**REFLECTIONS ON DELIVERING ONLINE DIGITAL MEDIA**

**COURSES: LEARNING FROM THE LEARNERS**

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**Abstract**

In this paper, we describe the development of two online courses designed to enhance staff digital literacy: *Ten Days of Twitter* (10Dot), which introduces staff to the use of Twitter for academic purposes; and *5 Minutes of Digital Literacy* (5MoDL), which supports Anglia Ruskin University’s (ARU) Digital Literacy Framework (DLF).

The ARU version of 10DoT, #ARU10DoT [1], attracts roughly 35 participants each time. Participants subscribe to a WordPress blog and each day, for ten (working) days, learn a different aspect of Twitter, and complete an associated task, in ten minutes. The introduction in 2017 of a Digital Badge for successful completion of all ten tasks almost doubled page views on the blog, and some previous participants repeated the course to acquire the badge.

*5 Minutes of Digital Literacy* (5MoDL) [2] is based on the 10DoT format and delivery. The course was designed to support ARU’s DLF [3], which defines levels of competency (i.e. Beginner, Intermediate, and Advanced). It addresses five key areas in five-minute segments on the five days of the first full working week of the month, for five months. 5MoDL was created in response to the lessons learned while running its predecessor, *5 Days of Digital Literacy* (5DoDL) [4].

Both courses attracted high levels of satisfaction, and most participants report changes to their practice as a direct consequence of them.

Keywords: Technology-enhanced learning and teaching, micro credentialing, mini mooc, staff digital literacy.

# INTRODUCTION

Twenty-first century education has been undergoing a transition that recognises the increasing sophistication and proliferation of communication technology. The number of smartphone users in the UK, for example, currently stands at 48.52 million, and this number is predicted to reach 53.96 million by 2022 [5]. To put this into perspective, the UK population is currently 65.65 million [6]. The ubiquity of ownership of smartphones, and other handheld, wifi-enabled portable devices, have replaced laptops as most students’ device of choice. The debate over banning or allowing smartphones in lectures rumbles on, with passionate arguments both for [7] [8] [9] [10] [11] [12] [13] and against [14] [15] [16].

Learning and teaching has embraced technology, and Technology Enhanced Learning and Teaching (TELT) has become a foundation for higher education, albeit on a very wide spectrum. It is impossible to imagine a Higher Education Institution (HEI) without a website, for example. Basic provision of technological elements such as email, word processors (e.g. *Word*), spreadsheets (e.g. *Excel*), PowerPoint, and the like, are so ubiquitous and fundamental that they are hardly recognised as technology at all anymore. Most HEIs offer a Virtual Learning Environment (VLE) or Learning Management System (LMS) (e.g. *Canvas*, *Blackboard*, *Moodle*) to provide digital support for teaching. Content ranges from a simple document repository to a fully interactive experience complete with online summative assessment.

One key area of TELT growth is the use of Social Media. Social media platforms have grown to such an extent that they dominate communication. *Facebook* is in the top spot (2.2 billion users), followed by *YouTube* and *WhatsApp* (1.5 billion users each), and *Facebook Messenger* (1.3 billion users) [17]. An app called *WeChat* is in fifth highest place, and is, like *Baidu* *Tieba*, *QQ*, *QZone*, and *Sina Weibo*, a Chinese social media site. China has blocked a great many websites including *Facebook*, *Twitter*, *Instagram*, *Pinterest*, *Tumblr*, *Snapchat*, *WordPress*, *Blogspot*, *Blogger*, *Flickr*, *SoundCloud*, *Google+*, and *Hootsuite* [18].

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The fundamental dichotomy of ‘Digital Natives’ and ‘Digital Immigrants’ [19] has largely been discredited [20]. UK policies such as widening participation and lifelong learning mean that many students are not technologically proficient, while many members of HEI staff are. Recognising that improving students’ digital literacy can, among other things, improve their employability [21], the UK HE sector moved to define digital literacy and to devise support packages to assist HEIs in developing it [22] [23]. In addition, many UK HEIs have created Digital Literacy Frameworks (DLF) to scaffold training and support for both students and staff [24] [25] [26] [27] [28] [29].

In its *Learning, Teaching and Assessment Strategy 2015-17*, ARU [30] stated a commitment to, ‘Enable staff to improve and extend their digital literacy skills through the implementation of the Technology-enhanced Learning and Teaching (TELT) framework’ [p.6], and to ‘Develop a barometer of digital literacy and establish a baseline digital literacy requirement for staff’ [p.7]. These efforts were coordinated by Anglia Learning & Teaching (AL&T), the learning, teaching, and assessment development unit at ARU. The two key developments in this strategy were to develop a TELT menu to support the framework [31] and a Digital Learning Barometer to assess levels of staff digital competence, and provide CPD to address any deficits. Consequently, ARU designed its own DLF [3], which was based on the EU Digital Competence Framework 2.0 (DIGCOMP) [32]. This, in turn, led to the development of a Digital Literacy Barometer, which allows staff to self-assess their level of digital literacy against the five areas of the ARU DLF, which are:

1. Finding, using and managing information
2. Working in the digital age
3. Creating digital content
4. Digital responsibilities
5. Problem solving in the digital world

Consequently, AL&T developed an online CPD course, *5 Days of Digital Literacy* (5DoDL) [4], to help staff develop their digital literacy by introducing them to a range of software and examples of good practice, covering each of the five areas of the DLF. AL&T also deliver an online CPD course specifically for Twitter, *10 Days of Twitter* [1]. Both courses offer participants the opportunity to claim Digital Badges for successful completion of all daily tasks. Digital Badges are a form of microcredentialing in which participants receive an electronic certificate indicating that they have acquired a skill. Badges for both courses and are designed and distributed using the online open badge issuing platform, *Credly*. Recipients can share their Badges across a variety of social media platforms, including *LinkedIn*, as evidence of their engagement with CPD, and thus enhance their CV.

# 5 MINUTES OF DIGITAL LITERACY

5MoDL is the second iteration of an online course that seeks to build staff digital literacy. Originally entitled 5 *Days* of Digital Literacy (5DoDL) the name was changed to 5 *Minutes* of Digital Literacy (5MoDL) in response to feedback which suggested that participants were confused about the program duration. 5DoDL had 390 participants, who viewed the blog posts 19,954 times and generated 3,621 comments (plus 2,975 tweets). Like 10DoT, successful participants were awarded digital badges, 813 of which were issued, which have been viewed and/or shared 5,972 times to date. Many valuable lessons were learned while running 5DoDL. The large number of participants amplified the smallest of design flaws, and the shortcomings of the platforms that were used to deliver the course. In order to address the scale of interest, unlike 5DoDL, which was delivered via a *WordPress* blog, 5MoDL is delivered via ARU’s LMS, *Canvas*, which restricts access to ARU staff. Instructions for daily tasks have been simplified and the language is much more precise to avoid any misunderstandings by participants.

In both 5DoDL and 5MoDL the users receive a post on a different topic each day, introducing them to a piece of software, technique or idea. Staff were asked to read the post, and then complete a task. The task required the staff member to either share their opinion, or give evidence that they understood how to use the software (often by finding information and using it), and often to post a link to articles they had found with a short description of why they found it useful. For example, staff were asked to use *Google Scholar* to find a paper relevant to their teaching, or to find a subject being discussed on *Twitter* that their students might find interesting, and then describe why. The reading of the post and the completion of the ‘activity’ should take no more than five minutes of their day.

As mentioned above, the topics were informed by the ARU DLF [3] that is split into five sections:

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1. Finding, using and managing information
2. Working in the digital age
3. Creating digital content
4. Digital responsibilities
5. Problem solving in the digital world

Each section is then broken down further into sub-topics and competency levels. For example, for the first area, *Finding, Using And Managing Information*, the three sub-topics are:

* *Information Search*: where staff had to evidence understanding of using search engines;
* *Information Management*: where staff had to evidence the ability to save files in different formats, and retrieve saved content; and
* *Information Authenticity*: where staff should be able to recognise and evaluate the authenticity and reliability of different information sources.

## Using Feedback from 5DoDL to Develop 5MoDL

Running the course a second time, rebranding, and moving away from the blog-based format to the LMS, allowed us to fold in much of the feedback and things we had learned from that initial run. It is safe to say that very few assumptions were made of the level of digital literacy when creating the original course content, and that approach continued into 5MoDL. Acronyms like ‘URL’ are always accompanied by a description; and simple actions such as ‘cut and paste’ are always accompanied with the keystroke commands. The subject matter of the posts adhered to a relatively basic standard. For example, the very first post was a simple instruction on how to use *Advanced Google Search*. Initially we thought that this might be too simplistic, but in most cases the feedback was very positive, and one of the most common messages left in response was ‘I never knew I could do this’ or just the words (and exclamation mark) ‘thank you!’.

Staff were often required to click on links and visit websites, or complete a task using a simple piece of software. It was in these cases that many lessons were learned by the facilitator, regarding the transparency and simplicity of the instructions. In one typical post, staff were required to watch a video, and then leave a comment about the subject matter. The omission of the instruction to where they should leave the comment lead to nearly 200 emails asking for clarity. As mentioned, the number of people engaged with the course, combined with the requirement to submit feedback, often generated hundreds of emails during 5DoDL, so 5MoDL took on that feedback, and greater care was taken in writing the content.

Staff would often complain if a post and activity took them beyond the five-minute mark, and it was clear from an early stage of 5DoDL that the posts had to be shorter and more succinct. Along with a more erudite approach in both 5DoDL and 5MoDL, the facilitator introduced a ‘Going Further’ section to most of the posts. Great care was taken to mention that ‘this part will take you beyond your 5 minutes’ and ‘if you would like to go further’, when introducing materials that went beyond the five minute mark. The content in these sections would typically expose the staff to more evidence, interesting content that would take them longer than five minutes to watch or read, and/or related areas of interest.

The language and general timbre of the posts for 5DoDL was deliberately informal, personable, and humorous where appropriate. In many ways, the facilitator wanted to create a low stakes, friendly atmosphere, with a light touch. This seemed to fit the blog platform and was universally accepted without any criticism in the feedback. That approach continued into the 5MoDL iteration of the course, though in some respects the move to the more formal platform of the University LMS, does not fit so well with the informal tone. This may well be just a psychological anomaly experienced only by the facilitator, as there has been no negative feedback about the tone of the posts in 5MoDL.

## Micro-credentialing

In line with a general drive towards micro-credentialing at ARU, electronic certification in the form of a Digital Badge was added to 5DoDL and 5MoDL, via the *Credly* platform. Once staff completed all of the activities for a week they would receive their digital badge. Staff would often chase the facilitator if they did not receive their badge directly after completing the week. Awarding digital badges for

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completion of activities encouraged active engagement with the content, and also encouraged staff to complete the course. In total, 813 digital badges were awarded, which have been viewed and/or shared 5,972 times to date. Staff were encouraged in one post to open a *LinkedIn* account, or revisit an account they had already opened but often had done very little with. The application of the badges into their *LinkedIn* accounts, boosted interaction with the badges, which included outside parties viewing them as a part of their online presence.

## 10MoDL and 15MoDL

Two more courses have been created to follow up and build on the literacy levels achieved by staff who took 5MoDL. 10MoDL and 15MoDL are intermediate and advanced levels of the course. Both go a little further each time and take longer to complete each day. These are intermediate and advanced levels, and are informed by the ARU DLF [3], and staff are increasingly be asked to evidence critical thinking, and the embedding of skills learned on the course into their teaching. Great care is being taken to build on the 5MoDL content.

## Evaluation

Staff are required to complete the survey as part of one of the final tasks to gain their Digital Badge. The questions were largely ‘Goldilocks’ style questions and the survey, on average, was completed within the five minute time period, in-keeping with the five minutes per day ethos. Complete feedback is currently only available for the first iteration (i.e. 5DoDL). Overall, the feedback was positive, with 36% saying the course was ‘fun’, 44% constructive, and 50% instructive. Negative feedback was low with only 5% finding it superficial, and just 3.6% found it confusing. The majority (89.3%) found that there was ‘just enough content’ and 54% sad that they would do another course in that style again.

The word ‘useful’ was included in the free text comments 444 times. Other quotes from the feedback included:

* Really useful function, I had no idea this existed! (*Speech to Text*)
* Cool, thank you very much for sharing this information. This is a very good selection of online resources (*lynda.com*)
* I had no idea that *Facebook* quiz apps continue running in the background unless users actively stop them (*Digital Citizenship*)
* I am amazed to see how quickly I could find out about entrepreneurship at ARU – certainly saved me a lot of time when I previously searched for this information (*Advanced Google Search*)
* What a great start to *5 Days of Digital Literacy* – started with a general search on the trombone and ended up reading about gender discrimination in top orchestras and the introduction of ‘blind auditions’ (*Advanced Google Search*)
* Very helpful in finding the latest info on technical accounting standards from an accredited source, in particular on revenue recognition (*Advanced Google Search*)
* I found the item on password management software in the computer security video useful and informative (*Digital Identity*)
* Really useful information on how to protect your data and computer from online viruses, hackers and more! Great tips which I will be taking on board (*Digital Identity*)
* Useful videos, especially the things to consider on your CV (*Digital Identity*)

# 10 DAYS OF TWITTER

For every student who recommends avoiding *Twitter* completely [33], it is possible to find others who think all students should use it [34] [35]. Similarly, there are academics who favour engaging with *Twitter* [36] [37] and those who do not [38].

While the majority of *Twitter* users develop their skills by simply visiting the *Twitter* website, or installing the app on their mobile device, some users are less willing or able to approach the process without support and guidance. Consequently, Webster [39] devised the 10DoT format to encourage reticent and technophobic academics (and library staff) to engage with *Twitter*. A supplementary

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purpose of 10DoT is to ‘persuade’ academics that *Twitter* is not simply a vehicle for celebrities and commercial enterprises, but can be an effective means of communication for a wide range of academic purposes.

10DoT uses a Fordist construction, breaking down the use of *Twitter* into its simplest elements, and presenting them as single actions. The course takes the novice user through from basic introductory tasks to more complicated and challenging activities:

* **Week 1** 
  1. Setting up your profile
  2. Sending tweets
  3. Following people
  4. Sending @messages
  5. Retweeting
* **Week 2** 
  1. Hashtags and Trending
  2. Pictures and Videos
  3. Managing People
  4. Managing Information
  5. The Past and The Future

Each daily task, however, is designed to take no longer than ten minutes. Thus *Twitter* is presented as ten tasks, each one lasting ten minutes, over a period of ten (working days). This bitesize format, which has proved so attractive in other arenas [40], offers time-constrained academics the opportunity to learn a new skill during a fraction of their day, during lunch breaks, for example. The use of short tasks also means that should a participant fall behind, it does not take too much time to catch up. Delivered after the conclusion of the course, an additional *Eleventh Day of #ARU10DoT* [1] suggests some practical ways in which *Twitter* may be used in an academic context, including: tweeting about new publications such as journal articles, blogs, website updates, and so on; ‘Crowd sourcing’ your work to invite people to engage in and help you with your work; publicising your events and then live tweeting them; and using hashtags are a great way to make your area of interest, and the materials you produce more visible.

The entire course is delivered online via a blog (currently *WordPress*). Users follow the blog with an email address to which daily notifications are sent. Recipients can either work from the content embedded in the email, or visit the blog itself. Each blog post is comprised of a description and walkthrough of the daily task, complete with screenshots and other supporting images, and ends with a task. In addition to emails, notifications are issued via *Twitter*, *LinkedIn*, and *Facebook*. This wide distribution results in potentially thousands of people becoming aware of the course. Participation in #ARU10DoT is not restricted to ARU and external participants are welcome to join. Indeed, some of the most positive feedback has been received from external participants. The course is, therefore, by definition, a MOOC, or more accurately a mini-MOOC.

As Webster [39] distributed the original 10DoT under a Creative Commons license, it has subsequently been adopted by a number of institutions in the UK, Europe, and overseas. The ARU version, #ARU10DoT, has been running twice per annum, in December and February (i.e. once per semester), since 2013. However, each iteration of the course requires both reflection and research. Reflection is primarily driven by the results of the evaluation surveys administered using the online survey tool, *SurveyMonkey*, after the completion of delivery (see below). Research is necessary to determine the nature and extent of any changes that *Twitter* has introduced to the platform. It has been prudent, therefore, to allow two weeks prior to each delivery to address any issues raised in the evaluation and any platform changes.

## Micro-credentialing

As with 5MoDL, and in line with a general drive towards micro-credentialing at ARU, electronic certification in the form of a Digital Badge was added to #ARU10DoT for the Spring 2017 iteration of the course. Thus, those participants who successfully complete all ten daily tasks qualify for a Digital Badge. Certification for the Digital Badge confirms the tasks that the bearer has completed, and

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confirms that it contributes to Dimension K4 of the *UK Professional Standards Framework*: The use and value of appropriate learning technologies [41].

The addition of Digital Badges resulted in a threefold increase in visits to the blog page, which suggests that participants were actively engaging with the material and the activities to ensure that they accurately completed the daily tasks. A second unanticipated impact of the introduction of Digital Badges was an influx of previous participants eager to repeat the course simply to qualify for a Badge.

## Evaluation

Respondents are invited to complete a short online evaluation questionnaire at the end of each delivery. All respondents (100%) to the most recent evaluation agreed that #ARU10DoT clearly demonstrated how *Twitter* can work in a professional context, and that they had changed the way they use *Twitter* because of the course. In addition, every respondent claimed their Digital Badge.

The core of the survey, however, is a set of ‘Goldilocks’ questions which invite respondents to indicate which topics have too much detail, which have too little, and which are just right. In the most recent evaluation, none of the respondents felt that any of the topics had too much detail. All of the respondents (100%) thought that the amount of detail was just right for the following topics: Setting up your Profile, Sending Tweets, Following People, Sending @Messages, Retweeting, Hashtags, Pictures and Videos, and The Past and the Future. However, 14.29% of respondents felt that the topic Managing People had too little explanation and 28.57% of respondents felt that the topic Managing Information needed further clarification. In addition, respondents suggested the inclusion of additional topics including Linking separate *Twitter* accounts, Changing the *Twitter* handle, Copyright and privacy issues, and Managing *Twitter* e-mail notifications. These topics will be reviewed, expanded, and added prior to the next delivery.

#ARU10DoT has proven to be such a popular and effective format that is has been adapted as a module on ARU’s Masters level course, *MSc Communication Skills for Conservation* (Comm4Cons, #C4C10DoT) [42]. One student on this course was able to attract research funding by tweeting directly to funding bodies.

Quotes from the feedback included:

* Short and concise – I think it’s ideal for academics and lecturers who perhaps do not have the time to spend on long (and dry) IT courses
* Nothing further than to say thanks for your help, support, and excellent mentoring
* Many thanks for the course, Mark. I have greatly enjoyed following it and taking part
* Just a big thanks, Mark
* Brilliant course Mark, thanks so much for all your excellent work and for encouraging me to do it. I now feel confident in using Twitter and just have to practise with it

# CONCLUSIONS

The HEA [23] define digital literacy as, ‘the capabilities required to thrive, i.e. be an effective and responsible participant, in a digital society’ [online]. Developing and enhancing staff digital literacy is, therefore, a fundamental requirement of Higher Education in the twenty-first century. At ARU, the DLF defines those areas in which staff should aim to become proficient; the Digital Literacy Barometer allows staff to measure their skill level; and CPD courses, such as *5 Minutes of Digital Literacy* and *10 Days of Twitter* facilitate skill development in those areas that staff need to develop.

Thus, policy drove practice, which is underpinned by pedagogy. Indeed, both courses approach digital literacy from the twin perspectives of practice (i.e. ‘how’) and pedagogy (i.e. ‘why’). The content of *5 Minutes* was not chosen at random. These examples were carefully selected from the plethora of digital tools and practices available as they suit a pedagogical purpose. Both courses are deliberately delivered online, despite occasional pleas from academic staff for face-to-face sessions, as classroom-based training for online practice is an oxymoron. The inclusion of digital badges as portable e-certification adds a further digital dimension. Consequently, these courses also act as exemplars of web-based distance learning.

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