

Digital Literacy: not drowning, waving

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From the outside, what we commonly understand to be digital literacy can seem a rather one-sided affair, in which students develop skills in scholarly research and communication techniques that support the negotiation of university systems and their proprietary frameworks. Meanwhile, the digital objects and platforms that underpin modern life – within and without the institution – are becoming increasingly complex in terms of their design and function as much as they are becoming equally ubiquitous in terms of their reach. This complexity is often embedded and invisible. It is almost beyond our comprehension to understand the complexity of a Google search algorithm, or the video compression technology behind Netflix or the confluence of technologies that constitute Tesla's navigation system.

Similarly, within an institutional framework, the digital academy constitutes a suite of complex embedded technologies that have become normalised: email, staff intranets, LMS sites, office software and the integration of web and database search functions into our daily workflow. We could even include basic social media communications and mobile phone apps in this bracket of digital standards. Scott Rodgers has noted this constitutes what we could consider an operational model for the digital humanities research and pedagogy. Citing Katherine Hayles who posits this as the prefiguring of our 'embodied virtuality' in which the act of being digital in an academic context "is inherently about transformations to the cognitive and embodied environments of academic life at the level of the habitual or every day." (Rodgers, 2017) For many this is still a burden rather than a ritual. What we define as digital literacy equates to different things for different audiences and expectations of proficiency vary considerably. The structural variations from institution to institution and functionality from platform to platform can be difficult to navigate – especially for restless researchers like myself or part-time and adjunct faculty.

We also need to understand what we are talking about when we talk about media in a digital literacy context. Digital media should be seen as an opportunity to push towards the next layer of complexity within the digital literacy toolkit. Media can be an interface for collaboration and communication. Media can be a tool of construction and authorship. Media can be something that can be curated, manipulated and shared. Media can be a channel, an archive or a platform. What brings these slippery definitions together is the notion of media as production – the creation of media using image, sound, text and design elements to critically engage with, comment upon and interrogate knowledge.

Yet how adept are we at pushing these technologies to a higher order of operation? Why is it important to look beyond the digital normal to a media toolkit that enables creation, remixing, collaboration and new modes of publication? How do we transition from being users to being makers? And finally, what can we do to leverage the media technologies that hang off the edges of the public, private and professional spaces that constitute our student's present and future selves?

One could say this is about two things: courage and code. Having the courage to see modes of media production and content creation as having academic merit and wide utility across many – if not all – Arts disciplines. Of building upon academic traditions of knowledge sharing and the capacity to innovate ahead of the curve. Yet to make media is to see media, and this is not immediately obvious within the current state of the digital university. Yes, digital literacy programs are very much a part of the landscape – the library's *Scholarly Literacy Framework* is indicative of this move – but in the digital

humanities and the social sciences more engagement is required not just with the study of digital objects but with the act of making media objects.

This requires a different mind-set, one that is concerned with the process of producing meaning with media. Yes, there is added complexity, the code that underpins the design of these digital objects and media tools is mostly invisible and the authorship of their function is a rarefied, often commercial, act. The data which passes through such objects not only drives their function but gives them value – again, this is mostly an invisible process.

However, this opaqueness allows them to be – on the surface at least - more user friendly and less confronting than they once were. Digital technologies in this context are as competent and as dextrous as the user wants them to be. Furthermore, they belong to a media ecosystem of peers, the method of their use is broadly understood, generously shared and almost infinitely variable. This of course masks how challenging it can be to use digital tools well and the difference is evident when they are used badly – and we have all seen many examples of that.

Of course, this presents a number of assumptions about young people and technology. One might ask, why do we need to teach digital media literacy to digital natives – don't they already have all of this stuff on board? To curate a Tumblr archive or shoot a panoramic photo is a sophisticated technological act but it doesn't constitute a proficiency in media production. According to the recent Foundation for Young Australians *New Work Order* report (FYA, 2016) a quarter of young people in fact demonstrate a low proficiency in digital literacy. The report also highlights the fact that the demand for enterprise skills – creativity, critical thinking and digital literacy – are all on the rise.

We also assume that the competent use of one form of technology therefore means a person has mastery over technology in all its forms. Furthermore, young people have conflicting feelings with regards to technology it can be at once personal and indispensable and in the same moment viewed with suspicion. The Adobe Education report, *Gen Z in the Classroom*, while mirroring some of the FYA findings indicates that there is a “nervousness” around technology's role in the future work place and concern that technology might in fact inhibit their ability to “think outside the box”.

And while we might assume technology has enabled a rich connectedness to social networks and provides 24/7 access to global information the report points out that it has also engendered a “lack of self-reliance” and a certain “technological dependence.” (Adobe, 2017) These are challenges that need to be resolved by addressing the technology directly.

To move beyond the digital normal is difficult. However, this is already happening in some parts of the university sector as it is here in Melbourne – and is certainly happening much faster at smaller more nimble institutions. It is also happening in small business, at local government level, in museums and in maker spaces in schools and public libraries. Knowing what's under the hood and manipulating technology for purpose is the next cycle of digital literacy and of collaborative learning in a networked environment. Citing Britton, the *Public Libraries in a Digital Culture* report identifies the importance of so-called makerspaces as “cultivating new forms of learning for a digital world, and fostering a ‘spirit of entrepreneurship within the community’.” (Wyatt, McQuire, Butt, 2015) There is potential in a research context to look to spaces such as the new [Digital CoLab](#) at Cornell University in New York or our very own [Digital Studio](#) in the Faculty of Arts here at Melbourne as spaces in which this can - and should - be explored. This could provide a gateway for such thinking at undergraduate level in terms of curriculum development, assessment design and active learning opportunities in the classroom that involve digital media production.

While this may seem at first an intangible leap given where we are now, we must see the concept of the maker space – ie the production space - as indicative of a technological and conceptual move. In practice and in discourse.

For Arts graduates this sits well with graduate attributes that promote notions of making and citizenry, consider this sampling of language from the BA:

- identify and resolve problems within complex changing social contexts
- articulate the relationship between diverse forms of knowledge
- act as informed and critically discerning participants within their communities
- work with independence, self-reflection and creativity

We do not presume these attributes to be the sole preserve of the academic scholar working in a traditional context. Nor should they be contingent on a work place and public realm that is devoid of technological means of production and communication. We could easily apply these attributes to working with digital media. (It should be noted that in the list of BA graduate attributes and the umbrella graduate attributes of the University that the word “technology” does not appear once).

Sitting alongside these attributes, and indeed perhaps it might be implied within them, are responsibilities we should think an Arts graduate in the 21st Century would be cognisant of and an active participant in:

- digital citizenship
- online identity management
- the protection and promotion of personal privacy
- evaluating, verifying and maintaining the integrity of information
- contributing to the cultural life of one’s community

These are all dependent on engagement with what we understand to be digital literacy at an institutional level. However, I would argue that this also requires an ability to communicate effectively – and critically – across complex digital media channels through the act of making. Sometimes this will occur independently but more often than not, this will happen in a collaborative setting and mostly across disciplines.

Lowgren and Reimer call this “collaborative media” suggesting that we are not just authoring texts – in a traditional media studies context – but designing new “infrastructures”. (Lowgren & Reimer , 2013) In terms of a transitioning future work force for Arts graduates this is a critical distinction as new appointments not only call for critical thinking but also creative thinking and the ability to design new systems and new paradigms using a mix of old and new media.

“Collaborative media refers to digital media where people outside the traditional media industries participate in production as well as infrastructural design. We argue that people's use of computers today increasingly comprise communicating in collaborative media, and that designing collaborative media implies fundamental changes to design processes and designer roles, which in turn forms a challenge to the proactive position of the CHI community in shaping future computer use.” (Lowgren & Reimer, 2012)

This of course is certainly applicable to the design of virtual education infrastructure and associated learning technologies. In the here and now - in an Arts context at least - incorporating digital media production into digital literacy programs could be a transitional model for not only curriculum design

but for cultural change. To get to a place that may not yet exist – and that is hard to define – will of course take some doing. It takes courage to see the code. Curriculum design takes time and interdisciplinary practice even longer. We need to see online spaces and studio spaces, mobile phones and mobile apps, production software and AV equipment and social media platforms as resources for constructing new forms of scholarly texts and new means to disseminate research.

Media production operates in a sphere that students are familiar with. It is a space in which they feel they can express themselves and construct dialogue and make meaning. Working with sophisticated arrangements of image, text and graphics is not easy to do well but it is an empowering act. For it is directly associated with the types of digital media systems students encounter each day. It is even the medium we are increasingly choosing as the format to package their education and broadcast it back to them.

This also an opportunity to look at digital media as a high-order organisational complexity. For example, we can even look to the construction of social media campaigns – complex convergences of media production - as symbolic microcosms of collaboration and critical thinking. The complex cycle of conception, production, publication and engagement has wide utility across a multitude of work places befitting an Arts graduate. Obviously, this has primacy in media and marketing but also in curatorial practice, in crisis management, in local government, in policy advocacy, in health and social services and at all levels of the education pipeline.

This is not only about analysis and interpretation, this is about critical engagement and creative development for a future work environment that is inherently interdisciplinary. This is about making. A new set of core digital skills for the classroom, the work place and for life. Skills that can embolden graduates to become informed and participatory digital citizens.

Even if we just bring this back to assessment design and learning design. We can do better. Let's consider the traditional models:

- The essay
- The reflective journal
- The presentation
- The exam

These examples certainly engage critical thinking and elements of creativity but what is their utility outside of academia? Now consider the alternatives:

- The video essay
- The blog site
- The interactive timeline
- The 360° VR image
- The Padlet wall

These are forms of assessment and learning tasks that have already been deployed or are in development by subject coordinators in the Arts Faculty. They still demand scholarly research and writing, academic referencing and the presentation of knowledge but have wider utility than just their pedagogical foundations.

A creative and confident utilisation of the digital toolkit that make these outputs possible however requires building capacity within both students and academic staff. There must be a willingness to pursue change and to demystify the digital technologies that for many are conceptually complex and

technically exotic. There are legitimate concerns within the academic community that need addressing – and the recent FlexAp green paper *Harnessing Virtual Infrastructure* pointed to some of the anxiety around this. There are two areas of concern we need to consider here:

Firstly, the technological paradigm:

- an appropriate targeted investment in the right equipment at the right time
- the pace of technological change and the ability to scale-up resources
- the impermanence of software availability and the interoperability of media platforms

And then, there is the academic paradigm:

- time and funding for academic staff to develop their skills and their curriculum
- the willingness of students to engage with new assessment models
- the academic merit of digital media objects against traditional scholarly outputs (or, how the hell do I mark this thing?)

Within the faculty of Arts there is a desire to tackle some of these concerns and it would seem that pro-active steps have already been taken with the establishment of the Curriculum Design Lab and the ongoing work by the Arts eTeaching Unit. Both are rare commodities at a faculty level. I am also a strong advocate for the library's *Scholarly Literacy Framework* which already has built into its suite of future student capabilities the concepts "create" and "connect". Both natural evolutions of the digital normal. There is also a strong existing capacity for embedding media technology into the teaching and online spaces via the collaboration between CSHE and the Learning Environments team.

Meanwhile, some of the preliminary documentation coming out of the FlexAP working groups is also very encouraging adopting a cautious and sensitive approach in their survey of the landscape ahead.

Whatever happens next, it will be a team effort.

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