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Article

The implementation and embedding of digital skills and digital literacy into the curriculum considering the Covid-19 pandemic and the new SQE: A case study from inception to implementation and continual development of the Digital Academy

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Abstract

This paper focuses on the introduction of a new model of digital teaching and resource provision for the University of Law (ULaw) Library Service, during the Covid-19 pandemic. It details the processes and steps we took to achieve the three core aims of: a new mode of online skills delivery, the creation of self-directed, independent learners in the various student cohorts at the university and the creation of a flexible self-assessment platform to provide an incremental learning journey for both students and staff. This paper also highlights some of the challenges and difficulties we faced, arising from a project of this size and nature.

Keywords

1. Introduction

With the fluctuating modes of delivery of learning brought about due to the Covid-19 pandemic, it became apparent that a new paradigm of learning and delivery was required for library skills and research training. The library service and wider university had to pivot, to respond to the unique challenges presented by the Covid-19 pandemic, as well as the introduction of the Solicitors Qualifying Examination (SQE), a new qualification path for solicitors and increasingly, non-legal professionals (The University of Law, 2020). We therefore needed a new model, enabling us to respond dynamically and flexibly to a shifting set of learning requirements from both staff and students. Thus, the idea of the Digital Academy was born.

The priority for the Digital Academy was the creation of multi-modal learning content, focusing on a wide range of digital and legal skills that aligned to the university's curriculum and enabled the learner to progress in their learning journey, without the need for face-to-face teaching or classroom delivery (Armellini, 2019). This was achieved through the integration of various software including: Padlet boards for collaborative brainstorming, Virtual Cafés to encourage digital participation, a wide range of library led online skills webinars and an emphasis on simulations of research databases and other platforms, created through Articulate 360 (Latipah & Gunawan, 2020). This ensured we prioritised self-led, asynchronous learning to achieve our secondary aim to create a self-directed independent learner amongst our students and staff.

Throughout the project and development of resources, the way we created content changed because we had to envisage what students and staff could not do before we delivered synchronous workshops or created a piece of asynchronous e-learning content. Marton's

surface and deep learning theory and Biggs' Constructive Alignment theory were essential because we sought to align what the learner did with the information they received and how they learnt across different channels (Marton et al, 1984, Biggs & Tang, 2011).

It became increasingly important to embed the Digital Academy within the wider curriculum of the university and to engage academic staff in the development of sessions and content, to strengthen the bridge between acquisition of knowledge and deployment of knowledge (Siemens, 2005).

Additionally, with the onset of the SQE, we also looked at how to support multiple choice questions, as these were significant parts of the assessment for the SQE. We therefore created content emphasising the need to look at keywords, critical analysis of questions and recognition of salient points.

Therefore, the Digital Academy and the Jisc Discovery Tool became increasingly perceived as a targeted learning intervention system, especially as we embedded the Discovery Tool as a key starting point within the Academy (Jisc, 2019a). The Discovery Tool is a self-reflective survey report that students and staff can use to benchmark their current digital capabilities. It provides them with guidance in the different areas of digital capability and suggests internal and external resources that they can use to develop these skills further. This achieved our third aim of creating a platform that was flexible and incremental as the learner developed or self-analysed their skills.

2. The growth in students' numbers and prolonged Covid-19 restrictions

The Digital Academy was initially conceived at a time when online student numbers were relatively low, having been recently introduced as a new study option for the university. Provision for online students was therefore limited, without a designated online librarian or set of resources tailored to their learning requirements. The pandemic ushered in a period of unparalleled growth in the online campus, with many students switching to either a streaming or purely online option for their course. It also effected the number of applications from both undergraduates and postgraduates the online campus received, with a growth rate much higher than previous years.

Therefore, the initial scope and design of the Digital Academy was perceived to be inadequate to accommodate an expanded set of learning requirements for both students and staff. The team faced increased pressure from both students and staff to develop a platform quickly, to provide an effective response to the digital skills gaps they faced. The Jisc Digital Capability Framework, while effective at providing a basic blueprint for the type of material and content found on the Digital Academy, could not encapsulate the extensive range of skills, research scenarios and learning requirements that students experienced and required guidance for (Jisc, 2019b).

A much broader digital curricula was considered, one with a much more flexible and responsive model of learning design and instruction, that was also aligned to the new digital curriculum of the university. Additionally, we sought to align this new framework to both the SCONUL seven pillars (Goldstein, 2015) and the Quality Assurance Agency (QAA) framework for law and business (QAA, 2019).

The prolonged Covid-19 restrictions also had a significant and positive impact on the formation of the Digital Academy. As students increasingly faced fatigue and struggled to come to grips

with some of the systems and ways of working in a completely digital environment, the importance of the Digital Academy was enhanced.

This situation again effected the overall design and feel of the Academy, with a much greater emphasis on ease of access and responsive learning solutions. The Digital Academy needed to be a 'one stop shop' for any member of the university and to be flexible and accessible enough to accommodate a wide variety of learning styles and preferences (Fresen, 2018).

3. New Model of Delivery

3.1 Learning strategies

A key element of the Digital Academy's success would be the need for engaging online learning. Drago and Wagner (2004) clearly demonstrated that visual, auditory, reading/writing and kinaesthetic (VARK) learning styles needed to be accommodated in online learning environments. Their research highlighted that online learning more naturally caters for visual learners with the prevalence of on-screen text and visual ques to inspire learners. Drago and Wagner (2004) stipulated the need for multi-modal learning objects, and it is this fundamental principle that underpinned the design of content and planning of learning activities on the Digital Academy.

Furthermore, this approach was adopted to cater for an increasingly diverse portfolio of students. Changes brought about by the SQE resulted in a widening of student types taking legal education and therefore the Digital Academy needed to provide an engaging experience for students with non-traditional law roles and varying educational backgrounds (Poydras, 2013).

To emphasise the multi-modal content of the Digital Academy and to create a standardised approach, the Digital Academy adopted the model of 'Try It, Watch It, Read it' (TWR Model). This model was regarded as a progression of the VARK learning style model as it allowed us to create very flexible and modular pieces of e-learning, in a digital environment (Drago & Wagner, 2004). The simulations encapsulated all four VARK learning styles in one piece of e-learning and created highly engaging environments for students. This was because the simulations were step by step click through guides of databases and other platforms used by students (Moore, Herzog & Perkins, 2013). Students also received verbal instructions from the simulations, ensuring that students received a variety of auditory, visual, and tactile inputs.

As part of this approach, gamification was considered key to the success of the Digital Academy. As Strmečki et al (2015) demonstrated, students enrolled in gamified versions of courses achieved greater learning successes. As a result, the Digital Academy includes a trophy/badge system to incentivise learning to encourage student engagement and learning outcomes. In its earliest iteration this took the form of a digital badge for completing the Discovery Survey, providing an incentive to complete it, as well as ensuring that it displayed to the university and employers that students were keen to improve their digital skills (Rosso, 2017).

We also incorporated a range of digital badges into the digital onboarding programme for new undergraduate students, again to try to incentivise learners to complete the modules and to provide something tangible for new students to achieve, before they joined the university.

This concept of multi-modal learning was found most usefully expressed by Armellini (2019) in the form of a concept entitled 'Active Blended Learning'. This approach 'combined sense-making activities with focused interactions in appropriate learning settings' (Armellini, 2019). While this methodology is not purely based in an online setting, the need for a mixed mode approach informed the design of the Digital Academy. As a result, content was split between

static (read it), self-paced traditional forms of e-learning (watch it/experience it) and instructor led sessions (watch/experience it).

As Arghode et al (2018) demonstrated, there is a clear need for a face to face, human interaction element in all online pieces of learning. Their research argued that online instructors 'build connections with online learners', something which was essential for an engaging and varied experience. This need for an instructor tallied with the aims of the Digital Academy and allowed the platform to cater for a wide range of learning preferences and styles (Francescucci & Rohani, 2019). The Digital Academy provided a surrogate person experience for delivery. Additionally, the platform is manned by 'digital experts', teaching and learning librarians who can provide expert and targeted advice on a wide range of digital skills, which align to the curriculum.

3.2 Change to top-down approach – organising learning

As mentioned above, the Digital Academy required a design ethos that incorporated the multiplicity of learning styles and preferences of staff and students. Therefore, we developed a three-stage learning process for all e-learning modules, which was named 'Try It, Watch it, Read It'. This model corresponded to an interactive simulation for the 'Try It' stage, an instructional video for the 'Watch It' stage and an interactive text-based piece of e-learning or, where appropriate, a PDF for the 'Read It' stage. This method was intended to provide a holistic learning experience for staff and students, while saving on complexity for the Digital Academy, avoiding the necessity to have multiple versions of courses. This model refers to some of the techniques and approaches, introduced by Armellini in the 'Active Distance Learning' model (Armellini, 2019).

As part of the wider strategy in terms of placing the Academy within the wider curriculum of the university, a 360 method to develop better practice was utilised. This involved recognising that all staff needed to participate in content development, including academic staff. The more we developed content the more we realised that we required more interaction and communication between the different stakeholder groups, to understand where the learning needs were and how to facilitate those needs (Donaldson & Ferris, 2015).

We had to find cohesion between the tools that staff, and students used, particularly while they worked within their curriculum, as some of the students would look up information on the Digital Academy on how to use Office 365 in specific situations, without realising how they could use Office 365 to help them in their day-to-day practice. This approach was heavily influenced by Bigg's model as we sought to align the learning students gained from the Digital Academy to the curriculum of the university and wider practice of qualified legal professionals (Biggs & Tang, 2011). It was intended that the Digital Academy would act as a bridge, spanning the gap between knowledge acquisition and utilisation of that knowledge (Siemens, 2005).

Informed by the Jisc Discovery Tool we could see that learners were struggling with collaboration in digital environments, as well as using tools designed to increase collaboration such as Office 365 (Jisc, 2019a). Furthermore, we created content on assisting learners to use Mendeley when working on collaborative projects and to encourage community driven research and resource sharing. This ensured we focused on how to use elements of assistive technology to work collaboratively, again with an emphasis on creating self-directed learning communities.

To facilitate a 360-degree perspective for all students going into law, we needed to focus on QAA benchmarking. The QAA stipulated that students should be law focused but develop a wider range of transferable skills (QAA, 2019). Law students increasingly work across the workforce of the UK in a diverse range of professions, for example human resources, compliance, and risk assessment. Therefore, the Digital Academy utilised the QAA framework

for both law and business, to ensure that students received holistic guidance and training that enabled them to develop as well-rounded legal and business professionals, while aligning closely with the wider curriculum of the university and lifelong learning skills.

Additionally, the University of Law (ULaw), by its nature, attracts a large proportion of mature students. We utilised the findings from the Transforming Access and Student Outcomes (TASO) report on mature students to frame content, particularly as mature students displayed a preference for repeatable, distance learning, something which the Digital Academy was set up first and foremost to provide (Hume, 2020). The report also highlighted the fact that mature students were less inclined to engage in social learning activities and therefore the solo nature of some of the learning pathways of the Digital Academy were much more suitable to their learning needs and preferences (Hume, 2020).

The multi-faceted role of librarians meant that we were perfectly placed to cover the wide range of skills required by both staff and students, as librarians, daily, had to deliver a broad range of study skill and research techniques (Tanis, 2020). By pooling our collective knowledge and experiences we were able to identify a broad range of skills and objectives for each student cohort and staff grouping. By taking this consultative approach across the library service, it allowed us to develop resources that were holistic, encapsulating the sheer breadth of skills required by modern students and staff (Mishkin, 2017).

As librarians had been consistently recording data from their pre-existing library sessions, such as attendance and feedback, we were able to see where student demand was highest, as well as the types of information students wanted to receive from library workshops. This data was then utilised as part of ongoing planning and discussions on the type of e-learning and library workshops that we wanted to produce as part of the provision of the Digital Academy.

4. Creation of independent learners

4.1 Learner-centred priority

Another key element to the success of the Digital Academy was the need for a personalised approach to learning, ensuring that learners had access to customised content and learning pathways. Nelson (2008) clearly highlighted that an engaging and useful online learning experience is one that 'provides a creative mix of information and activities that the learner can choose to go through in their own order and at their own pace, thus ensuring that they engage with the learning and get the most out of the experience'.

Therefore, as Petersen and Gundersen (2019) have demonstrated, there was a clear need to create a personalised curriculum for each student, usually highlighted by an individual's learner profile. As such, the Digital Academy utilised Jisc's Discovery Tool for this purpose. This allowed the Digital Academy, as Petersen and Gundersen demonstrated, to develop a recommended learning path, based on the digital self-assessment tool.

4.2 Collaborative learning

From the beginning of the first lockdown in March 2020 the Virtual Café was created, a virtual library which replicated the physical library. This was an online space where learners could meet and discuss their issues and ideas without pressure. The library was regarded as the perfect entity to take this initiative forward as librarians and libraries in general were regarded as safe and welcoming places (Saltz & Heckman, 2020). Students felt more comfortable exploring new concepts and ways of learning with librarians than traditional tutors and it was therefore perceived that library led digital cafés could make an impact in this area.

Within the session a range of support service members were present; a librarian, a study skills advisor and the study skills coordinator were on hand to answer questions and offer guidance. A loose curriculum was available, including a few prompt questions which were aligned to where the learners were in the curriculum, for example questions such as 'how are you finding the reading lists?', 'what kind of revision notes are you taking?', and 'what do you do to consolidate the workshops?'.

These were ready should the learners lack something to discuss. Although sending emails, advertising through social media sites, advertising on the VLE platform and presenting the Virtual Café at induction sessions, the concept did not catch on.

Even though the Virtual Café was not successful, students were still contacting lecturers and support services to say that they would like to participate in online engagement sessions, as they felt they needed to connect with fellow learners. They were unsure, however, of how to take this forward. They did not want to take responsibility for finding a place to be able to meet and discuss the issues they were dealing with and the content of the course but felt there was something lacking from their university life.

In early 2021 the BAME (Black, Asian, and Minority Ethnic) community created an initiative to develop working groups, looking at close collaboration across the university for members of the ULaw community. An element of this project was student led and had slightly more success at engaging groups in interactive online environments. Furthermore, the group sought to encourage members of the ULaw community to participate more extensively in online learning environments, during both lectures and workshops. This group had the potential to have transformational change on the institution as BAME students, as of time of writing, were the largest cohort of students at the university.

This group also sought to encourage ULaw students to utilise the extensive range of digital resources students had access to and proposals from the group were considered as part of the development of the Digital Academy. This reflected the desire from Digital Academy staff members to create a platform that was inclusive and catered for a wide range of learning needs and demands.

Further to this, the library and study skills teams were creating the Digital Academy, and as time went by it was recognised that a semi-structured, informal place to develop learning would be far more suitable than the systems that had been in place thus far. Some Digital Academy team members had previously worked at a place where digital scholarship could be developed, and they created a working group which would look at how to facilitate skills to bridge the gap between understanding the content and putting it into practice (Siemens, 2005).

Digital Scholarship was regarded as 'the bridge' between the acquisition of knowledge from the library and study skill workshops and content on the Digital Academy, as well as the utilisation of the acquired knowledge by students and staff daily or to specific research or study scenarios (Siemens, 2005). It was regarded as a vital extension to the content on the Digital Academy, as it allowed students to apply library and study skill content to their legal and academic study.

Digital Scholarship was regarded as a key part of producing the 'O shaped lawyer' of the future, well rounded legal professionals that were not just well versed in academic and legal theory but had a wide range of skills allowing them to become versatile in any future roles (Poydras, 2013). Additionally, it allowed students to regard assistive technology as an extension of this knowledge, not just for students with learning disabilities and needs.

4.3 Engaging self-direction

The Digital Academy team decided to create a plan and identify their audience, as it was thought that by doing so, content could be better tailored to appeal to a diverse range of learning styles and student cohorts. For self-direction to be encouraged, we needed a framework that charted a consistent and engaging student journey, one which students would find interesting and engaging to embark upon (Chakraborty & Nafukho, 2014). We therefore developed a structure for the whole student population of the university, visuals were used, and groups from the different student cohorts identified. Figure 1 demonstrates the scope and scale of this mapping procedure.

One of the first frameworks we designed was the introduction to the Digital Academy (Figure 2). We felt that it was essential to provide an easy introduction into both life at a HE level, as well as how to use the Digital Academy. This part of the framework was key in ensuring that students and staff felt comfortable with using the Digital Academy and for students, felt able to start to recognise new and enhanced ways of working and learning. A large proportion of the framework looked at platforms used by the university to provide learning and some of the core issues new undergraduates faced from day one such as collecting and collating evidence.

The foundation branch of the framework was intended to provide enhanced guidance to new students to higher education (Figure 3). As opposed to providing them a general introduction into life at the University of the Law it was designed to build their confidence in both their use of academic language and digital study and research skills. We felt that if this was including in a 'foundation year' course, it would ensure that the Digital Academy captivated students' attention at the very point of joining the university. It also allowed us to address fundamental digital skills early in the students' academic journey.
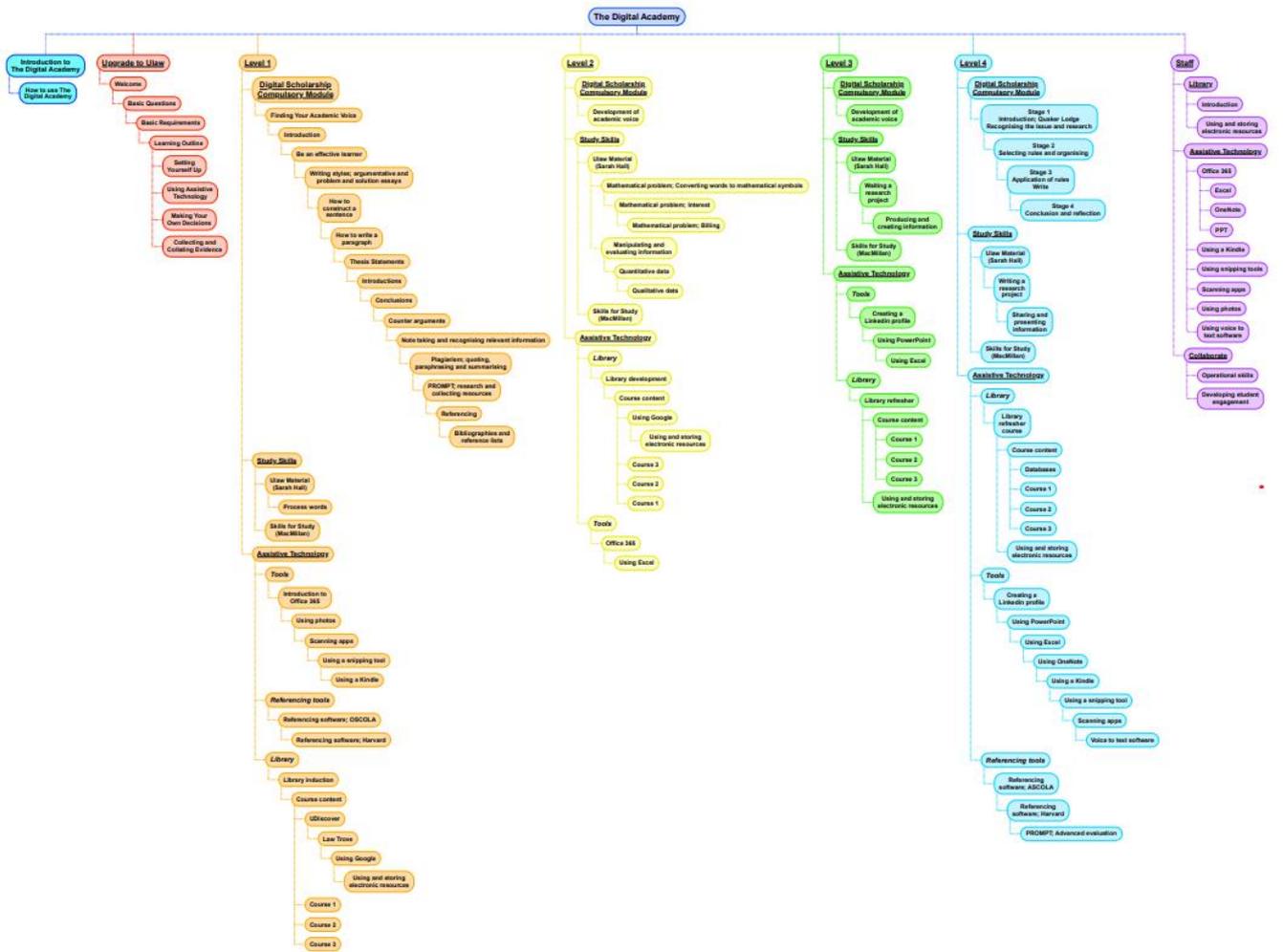
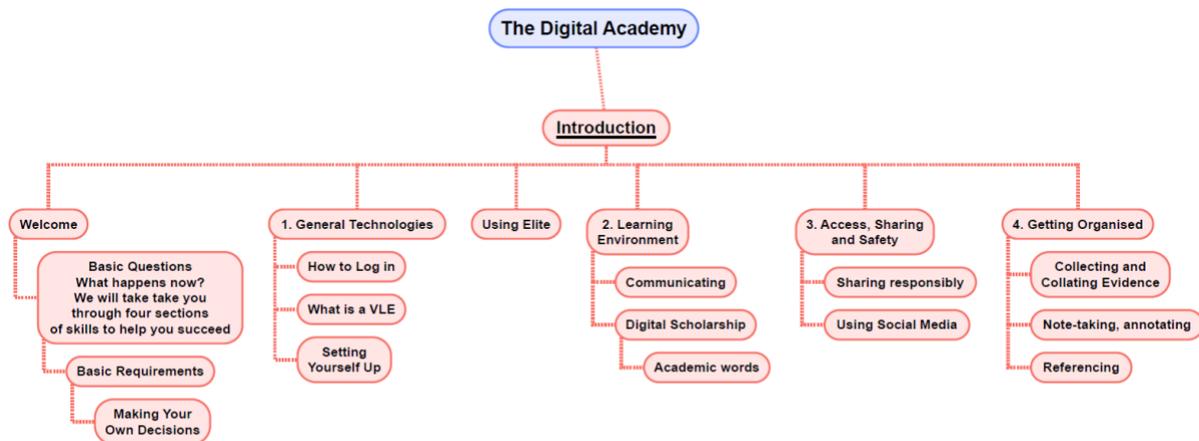**Figure 1:** Mapping procedure of Digital Academy skills matrix

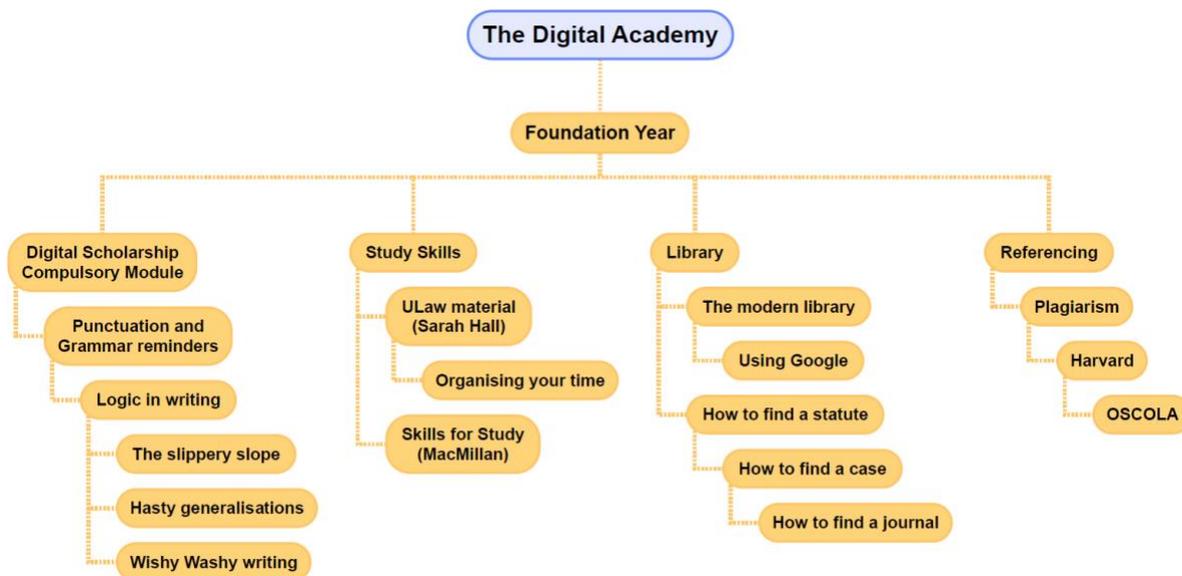**Figure 2:** Digital Academy introduction framework

Figure 3: Digital Academy Foundation Year framework

Redmond et al.'s (2018) framework was utilised to inform how to create and develop themes which would capture students' interest. To ensure content was suitable and relevant, the Digital Academy team filtered groups into levels or year groups (Figure 1), initially focusing on law students, as they were the biggest student group of the university. This would allow content creators to address the identified themes of cognitive development, as well as behavioural and emotional engagement. As time moved on it was assumed that modification of the groups, resulting from feedback, would advise content writers of any refinements and adjustments and would continually ensure relevance and suitability for content.

Replicability of content and exercises was also considered as the learners would be able to tackle the content at their own pace and within their own time frame. Repeating adaptations to promote individual learning was on the agenda for the content creators to facilitate deep learning experiences (Hume, 2020).

When creators were informed by the learners needs, they could reflect on how to support learners and to create experiences that promoted self-directed learning. It became apparent that addressing learner requirements in this case would be best met by implementing a mixed methodology approach. The first part was quantitative, deductive research on learners' perceptions generally facilitated by the Jisc Discovery Tool (Jisc, 2019a). We then conducted qualitative and inductive research, which was gathered by simply listening to what the learners told us, reading their feedback emails, and then making judgments between the team on how to best deliver the content the learners needed. Figure 1 showed us the vastness, and range of the cohorts and their requirements.

Considering that the cohorts of the university were so diverse, an understanding that meaning and understanding for the individual was different was also key to developing the pathways for self-led learning. As a result of dealing with a wide range of cultural and social backgrounds, we needed to consider the learning experience as it was lived in the moment for students. Supporting learners in developing information literacy skills was influenced by Cook and Klipfel's Cognitive Psychological Model (CPM), which engages learners in online socialisation, information exchange and therefore knowledge acquisition (Cook and Klipfel, 2017). This was regarded as a core theory that enabled us to focus on the creation of self-directed independent learners.

5. Creation of self-assessment platform

5.1 Targeted learning interventions

The Discovery Tool emphasised the knowledge sharing aspect of Cook and Klipfel's model (2017) and after participating in the Jisc Discovery Tool, it was identified that students were struggling to engage with digital learning activities (Jisc, 2019a). They struggled with leading a conversation, recording conversations and then sharing their content in a digital environment.

As Figures 4 and 5 demonstrate, learners did not see how digital technology or assistive technology could assist them in their learning journey and in particular engaging with online learning and knowledge sharing. Figure 4 shows that only nine percent of students suggested they actively recorded and shared ideas using collaborative platforms. This was particularly concerning for the university, as a large proportion of engagement with online teaching required some form of sharing, outside timetabled lectures. Further research was required on how students learnt information and the digital tools they used, if any.
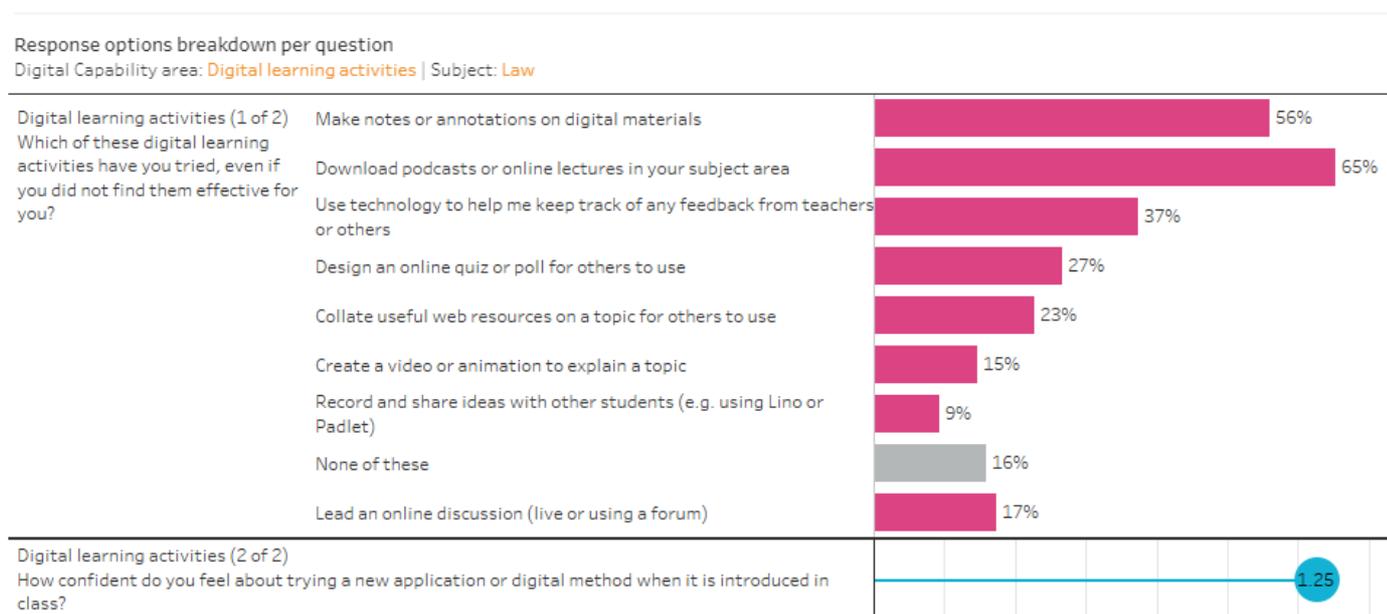
Response options breakdown per question
Digital Capability area: Digital learning activities | Subject: Law

Digital learning activities (1 of 2) Which of these digital learning activities have you tried, even if you did not find them effective for you?		
Make notes or annotations on digital materials		56%
Download podcasts or online lectures in your subject area		65%
Use technology to help me keep track of any feedback from teachers or others		37%
Design an online quiz or poll for others to use		27%
Collate useful web resources on a topic for others to use		23%
Create a video or animation to explain a topic		15%
Record and share ideas with other students (e.g. using Lino or Padlet)		9%
None of these		16%
Lead an online discussion (live or using a forum)		17%

Digital learning activities (2 of 2)
How confident do you feel about trying a new application or digital method when it is introduced in class? — 1.25

Figure 4: Breakdown of answers to the digital learning activities question asked by the Jisc (2019a) Discovery Tool

After identifying further issues, it was clear to see the learners had difficulty in cooperating in a digital environment. Learning activities and traditional work-based activities needed to be developed to assist the learners in developing digital skills.

Additionally, collaborative learning practices were lacking, and they needed to collaborate more. These problems related to not only a lack of a place to collaborate but a lack of understanding as to what collaboration meant (Carstensen et al, 2020). Furthermore, the recognition that sharing practice aids learning was not recognised and was not encouraged by the resources provided to students elsewhere across the university at the time.

Diverse cohorts could use each other's differences and deficits as a springboard to strengthen their digital understanding and develop their skills. This coupled with the skill of using a range of collaborative and assistive tools would enhance their own practice and be useful for sharing in collaborative environments. At the start of the project there were three main places where

collaboration could occur; the virtual learning environment (VLE) (called Elite at ULaw), the Virtual Café and learners' own social media groups.

The VLE was considered by the students to be a place where they collected information, but not somewhere they would practise using their collaboration skills, due to very static content hosted on the platform. In the VLE learners considered Collaborate, the online workshop software, a place to shine in front of their peers, not the place to make mistakes. This made learners reluctant to post comments or unmute their microphones.

The social media platforms were considered unsuitable by staff as they did not offer support, guidance, or the understanding of publishing restrictions, including what could be shared or whether collusion would occur. Plagiarism or any other such academic offence, was also a concern. The Digital Academy was therefore seen as the perfect platform for students to engage in self-directed learning as well as collaboration and sessions were designed to facilitate this type of learning.

5.2 Digital participation

A key example of the integrated approach we adopted as part of the design for the Digital Academy focused on the Digital Capability of Participation. We used data from the discovery tool to highlight the fact that this was an area where students were underdeveloped, significantly more so than the wider higher education sector. Figure 5 shows that 32% of students suggested they didn't engage in any of the forms of digital participation highlighted by the survey. This matched to the student experience at the time, as many felt unsure as to how to engage with online teaching and with their peers effectively. A very small proportion of students admitted they regularly engaged with online discussion in and outside of timetabled workshops. The wider university was also concerned with the fact that students were not participating within online communities as much as they could be and were concerned with student disengagement.

Response options breakdown per question
Digital Capability area: Digital Participation | Subject: Law

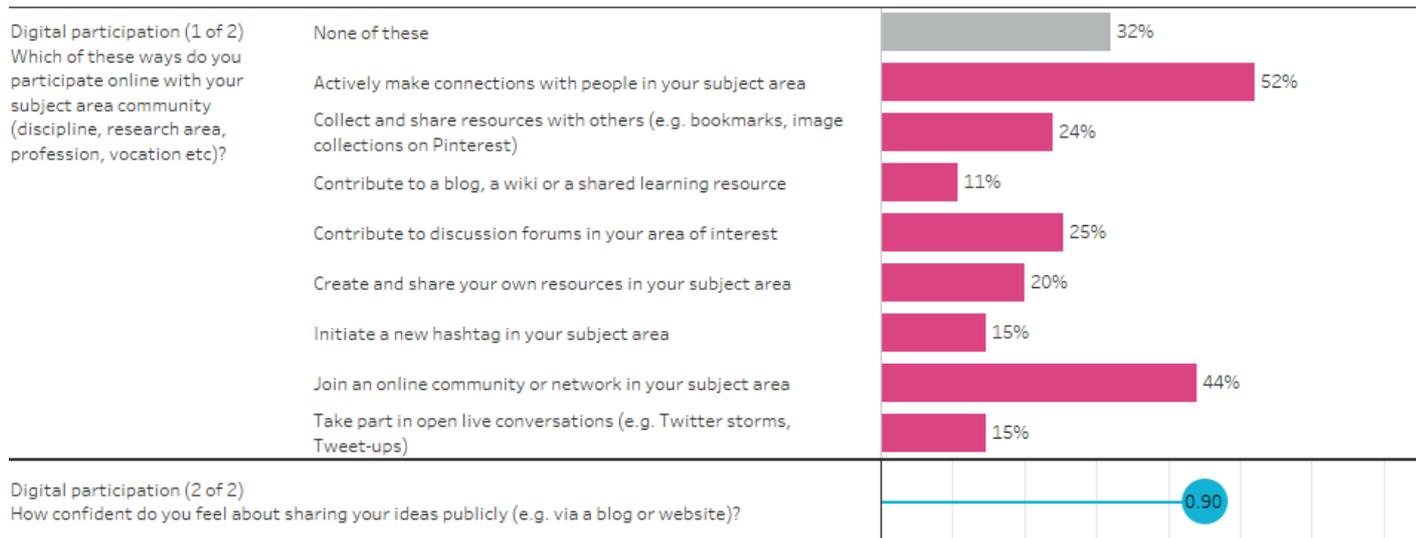| Digital participation (1 of 2) Which of these ways do you participate online with your subject area community (discipline, research area, profession, vocation etc)?		
None of these		32%
Actively make connections with people in your subject area		52%
Collect and share resources with others (e.g. bookmarks, image collections on Pinterest)		24%
Contribute to a blog, a wiki or a shared learning resource		11%
Contribute to discussion forums in your area of interest		25%
Create and share your own resources in your subject area		20%
Initiate a new hashtag in your subject area		15%
Join an online community or network in your subject area		44%
Take part in open live conversations (e.g. Twitter storms, Tweet-ups)		15%
Digital participation (2 of 2) How confident do you feel about sharing your ideas publicly (e.g. via a blog or website)?		0.90

Figure 5: Breakdown of answers to the digital participation question asked by the Jisc (2019a) Discovery Tool

We then utilised the data to inform the type and content of e-learning we wanted to create to meet this skills gap. Several modules were developed, focusing on the topic of digital participation. These were then housed in the Digital Academy and directed towards the student

cohorts that required this intervention. The modules ranged from a basic introduction to the expectations of digital participation that the university espoused, all the way up to advanced engagement through additional channels such as LinkedIn and using web conferencing software.

We felt like this approach was successful as it directly addressed a perceived skills gap amongst students and had utilised learning analytics to inform our response. Furthermore, the data from the discovery tool also allowed us to develop library and study skills workshops, again targeting this skills gap and providing a more face to face, synchronous learning experience for students (Eagleton, 2017).

This was the first attempt at an integrated approach to learning design on the Digital Academy and was highly data driven, providing us the flexibility to create responsive learning solutions. As a final step, we ensured that our response was targeted at learners by embedding links to the content as part of the next steps identified by student and staff capability reports (Eagleton, 2017). This ensured that our learning response was visible and was surfaced as part of the students learning journey, meaning they had access to content when required and could see the learning in the context of the wider university curriculum.

A further example of the integrated approach we adopted centred on improving students' problem-solving skills. Once again, the discovery tool highlighted the fact that this was an underdeveloped skill amongst law students, with our cohort falling behind the wider sector benchmark in this area. A small proportion of students said they never utilised these skills as part of their everyday learning, something which was surprising given the fact that this is a core skill focused on as part of the university's curriculum.

We therefore used this data to feed into conversations about what modules to design to meet this skills gap, as well as considering the content we had designed previously. Due to the demands of the project and other library initiatives occurring during development, we ran out of time to develop a full learning package, thus far. We therefore incorporated problem solving guidance into the library workshops we were already running, focusing much more extensively on scenario-based sessions (Bower et al, 2015).

While were unable to implement a full e-learning solution, we drew up plans for a multi-branching scenario game to improve law student's problem-solving skills. This would focus on a wide variety of legal problems and was inspired by the Phoenix Wright Nintendo games. It was perceived that gamified elements could really engage students with problem solving, creating an interactive and fulfilling experience.

6. Limitations and future considerations

Due to the enormous pressure to launch the platform and service for students and staff, we faced very limited development time and as a result, elements of our original plan had to be delayed or halted for future iterations of the platform. The nature of the project became problematic as we realised that the Digital Academy, if done successfully, would be a massive undertaking, having real institutional impact and significant change. Furthermore, we identified several limitations, after the platform went live, that we could potentially address in the future, for the platform to be ultimately successful and as impactful as possible.

As we developed a broader collection of Shareable Content Object Reference Model (SCORM) packages, as well as launching the platform early, we quickly realised that we did not have a robust platform to plug the SCORM files into. This meant that while we could track clicks and hits on the site, we were unable to gather highly valuable learning analytics to track a student's progress and learning journey. This therefore meant we were unable to proceed with the Digital

Scholarship part of the Academy, a certification program that gave added value to the skills the students were learning and provided the crucial academic bridge between acquisition and application of knowledge.

Additionally, we realised that we needed to focus more heavily on the student side of the Academy, particularly as this was where the need was felt strongest. As a result, the staff side of the Academy was left under-developed and therefore did not go live initially. This was due to time pressures and the fact that the design language for the staff part of the Academy was not as developed and required more discussion with the stakeholders for that part of the project. We wanted to ensure consistency of approach, and it was felt that this wasn't feasible within the timeframes of the project.

The university needed a solution sooner, rather than later, and senior figures were keen for the platform to launch ahead of time. As a result of being forced to soft launch the Digital Academy prematurely, the platform is still being developed, however it now seems that the Digital Academy will be in a constant state of development and change throughout its lifespan, particularly so that it is always able to stay up to date with new technology and to be pre-emptive. Furthermore, the product should be developed incrementally, in line with university policy, widening participation and student and staff feedback.

This approach led to a slightly lower than anticipated number of students utilising the site. It was felt that a big bang approach may have been more appropriate, as a big advertising campaign would have stimulated more interest and driven more students to use the platform initially, thus creating a much larger initial user base. Initially, it was felt that the Digital Academy didn't have the impact we desired.

7. Conclusions

Through the creation of the TWR model, the team felt like they had achieved the principle aim of creating engaging learning content. The model we adopted allowed our learning content to be multi-modal for the first time and catered for a wide variety of learning styles and needs. We saw the TWR model as an enhancement of the VARK model of learning styles and preferences, one that performed well in an online environment. Additionally, we felt like the online synchronous workshops complemented this approach, giving an extra element of engagement, in this case human interaction, something in high demand by students at the time (Hume, 2020).

The team also felt like we had started the journey towards creating independent self-led learners. The discovery tool and our own targeted learning interventions provided the framework for students to evaluate their own practice consistently and critically. While uptake has been limited due to the limitations considered above, the culture of independent learning and self-assessment has started to grow and is a very encouraging starting point for future development.

The Digital Academy team felt that they had created a very self-reflective platform and cross project initiatives such as the Insights survey and promotion of the discovery tool, which enhanced the status of the platform as a way of guiding learners to areas of practice they can focus on. Further development is required to take the Academy one step further, creating a holistic self-assessment tool, with responses and learning content embedded within feedback.

Therefore, what started as a simple response to the pandemic in terms of hosting content in an online learning environment has turned into an institution wide initiative to embed digital skills into the wider curriculum of the university. The Academy therefore has the potential to engender real change within the organisation, not only on a student level, with students being more aware

of the range of learning opportunities available to them, but wider academic staff realising the potential to enhance their teaching provision.

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