whether it is the focus of the conversation or not.

Our experience with audiences not engaging in OS when presented as a sole topic led us to embedding OS outreach in other work. We hold regular sessions on strategic publishing so we incorporated OA into these. When providing training on data storage and archiving, we also mention Open Data. When discussing reading lists for teaching we highlight OER. We came across this form of outreach in a more organic way than some of our more planned outreach. It would have been of benefit to sit down early and map where the points of OS and the research lifecycle intersect and discuss how we may integrate into these topics earlier.

Open Scholarship is bigger than any one person – OS is a broad concept that changes quickly and can be very overwhelming. Having someone on campus who can dedicate time to co-ordinating information, outreach, and services helps, but they cannot do it alone. Once the OA conversation gained momentum the Research Relationships Manager could not be the one "go to," so UNE Library created an internal group to discuss OS while also creating a space for those outside the Library to join in the conversation through the CoP. The liaison librarians were more empowered to handle questions around OS more regularly through internal workshops and attending specific events such as the information sessions hosted by the AOASG. Having more people involved means more can be done and reduces burnout by individuals.

Everyone already knows about Open Scholarship, or, at least, they think they do – Almost everyone we spoke to in the initial stages "knew" about OA. However, it quickly became apparent that this knowledge was, most often, out-of-date or misinformed. We learned to assess where people's knowledge-base was, often through just a simple conversation, and then worked with them to build that up. This allowed for trust to form and for individuals and groups to engage with us and become more interested in the topic while comfortable in the space. A topic that would have been good to address earlier was that of Open Data. While we decided to focus specifically on OA, highlighting Open Data at the same time would have been of benefit to the audience we were engaging with and would have addressed issues specific to Open Data earlier on.

Highlight the "why" – Contextualizing the benefits of OS within people's interests proved to be quite difficult at times- an academic in one discipline may be all for Open Data but their colleagues are not, a Head of School may see the benefit of OS but their Faculty colleagues may be focused on other issues. As we became more experienced in talking about OS to various groups, we could better adjust and highlight different elements of OS. The AOASG workshops were useful for providing librarians with key points of engagement, as was the growth in individuals' confidence in discussing the topic.

Reach out to other libraries, librarians, and groups – Connecting with colleagues in other institutions proved invaluable to UNE Library. As a small institution, we often do not have the resources to develop everything new. Being able to reuse information sheets and outreach activities already developed, and contextualise them to our needs, saved us a lot of time. Joining such groups as the AOASG and the OTN allowed us to keep up-to-date with what other institutions were discussing, planning, and grappling with and allowed us to feel less isolated in the work we were doing.

NEXT STEPS

The Open Scholarship landscape at UNE has changed dramatically in recent years. Through focusing outreach and scholarly communication on different audiences at different times, UNE Library has built both the skill-set of individuals and the skill-set of different departments and areas across the institution through past learning. This approach has created a base knowledge housed within the library where librarians and repository officers feel more empowered to not just answer questions on OS, but to actively engage with the academic community about these topics. While there are many influencing factors and drivers within OS, the work by UNE Library staff outlined in this paper has undoubtedly facilitated in the creation of OS advocates and champions throughout the UNE community. While there is still work to do in moving OS out of the library and making it more embedded in the UNE community, we are confident that this is progressing.

Through proactive and nuanced outreach and communication with the UNE community the library has engaged in what Goger (2015) identifies as a two-way mode of communication, readjustment, and relationship-building. At UNE, this group of OS champions includes library and other professional staff, academics, postgraduate students, and research managers who discuss advances, changes, and setbacks with their own communities while having semi-regular contact with other OS advocates.

Next steps include continuing this work through maintaining relationships and conversations, while expanding into other areas of the OS conversation. This includes highlighting the importance of Open Data and how this may be achieved, embedding the F.A.I.R. principles[5] to our work and outreach, and speaking directly with academics about OER jointly with the LATT-led curriculum renewal project. UNE Library remains engaged with the institution-wide policy and guidelines renewal process, and is advocating for

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[5] The F.A.I.R. Principles ensure research outputs are Findable, Accessible, Interoperable, and Reusable. For more information- https://www.fair-access.net.au/background-information

Open research outputs to be seen as a marker of excellence in academic promotion, allowing UNE's approach to OS to be not only normative but rewarding (Nosek, 2019).

Upon reflection, it has been engaging with each of these distinct audiences at separate times and in individual ways that has aided us. By understanding the why and contextualising OS for each of these audiences, library staff have increased individual and collective interest, understanding, and need for OS in a relatively short amount of time. There has been a marked increase of individuals and groups across campus contacting the library for more information on OS and inviting the library to speak at a number of forums. Examples of these forums are: presenting on Open Scholarship within an international, national, and UNE context for the Senior Executive Research Summit, discussing OS with various groups of Early Career Researchers and postgraduate students, providing information- via meetings, phone calls, emails, and blog posts- to interested academics as required, and advising Faculties and Schools where OA publications may align with their research and publishing strategies. It was of great benefit to UNE that the library had a team of people who were up-to-date with OS content, engaged with the conversation, knowledgeable about the OS landscape across Australia and internationally, and had resources on hand to use when the phone calls and emails for updates and clarification began coming in. The work behind this, of course, began years before.

A challenge UNE Library is still facing is the overall breadth of OS. While this breadth has always been acknowledged, initial focus was on OA. Through outreach, communication, and education, librarians have informed the UNE community on these topics and expanded this to include Open Data, OER, and OEP. However, this is a fast-moving field and keeping the library up-to-date can sometimes appear overwhelming, let alone other directorates and individuals. As the skillsets of individuals grows, people's interests are focused more towards one aspect of Open than other. This approach may work in creating specialists in that area, though we are aware that everyone will need a grounding across all areas of OS.

OS is an expansive, complicated, and ever-changing topic. Having people from across the institution regularly working in this space allows us to keep abreast of changes, updates, themes, and types of outreach that are needed. UNE Library will always have an active role within the OS space. Going forward the library will be solidifying these relationships with continued contact, outreach, and, hopefully, more formalised projects. It is encouraging that the library has been able to assist in creating strong allies across many levels of the UNE community and beyond it. By engaging in the ways outlined in this paper, UNE Library has created a campaign that fits with UNE; community-led, collaborative, transformative. Looking ahead, UNE Library intends to continue our involvement with industry leaders and the wider OS community through working with the OTN and the AOASG. The work

will continue to be collaborative, address the direct needs of the audience we are talking to, and be embedded in how we all practice and support scholarship.

POSTSCRIPT

At the time of writing, the author is in the first month of self-isolation due to the CO-VID-19 global pandemic. The author has observed that, in recent weeks, there has been an increased push for Open Data and Open Access research to be made available if it pertains to COVID-19. Publishers the world over are releasing content to this effect (World Health Organization (WHO), 2020), and libraries and tertiary institutions are turning towards eTextbooks and OERs en masse to meet student needs. Much commentary across the Galleries, Libraries, Archives, and Museums (GLAM) and research sectors is focusing on the ways this will change the perception and use of OS well beyond this pandemic crisis.

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APPENDIX A

The below Capability Maturity Model (CMM) has been designed to measure institutional capability under four elements: policies and procedures, repository infrastructure, support services, and managing Open Scholarship. This model has been adapted from the CMM used by the Australian National Data Service (ANDS, now referred to as Australian Research Data Commons (ARDC)) to develop a data management framework. More information on this can be found at: https://www.ands.org.au/guides/creating-a-data-management-framework

The four elements provide a measure of maturity along a spectrum of labels: Initial, Development, Defined, Managed, and Optimised. These five labels delineate Level of Maturity and indicate an institutional progression from initial considerations of Open Scholarship (OS) issues towards the ideal of an optimized implementation of OS practices and infrastructure contextualized to the workings of the university.

Stakeholder areas	Level 1 Initial	Level 2 Development	Level 3 Defined	Level 4 Managed	Level 5 Optimised
	Process is disorganised & ad hoc	Process is under development	Process is standardised, communicated	Process is managed, measured	Focus is on continuous improvement
Institutional policies & procedures	Policies & procedures may be undeveloped, not up to date, and/ or inconsistent.	Policies & procedures are developed & harmonized.	Policies & procedures are promulgated & absorbed into behaviors.	Policies & procedures accepted as part of the culture & subject to audit.	Policies & procedures are subject to review & improvement.
Repository infrastructure	Repository infrastructure provision is patchy, disorganised & poorly publicized.	Funds are invested in technology & skills. Responsibilities are defined. Processes are established, defined & documented.	Management shows active support. Facilities are well-defined & communicated, standardised & integrated.	Funding adapted to need. Management actively engaged. Documentation kept up to date.	Concerted efforts to maintain, update & publicize infrastructure. Metrics & feedback used to optimise services.
Support services	Training is ad hoc, curation & preservation services are disorganized, OS planning is unsupported & other services inconsistent & poorly publicized	Investment in skills. Services identified & staffed. Responsibilities are defined. Documentation & training developed	Active participation in training & widespread availability of services.	Widespread take-up of services. Curation & preservation acknowledged as critical to the Institutional mission.	User feedback used extensively to update & improve services.
Managing Open Scholarship	Open Scholarship is chaotic & understood by only a few.	Responsibilities are defined & skills developed. Processes are established, defined & documented. Open Scholarship is applied to strategic elements	Processes are standardised & integrated. Open Scholarship is applied to new publications & resources	Open Scholarship quality metrics collected. Open Scholarship is applied to all publications & resources	Continuous improvement applied to processes & capabilities.

APPENDIX B

Diagram of Brian Nosek's approach to change management, as discussed in Approaches-Part 2.