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Re-envisioning the role of academic librarians for the digital learning environment: The case of UniSA Online

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Re-envisioning the role of academic librarians for the digital learning environment: The case of UniSA Online

Abstract

Academic librarians cannot escape the implications of the knowledge economy and the pervasion of technology which effects everything that we do. Similarly, we must be prepared to teach our students how to cope in this knowledge society and how to develop the necessary information and digital literacy skills to be productive members of society in a digital environment. This article explores the first eighteen months of our experience as digital curriculum librarians in a large project at the University of South Australia (UniSA), UniSA Online. We have taken this opportunity to critically reflect on being embedded librarians within such a strategic and unique project. We examine the key cultural, pedagogical and technological challenges we have faced in delivering resources, support and services to the project team. The solutions we have adopted to overcome these challenges within an intensive course development environment are also outlined. The importance of building good relationships both within the project team, academics and with other library staff to deliver positive outcomes is discussed. We examine the pedagogical imperatives we have followed and the technological challenges we have faced to provide an active learning experience for our students in a digital learning environment. Our role as digital curriculum librarians is still evolving, however, we can observe some emerging trends within academic librarianship and comment on them, as we believe that the imperatives of the knowledge society will only become more prevalent into the future. We conclude by outlining which professional skills we need as academic librarians to evolve our roles and be successful in the digital world.

Keywords

academic librarians, university libraries, embedded librarianship, information literacy, digital curriculum, online pedagogy, professional skills, digital learning environment

Introduction

The transformation from an industrial to a knowledge economy is changing the internal and external working environments of the institution we have called a library for the past 250 years. This transformation influences what librarians do, how they work, where they work, how they are perceived, and what competencies they need to succeed in this new environment (Bedford et al. 2015, pp. 81-2).

Academic librarians have traditionally been seen as facilitators, connecting users and the information they seek. For centuries librarians have acted as gatekeepers and guardians of information and have been valued in that role. However, the onset of the knowledge economy has disrupted this traditional role. The knowledge economy, originally predicted by Drucker (1969), highlighted that knowledge would become the key commodity of future economies overtaking labour, natural resources and capital. As librarians we cannot escape the implications of the knowledge economy and the pervasion of technology which effects everything that we do. Managing our physical collections is no longer our primary purpose, instead we have to capitalise on our capabilities as information management professionals. It is imperative that we evolve to stay relevant and valued within our institutions in this time of rapid change (Bedford et al. 2015; Sappington & Bedford 2017). Similarly, we must be prepared to teach our students how to cope and to develop the necessary higher order thinking skills to be productive members of society.

Methodology

This article uses a reflective case study approach to explore the first 18 months of our experience as digital curriculum librarians in a large project at the University of South Australia (UniSA), UniSA Online (UO) (Yin 2003). By using a qualitative approach we have been able to capture and place our experiences within the wider context of academic libraries (Bentley & Kerhwald 2017; Denzin & Lincoln 2008; Stake 2008). In particular we have used a narrative inquiry methodology to explore the key cultural, pedagogical and technical challenges that we have faced and the solutions adopted to attempt to resolve these challenges. From this reflection we propose which skills and attributes academic librarian need to stay relevant in the knowledge economy (Clandinin & Connelly 2000). In writing this reflection we have relied on data collected in the form of statistical record keeping of appointments and resources created, reporting over the last 18 months for senior management on our activities, and discussions and observations between ourselves as well as with other members of the UO project.

Context

UniSA Online delivers career-focused, online degrees offering a flexible learning experience where students can study at their own pace to suit their lifestyle (University of South Australia 2018). This project is intended to capitalise on a rapidly evolving digital world and a growing online education market¹ (Munro-Smith 2018) which will allow the University to attract students regardless of location or commitments. Most importantly it aims to give students a unique, authentic and interactive learning experience. This initiative was signposted in the University's *Digital Learning Strategy: 2015-2020* (University of South Australia 2015b).

¹ According to the *IBISWorld Industry Report X0008 on Online Education in Australia* the industry has seen an average annual growth of 5.5% in online education between 2013-2018. Even though the sector is slowing it is still predicted to grow by a slower rate of 3.8% annually from 2018-2023 (Munro-Smith 2018).

UniSA is the youngest of three public universities in South Australia with over 31,000 students and has six campuses in Adelaide and regional South Australia (University of South Australia n.d.). UniSA has a large library spread across five of these campuses and has a team approach to support teaching and learning in academic divisions (faculties). This was an innovative decision at the time of inception and is indicative of the flexible approach the Library is prepared to take to meet changing needs in the academic world (Dorskatsch 2007). The Library no longer has a university librarian, but a chief information officer who manages both the Library and Information Systems and Technical Services (ISTS)

To support the *Digital Learning Strategy* the Library launched its own digital collection strategy in 2012. In 2016, the Library also enhanced its online reference service '*Ask the Library*' – *Anywhere, Anytime, Any device* to provide an easy to use, extended hours referencing service for all students, regardless of location (Hockey 2016). As a key stakeholder in the *Digital Learning Strategy* with relevant services and expert staff, Library management were keen to explore a new and unique approach to support UO.

The Library proposed creating two digital curriculum librarian (DCL) positions to be embedded into UO. These were the first of their kind at the UniSA Library. A new position description (PD) focusing on digital pedagogies and curriculum development was developed to reflect this opportunity and the Library negotiated with UO administration to fund one position while the Library funded the other for the first year. There was no comparable PD available, so a new one was written with reference to our existing PD, but also the PDs for UniSA online educational designers, academic developers, and other external roles requiring digital literacy, education and digital media (see Appendix 1).

There are noticeable differences between the academic librarian PD and the DCL PD. The latter emphasised the need for an in-depth knowledge and understanding of the digital environment, digital resources and online pedagogical practices. There was also an explicit expectation that these positions would be leaders and innovators in the Library's digital curriculum delivery (University of South Australia 2016, p. 2). These skills and attributes were not required in the academic librarian PD with its much more traditional focus on supporting research and information literacy education (University of South Australia 2015a).

UniSA Library is not alone in deciding it needed to transition positions to suit the online learning and teaching environment. There are a number of recent studies that analyse digital library job advertisements which all concluded that there is a need for staff with either relevant digital and IT or multimedia skills (Choi & Rasmussen 2009; Heinrichs & Lim 2009; Ocholla & Shongwe 2013; Raju 2014; Raju 2017; Shahbazi & Hedayati 2016). Choi and Rasmussen (2009, p. 465), in particular, observed the frequent appearance of "technological skills and experience, metadata, digital content creation and management, and managerial skills for changes and collaboration". For such a key skill it is surprising that neither the Australian Library and Information Association's (ALIA) core competency document *The Library and Information Sector: Core Knowledge, Skills and Attributes* (Australian Library and Information Association 2014) nor the American Library Association's (ALA) core competencies document (American Library Association Council 2009) make explicit reference to digital literacy or digital pedagogical practices.

These positions commenced in January 2017 and formed part of the project team which also consisted of one associate dean: online education for each university division, plus academic developers, online education designers and relevant academics. The aim was to deliver 12

undergraduate degrees with a start date of January 2018, with all course development to finish by the end of 2018.

What follows are our reflections on three themes in our experiences as digital curriculum librarians. The first theme explores the social and cultural issues which impacted on our work. The second theme highlights pedagogical issues which arose as part of our ongoing contributions to the UO project. The third theme focuses on technical challenges related to working nearly exclusively in a digital space.

Social and cultural issues

Being an entrepreneurial embedded librarian within the context of a startup university can deliver results hastily. New ideas, opportunities and collaborations are always flourishing under a startup environment where people think optimally and collaboratively to address ongoing challenges and transitions that a startup would typically face (Pun 2015, p. 418).

Once these positions had been established and we commenced working in the role we faced a number of social and cultural challenges. Defining our role and finding our purpose was a significant challenge. From the first day we realised that our vision for these positions did not align with that of the project team, and we believed this was related to a wider issue surrounding the perception of librarians in the digital age. From the DCL PD we understood our core responsibilities to be to “work with academic staff and developers as part of a team on the design and delivery of learner-centered curricula” and to deliver and incorporate “digital literacy skills and digital resources across programs and the curriculum” (University of South Australia 2016, p. 2). The project development team, however, did not appear to have the same expectation.

For example, the project team had devised a project management plan to enable rapid curriculum development. In this process we were to be a checkpoint and were to check and clear for copyright all the resources that had been embedded in the courses. This was the principle way in which the project team saw that we could add value to the process. Copyright responsibility lies with the academic, however and it was simply not viable to audit so many courses in the timeframes that we were given. It was very apparent that should we take on this responsibility we could not manage to meet our core objectives.

This was not surprising as frequently librarians’ expertise in information management and discovery can be underestimated. There is also a commensurate lack of understanding about how librarians can support the development of students’ information and digital literacy skills. These limited expectations of our profession reflect the fact that our environment and roles have changed enormously in the last decade and perceptions do not reflect that change. Robert Hallis (2017, p. 369) observes “over the past few decades, librarians have witnessed a fundamental change in the way people interact with information: the way they look for it, the convenience they expect and the way they evaluate it”. This perception that information is freely available and easy to discover online has led to an associated devaluing of the role of the librarian and “a culture in which professionally qualified librarians are increasingly seen as an unnecessary luxury” (Law 2014, p. 201). Drummond (2016, p. 275) in her article recalls overhearing a colleague describe her as “just” the librarian and wondering “how and why had the profession and my role been belittled so much?”. She goes on to discuss how you can change perceptions in a role outside of the established library sphere and this is something we wished to achieve.

We needed to be assertive from the outset. It was critical to establish boundaries and promote what we could offer in terms of producing higher quality and more engaging curriculum. We did not believe that checking resources for copyright compliance was the best use of our time and skills and we needed to negotiate accordingly. So we began this project with the intention of “relationship building” (Delaney & Bates 2015; Díaz & Mandernach 2017). We took the opportunity to educate the product development team on the amount of work involved in copyright compliance and the complexity of tracing longstanding resources back to their origins. We also emphasised the work that we thought would add value to the courses and promoted our roles as we understood they should be from our recently developed PD. We were careful to emphasise not only our expertise in finding, designing, creating and evaluating online resources for the curriculum, but also our expertise in identifying the latest practices and technologies to embed digital literacy into the curriculum. To this end we met with the project manager, all the associate deans of online learning and all the academic developers early in the secondment to market how we could work with them in different ways. We also negotiated workflows to ensure that we met with the academic of each course being developed, so we could introduce ourselves and address concerns they may have.

Noticeable to us were the different take up rates of our offers of assistance between the different Divisions. Those which had a history of working productively with the Library were quick to take up our offer and we developed strong working relationships with those teams almost immediately. We have kept records of our appointments and had over 700 appointments in the first 18 months. Following these meetings and appointments we provided support for 94 per cent of courses developed by July 2018. Of the 155 courses completely developed we have provided support for 145 of them. There was one exception and we suspect this was partly cultural for this Division but also that there was no obvious person that we could contact. The associate dean for online learning for this Division was replaced after an initial six months with a temporary associate dean and there was no single academic developer like there was in other Divisions. This meant that we were unable to set up those early meetings with the academics and support we provided ended up being ad hoc and normally in response to problems.

Also critical was being co-located with the academic development teams which provided many opportunities for informal questions and communication. Library management had argued for this co-location from the outset. If we had been located within the Library, we could not have been as responsive to the product development team needs. This incidental traffic built relationships and facilitated communication which greatly enhanced our ability to collaborate with the academic development teams. We became a pivotal point between services in the Library such as acquisitions, the Digital Readings Service, copyright, other Academic Library Services (ALS) teams and the UO product development teams. We could filter and streamline communication thus improving efficiently and productivity, which they appreciated. This model of support is frequently described as embedded librarianship which “takes a librarian out of the context of the traditional library and places him or her in an ‘on-site’ setting or situation that enables close coordination and collaboration with researchers or teaching faculty” (Carlson & Kneale 2011, p. 167). Increasingly popular in recent years, and an approach adopted by academic libraries to redress concerns about the devaluing of the profession, there are numerous cases of embedded librarianship reported in the literature (Abrizah et al. 2016; Vassilakaki & Moniarou-Papaconstantinou 2015).

It was particularly important that we be co-located with the Critical Approaches to Online Learning (CATOL) course writers. This introductory course, common to all the degrees in UO, is designed to prepare students for success in the online learning environment. As academic librarians this was a rare opportunity to embed information and digital literacies into the curriculum. This co-location led

to an extremely productive working relationship and enabled us to consider resources and activities to support students learning enhanced by this constant interaction (Shank et al. 2011).

In addition to creating content we sourced high quality, engaging digital curriculum. A fundamental philosophy behind UO is that existing courses would not be replicated but would be reimaged. This philosophy required additional resources (text and multimedia) to supplement and contextualise the narrative written by the academic. This provided multiple learning opportunities for students to encourage a more active learning experience (Clark & Mayer 2011; Mayer 2009). Particularly important to break up the narrative was multimedia which needed to be of a high-quality production value, no more than ten minutes, reputable and copyright compliant. Searching for content acted as a catalyst and strengthened relationships with academics and academic developers, creating goodwill (Creaser et al. 2014; Eva 2015). Academics appreciated receiving curated content, which had gone through some quality control and was organised clearly by topic, themes and formats.

We were in constant contact with academics to understand exactly what they needed, to negotiate tight deadlines and explain any issues around formats or student access. It was a positive and organic way to highlight the Library's digital collection of almost a million items, including video collections, which could contribute to sound pedagogical practices. As librarians it was important to take advantage of these organic opportunities to build valuable relationships through cooperation with academics, learning advisors and IT experts. These relationships provided an opportunity to showcase library expertise as educators and market the well designed information and digital literacy resources that could be created to embed within courses (Chen & Lin 2011).

In this role it soon became apparent that considered planning of a number of smaller projects to deliver information and digital literacy resources and resources for the curriculum would be required. Neither of us have any formal project management qualifications, yet we were expected to deliver projects within budgetary and time constraints, which were high quality, developed in consultation with numerous stakeholders and with documentation when appropriate. By using project management principles "to bridge cultural differences in ways of working among librarians and their partners" (Burrell & Rowell 2017, p. 317), a common understanding of the project objectives and any possible constraints was created. In an increasingly technological environment where academic librarians are required to manage projects that are of value for the entire institution, we should consider having formal project management qualifications (Horwath 2012). Project management "is one way to demonstrate to stakeholders that we are committed to increasing the value and relevance of our organizations" (Horwath 2012, p. 30).

Pedagogical issues

In an age where access to all types of information constantly surround us, pedagogically sound mediators and "guides by the side" are sorely needed to assist in accessing and making sense of the ever more vast, and at times extremely chaotic universe of resources (Shank et al. 2011, pp. 106-7).

To what extent do academic librarians need to be teachers? How much pedagogical knowledge do we need? These were questions we faced as the first DCLs at UniSA Library. We could not assume our university students are digitally literate even though many are 'digital natives' (Akçayır et al. 2016; Šorgo et al. 2017). While some argue that in a digital age finding information has never been easier, we believe that the opposite is true. It is more important than ever before for students to have

the skills to confidently navigate this vast digital sea of information (Hallis 2017).

Since the beginning of the 21st century, with the onset of the knowledge economy, the role of academic librarians has required a greater focus on providing innovative instruction and education on information literacy. This in turn has meant there is a need for a greater understanding of sound pedagogical practices and instructional design theory and practice (Bell & Shank 2004; Bewick & Corral 2010; Doskatsch 2003; Hall 2017). Our new position description did explicitly state that we were expected to “lead the discovery, evaluation and application of new and relevant library technologies and strategies aimed to engage students” (University of South Australia 2016, p. 2). However, at the outset we were not aware how important pedagogical knowledge would be to our work. While we both had considerable experience in developing resources to support information and digital literacy, we did not have any formal pedagogical training and now appreciate how valuable that would have been when developing these new resources. Our experience is reflected in Moselen and Wang’s (2014) study at the University of Auckland where many interviewed academic librarians expressed the need for further professional development around learning theories and pedagogies. Similarly, Hall (2017) and Hall (2013) acknowledge the value of on the job training but advocate formal pedagogical training for academic librarians.

Our first opportunity to rethink digital literacy support for students in the online environment was with the foundation course *Critical Approaches to Online Learning (CATOL)*. We saw this as an excellent opportunity to work in partnership with the Online Course Facilitator to create a series of short, interactive tutorials to embed at key points within the course. These would teach students fundamental skills around navigating and finding information online and we were confident this design could be effective (Mery et al. 2014). Our aim was always to give the student an active, learner centred approach where the learner is not just a passive receiver of information. We believed the best way to achieve this was to create opportunities for hands on (behavioural) activity or well-designed multimedia which fosters cognitive learning processes (Mayer 2005, 2009). Solving real life problems (in this case linking our tutorial explicitly to assessment which in turn is industry focused) provided students with an authentic learning experience and the motivation to complete the tutorials which they could then transfer to their real life (Ertmer & Newby 2013; Nagowah & Nagowah 2009).

Using this pedagogical aim we applied the following criteria to evaluate possible software to create these resources. By meeting these criteria we were confident we could design resources that would foster the necessary cognitive processes for deep learning. These resources needed to

- be engaging and interactive,
- allow active and constructive learning in order that the tutorial students could create knowledge and understanding (Ertmer & Newby 2013),
- be relevant and as authentic as possible (Ertmer & Newby 2013),
- provide a self-guided experience,
- provide opportunities for reflection and testing of knowledge,
- be robust and intuitive to use, and
- be customable to different search tools and learning needs.

In addition, we felt strongly about the need to provide tutorials with a consistent look and feel across degrees. We also needed to create resources in a short space of time and with limited technical skills. Ultimately, we created four formative tutorials: one each on searching the Library catalogue and searching Google Scholar and two on referencing, to provide students with immediate feedback

which they could then apply to their summative assessments. The success of these tutorials is evidenced by their use. In two academic terms we had 684 students enrolled in CATOL and they completed four tutorials 2590 times (see Appendix 2).

Creating these tutorials posed two significant challenges: pedagogical and technical. Our principal pedagogical concern was the split screen interface. This added unnecessary extraneous cognitive load for students which inhibited learning as they were forced to scan back and forth between the two sections of the tutorial to integrate information (Ayres & Sweller 2005; Mayer 2009; Pickens 2017; Sweller et al. 2011). A better design would have been to have written instruction within the live screen adjacent to where students perform an action. This would reduce extraneous cognitive load and help to free up students' abilities to select, organise and integrate information to make meaning (Ayres & Sweller 2005; Mayer 2009).

In addition to the tutorials, we created a series of five scalable interactive overlays for an exemplar article to illustrate a range of writing and referencing skills. Students could hover over relevant highlighted sections to receive short explanatory notes to help them build their knowledge around academic writing. These were to scaffold students through certain conceptual processes such as making an argument, understanding and creating references, and language use. These overlays were built in HTML and were a collaborative effort with the language and literacy coordinators at UniSA and our web team. By breaking down the article into segments with short explanatory notes, we aimed to assist the learner with managing this potentially complex task and apply this new understanding to their own written work (Clark & Mayer 2011).

At the same time, we reviewed our existing resources and decided it was necessary to update our suite of Library information literacy videos. We knew that our Student Engagement Unit (SEU) colleagues had recently created a collection of engaging, animated study help videos and saw an opportunity to create four complementary information literacy videos to supplement their collection. Most importantly, we knew that having short, attention-grabbing, animated videos, which communicate fundamental concepts, using clear, friendly narration could act as powerful learning tool (Mayer 2003; Mayer 2009).

Students could effortlessly dip in and out of the collection depending on their needs. Also, having the same look and feel gave students a familiar and cohesive experience. The four videos we developed as part of this project were:

- Study help: Plan your search.
- Study help: Evaluating information.
- Study help: Scholarly sources explained.
- Study help: Understanding copyright.

Technological issues

It is commonly the case with technologies that you can get the best insight about how they work by watching them fail (Stephenson 1999).

The interactive tutorials that we developed using *LibWizard* software pushed the boundaries of our problem-solving skills and technical knowledge. Our intention was that the technology would enhance rather than impede a student's learning (Mayer 2005, 2009). However, it was not realistic to think that we could avoid being constrained by both the technology that is available and our ability to create bespoke resources. There was an expectation in our position description that we "identify,

design and build active and engaging online learning activities and resources” (University of South Australia, 2016, p. 2) which gave us the freedom to examine different options. However, on reflection we know our limited technical skills impacted on the choices we could make.

We concluded that two software options could meet most of the pedagogical criteria and could form a positive learning experience for students: *Guide on the side* (GoTS): an open source software developed by University of Arizona Libraries (Sult et al. 2013); and *Springshare LibApps*: a subscription-based software which incorporates *LibWizard* tutorials (Sherriff 2017).

We chose *Libwizard* to create the tutorials principally because it was a cost effective add on to software the Library was already using; we could not obtain the necessary server space for *GoTS* and we did not have web development skills nor access to those skills to create a bespoke resource. While it was frustrating to have to base resource creation decisions on what was technically possible rather than what was best pedagogical practice, realistically this is something we could not avoid. For example, we would have preferred students to be able to listen to narrated instructions, in a friendly, Australian accent which would have allowed us to speak directly to students and create a more engaging and personalised experience (Mayer et al. 2004) as we understood that animation and narration in tutorials would improve student’s ability to connect and integrate concepts and be “important in conceptual understanding” (Mayer 2009, p. 229). However, we have been unable to achieve this with the product we are using.

Another issue that soon became apparent was the dynamic online environment that we operate in and which led to unforeseeable problems with the tutorials after they were created. For example, a number of technical issues arose, not with the *Libwizard* software but with the systems the software was interacting with. The benefit of being embedded in the project meant that we could rely on our existing relationships to seek a quick solution for UO. It was here that we could really see the value of being embedded librarians (Delaney & Bates 2015; Pun 2015; Shank et al. 2011).

Developing these resources has highlighted gaps in our technical understanding and we have felt constrained by our limited abilities to manipulate resources to best suit the learner (Bell & Shank 2004). We have had to rely on the software available, which is not perfect, and we would like to have tailored it to suit the learner. While our own technical prowess has improved considerably as DCLs, we have been entirely self-taught and have learnt by experimentation and through more experienced colleagues. This has raised the question of how much technical training is enough for an academic librarian in the 21st century? Is formal training needed? Do we need to seek graduates with a technical background? Finding the right technology to use is an ongoing process. For example, we have begun to critically appraise the Moodle plugin *H5P* as a potential additional tool or replacement for *LibWizard* tutorials. While we know *H5P* has a large range of interactive features its applications are not clear, so further investigation and experimentation is required.

A further technological challenge that we faced was the philosophical desire to have resources that are only digital. It was evident from the outset that this would be an issue in relation to textbooks. The development team wanted e-textbooks available to students via the Library, so they would not be required to purchase them. This admirable aim, we soon discovered, was just not realistic. Most publishers are not prepared to offer an e-textbook edition to a library for institutional purchase. Even if they did offer an institutional licence, they would not provide their inbuilt interactive content. Certain disciplines, such as Business, make heavy use of this content within their courses to personalise learning and allow students to have formative self-assessment opportunities.

When we successfully negotiated a library e-textbook, many publishers or vendors would not offer unlimited or Digital Rights Management (DRM) free versions. We continue to be dependent on publishers licence models as many will limit to only one or three users at once which is not viable when all students need to access the same book at the same time (Vasileiou et al. 2012). We have successfully negotiated on a number of licences for e-textbooks and these negotiations are ongoing. However, it is a difficult and slow process to reach a mutually beneficial arrangement with all parties (Wells & Sallenbach 2015). There is also a significant cost to e-textbooks. Licences can be prohibitively expensive when trying to provide e-textbooks for a large cohort of online students which is only growing (Wells & Sallenbach 2015).

This is an ongoing problem with no resolution in sight and is driven by publisher's desire for profit over students' best interests (Guthrie 2012). In advocating for our students, we need to rise to the challenge and negotiate a better system of access to e-books. This has also highlighted the benefits of Open Educational Resources (OERs) which are freely available to all with no licensing restrictions. In our experience, however, academics can be wary of OERs, particularly open textbooks. When proposing OERs to academics, some have questioned their quality and their authority and were resistant to the idea of leaving their current textbooks behind (Morris-Babb & Henderson 2012).

Skills for the 21st century academic librarian

As we reflect on our experiences in this project, and re-examine both of our position descriptions, we see the need to articulate more clearly and in more detail the following skills and attributes. Actively recruiting staff with these skills and attributes, or providing training and learning opportunities for existing staff, can only benefit our profession and ensure that we not only survive in this transitional time but thrive.

Excellent communication and interpersonal skills (be an influencer)

Librarians are no longer sequestered in quiet book-lined spaces but are relationship managers. Libraries are about talking to people, they are in a customer service industry. Innovation and change does not just happen; you have to influence those in decision-making roles to succeed. We need to be expert negotiators and "liaisons" and market ourselves and our expertise. Being able to influence those around us to achieve goals is vital; we need to be able to read the situation and adjust and adapt our communication style accordingly (Creaser et al. 2014; Delaney & Bates 2015; Díaz & Mandernach 2017; Eva 2015).

A fundamental level of understanding of the digital environment (be a tech guru)

We operate in a rapidly evolving digital environment which requires us to have more than just a basic understanding of the latest software in information management and online teaching. We need to be flexible, curious and creative when developing resources for teaching and learning. There are so many more options now to create an engaging interactive experience for students which did not exist five years ago. We need to be prepared to explore options, critically appraise suitability and adapt (Heinrichs & Lim 2009; Raju 2014; Raju 2017).

Formal training in curriculum development and pedagogy (be a teacher)

We need to be creative in the way we deliver information and digital literacy support. Students at university may be digital natives, but they are not necessarily digitally literate, and this brings its own unique set of problems. The academic librarian needs to have a theoretical understanding of

curriculum development and pedagogy to create appropriate curriculum. As we increasingly form part of a teaching team, it may be time for academic librarians to consider seeking out formal training in curriculum development and pedagogy (Bell & Shank 2004; Bewick & Corral 2010; Hall 2017).

Initiative and Resilience (be brave)

New positions such as these are not created by chance. It took initiative and vision from the Library management team to argue for the positions and get funding. To achieve all that we have in this short time has also taken initiative from us as individuals. Wherever we could we have advocated our services and embedded ourselves in the product development team. We should be marketing ourselves and what we can do to improve the student experience in online learning (Drummond 2016). Similarly, we need to be resilient to continually seek new solutions to problems. We need to be braver to remain relevant in the future. We cannot just be reactive, we need to seek opportunities and run with them (Law 2014).

Project management skills (be a manager)

Libraries are increasingly delivering or being involved in projects with associated budgets and deadlines which require more accountability on our behalf as we have become corporatised. We need to be mindful of the parameters of the project and the appropriate processes needed to deliver a project on time and within budget. Education is a commodity like anything else and we are more accountable than ever before (Burress & Rowell 2017; Horwath 2012).

Conclusion

We are now moving forward into our third year as digital curriculum librarians with UO and have taken this opportunity to reflect on the key challenges that we have faced in this project and the actions we have taken to attempt to overcome these challenges. The project is ongoing, and our role is still evolving. We can start to see, however, some emerging trends with academic librarianship and comment on them as we believe that the imperatives of the knowledge society will only become more prevalent into the future.

The first challenge we faced in this project was defining our role and demonstrating our value. We needed to assert ourselves and at the same time demonstrate our capabilities by building relationships. Co-location was also instrumental to creating positive relationships. Another challenge we have faced was developing new, innovative and pedagogically sound ways to support students' information and digital literacy development in an online environment. Short development timeframes and limited software solutions added to this challenge and required a creative problem-solving approach. Supporting curriculum development for courses that were offered completely online only intensified issues we had with technology. Negotiating positive solutions to these technical issues required resilience but most importantly took advantage of the relationships we have developed.

Being embedded in the project and in the curriculum has been a great success as evidenced by the amount of appointments, the course development and the curriculum development we have been involved in. Our secondment has just been extended a third time and we will continue to be embedded in the project until 2020. Even at its conclusion, the knowledge we have built and the relationships we have developed will not be lost as we are planning to transition this back to the Library over the next year prior to our return. We hope that in this transition period the Library can take the opportunity to re-envision the academic librarian role. We believe that our work has enhanced the reputation of the Library with this key stakeholder at the University. This case study

has really showcased the potential of academic librarians to add value to a large strategic project such as this.

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Appendix 1 Position Description for Digital Curriculum Librarian

POSITION: Digital Curriculum Librarian	
EMPLOYMENT TYPE: 12 month Fixed term contract	CLASSIFICATION: HEO 7
DIVISION/PORTFOLIO: Resources	
SCHOOL/UNIT: Library	
DATE APPROVED: September 2016	

BROAD PURPOSE

The Digital Curriculum Librarian works with academic staff and developers as part of a team on the design and delivery of learner-centered curricula within the University's learning management system to support program and course delivery.

The position is responsible for identifying, developing and incorporating digital literacy skills and digital resources across programs and the curriculum to address the graduate quality of lifelong learning.

POSITION ENVIRONMENT

The [University of South Australia](#) is an enterprising and dynamic, outward-looking institution established in 1991, but built on more than 150 years of teaching, learning and research excellence of our antecedent institutions. We are South Australia's largest university, and continue to enjoy a strong upward trajectory across a number of key indicators and global rankings - we are ranked amongst the top 3% of universities worldwide and in the top 50 international universities under 50 years of age.

Known for our strong and engaged research and our experientially-based teaching and learning, all activities are conducted in close collaboration with business, industry, government and the professions. The University of South Australia prides itself on educating individuals to the highest standards, investing in the very best teachers and researchers, as well as state-of-the-art physical and virtual infrastructure; creating and disseminating knowledge so that our communities and societies are better able to understand and address the crucial challenges of our time.

We offer a wide range of educational choices across our four academic divisions – business; education, arts and social sciences; health sciences; and information technology, engineering and the environment. We are also home to a range of dedicated research institutes and centres, as well as co-operative research centres that - in collaboration with industry, government, university and research partners - are focused on helping to deliver practical and enduring solutions to real-world problems.

The [Digital Learning Strategy 2015-2020](#) is a whole-of-university strategy, through which the University aims to be recognised internationally for its use of innovative digital technologies to deliver a compelling and industry-relevant learning experience for students. To realise this vision we will deliver a series of projects and commitments aligned with the following five strategic priorities:

- Strategic Priority 1: Delivering an engaging and digitally enriched curriculum
- Strategic Priority 2: Supporting our students to become productive professionals in a digital age
- Strategic Priority 3: Expanding our flexible learning arrangements
- Strategic Priority 4: Developing our academics as leaders in the digital learning experience
- Strategic Priority 5: Inspiring and supporting life-long learning.

The [University of South Australia Library](#) supports the University's teaching learning and research mission through provision of relevant information resources and associated services. The Library also coordinates copyright for the University. There are five campus libraries, located at City East, City West, Magill, Mawson Lakes and Whyalla as well as the Off Campus Library Service. Information technology and information resource management services are on the Mawson Lakes campus. The Library has a growing research collections with over 700,000 ebooks and online journals as well as print resources and archival collections.

The Library is operating in an environment of increasing availability of digital information and demand and plays a significant role in training staff and students in information skills.

REPORTING RELATIONSHIPS AND KEY STAKEHOLDERS

This position will report to the Manager, Academic Library Services.

The Digital Curriculum Librarian works collaboratively with academic and professional staff across the University, including, but not limited to:

- Academic Librarians
- Course Coordinators
- Online Educational Designers
- Academic Developers
- Program Directors
- Information Strategy and Technology Services staff
- Learning Advisers

In addition, this position also liaises with parties external to the University including other universities and TAFEs, product vendors, suppliers and service providers.

CORE RESPONSIBILITIES

1. Work collaboratively with the Academic Library teams, Course Coordinators and Teaching and Innovation Unit staff in the development of new online courses and programs in line with the University's *Digital Learning Strategy*.
2. Develop and incorporate into the curriculum, innovative digital literacy programs that encompass a range of capabilities including information literacy, digital creation and scholarship, digital learning and Information and Communication Technology (ICT).
3. Identify, design and build active and engaging online learning activities and resources, including open educational resources such as video, blogs, gamification, animation or simulation software, interactive ebooks, applications and third party learning resources for

teaching.

4. Recommend strategies for the effective integration of interactive learning experiences to increase student engagement and use of quality digital information sources.
5. Provide expert advice and guidance to academic staff on the use of digital resources in line with the University's *Digital Learning Strategy* and copyright requirements.
6. Provides expert assistance with identifying learning resource vendors and open educational resources that support online pedagogical practices.
7. Lead the discovery, evaluation and application of new and relevant library technologies and strategies aimed to engage students.
8. Ensure interactive online learning activities and resources are accessible via multimodal devices and technologies to optimise learning and teaching.
9. Assess the engagement with resources in order to develop and implement strategies to improve the quality of the student experience.
10. Monitor and analyse emerging instructional technologies to adapt and align with the University's e-learning strategies.
11. Participate in multiple team initiatives and projects and cooperate with team members in a manner that reflects a commitment to team goals and objectives, effective communication, information sharing and problem solving practices.
12. Maintain knowledge of the latest developments in educational technologies and online information resources.

The duties as specified above may be altered in accordance with the changing requirements of the position.

SPECIAL REQUIREMENTS

Travel to regional centres, interstate and overseas may be required.

UNIVERSITY REQUIREMENTS

Staff must follow and apply the following:

1. Core Staff Attributes

To contribute to a successful and enterprising culture at UniSA, each staff member is expected to demonstrate the following key behavioural attributes:

- **Is trusted, authentic and self-aware** – establishes credibility, is honest, reliable, accountable, and responsive
- **Takes the initiative and delivers results** – by seizing opportunities and being outcome and customer focused
- **Provides solutions** – through logical, creative and innovative thinking and timely, transparent and consultative decision making
- **Communicates with impact** – displays clarity, diplomacy, persuasiveness and sensitivity
- **Leads and works well with others** - displays conviction and resilience, working collaboratively, motivating others and mobilising influence.

2. Health Safety & Injury Management

- Follow reasonable instructions, work procedures and practices to maintain the health and safety of yourself and others.
- Report all identified work place hazards and incidents.

3. Performance Development and Management

Participate in the University's Performance Development and Management process.

SELECTION CRITERIA

Essential

1. Relevant tertiary qualifications such as Information Management or Education or equivalent skills and knowledge, including experience in an academic or research library.
2. Demonstrated expertise in selecting and evaluating educational technologies and integrating digital and interactive learning experiences to enable and increase student participation and engagement in different discipline areas.
3. Demonstrated experience in designing learning resources for a variety of digital learning and web-based experiences including training.
4. Demonstrated understanding of best practice methodologies and pedagogy for online learning, and developments in digital literacy.
5. Demonstrated high level of organisational and time management skills, combined with an analytical approach to problem solving.
6. Highly developed communication and negotiation skills, including the ability to work successfully and strategically with people at all levels within and outside of the University.
7. Current knowledge of emergent trends in ICT, particularly the educational application of social media, mobile technologies and rich media collaboration.

Desirable

1. Experience in the use of learning management systems such as Moodle and/or specific software, e.g. Mahara and Adobe Connect.
2. Knowledge of project management principles and practice.
3. Demonstrated understanding of the Australian higher education and academic library sectors, and of the distinctive profile of the University of South Australia.

Appendix 2

