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# TEACHING IN AN AGE OF UBIQUITOUS COMPUTING: A DECELERATED CURRICULUM

# Leanne McRae

Abstract: Ubiquitous computing describes the current conditions of our interactive, screen-based habitats where movement between screens has become a defining trope of everyday life. As students and teachers increasingly deploy screen-literacies within the education process where laptops, tablets and mobile phones become the mechanisms by which education is accessed and activated, new ways of thinking about and through attention, learning, and scholarship need to be deployed. The possibilities of a decelerated curriculum offers opportunities to re-encode the structures and styles of learning students engage with to enable them time to absorb, ponder and problematize the processes of their learning. By asking students to slow their interaction with texts, interfaces, digital and analogue environments teachers are able to engage with digital technologies and ubiquitous screens in meaningful and challenging ways via course content and assessment strategies that enable new technologies a critical and relevant space within their teaching and learning landscape. In this paper, the example of a staged assessment structure is used to demonstrate the ways in which multiliteracies can be activated via deceleration but in ways that permit screen-based interactions while creating a space for critical reflection on the networks of attention that flow across screens.

**Keywords:** Ubiquitous computing, pervasive learning, digital technology, pedagogy, teaching and learning

# Introduction

In an age of ubiquitous computing, how we manage technology in the classroom is essential to effective teaching and learning. Instructors are urged, by university hierarchies, employers, marketers and even students themselves to offer course materials and deliverables via new media technologies online and via apps on mobile devices. This delivery is aligned to the lifeworlds and desires of digital natives. Many students are hyperlinked, hyper-connected and have hyperactive attention spans. Therefore, assignments and courses need to be delivered through networks and modalities that capture and sustain their attention through 'sexy' interfaces and 'fashionable' frameworks.

How this technology is mobilised within the classroom and via external nodes needs to be closely considered. This research is situated within a wider understanding of communication, digitisation, and education particularly in light of recent work in this area by Cinque and Brown (2015) who locate this debate as "a major issue in Australia (and elsewhere)" (p. 1). They affirm the importance of understanding these relationships.

we aim to contribute to this debate by examining the pivotal issue of how young people are actually using screen media – an issue that often seems to be

overshadowed in the enthusiastic, if not hasty, conclusion that students and education will 'never be the same again' (p. 1).

The unproblematic classroom deployment of a variety of tech-based interfaces from PowerPoint slides and click-through online tests, on to YouTube clips and Ted Talks, disperses resources with little consideration of content criticism, pedagogic outcomes, or the literacies flowing around and through these interfaces. How students use this technology to manage not just the unit content but their active and interactive engagement with the context of classroom and out-of-classroom instruction remains an important area for research.

It is easy to lament the students' lack of attention and their reliance on digital technologies to shift their focus away from theories, ideas and concepts, on to Facebook, text messages and tweets. But the intersecting dialogue between attention capture and distraction via technologies, platforms and interfaces sits uneasily within the debate. More nuanced understandings of how technologies of pleasure, leisure, pedagogy and empowerment might circulate through teaching and learning is needed to reframe the expectations of students and teachers alike.

The purpose of this paper is to rethink the relationships governing the deployment of technology by teachers and students within the classroom. While instructional staff are the bearers of responsible delivery of service, the use of technology by students to receive that service is often constructed as irresponsible and even corrosive. This is not always the case. Teachers need to have reflexive understanding of the role that digital technologies play in relation to pedagogy, not to demonise or dismiss new technologies within their teaching, nor to celebrate and uncritically deploy them. Instead, a nuanced understanding of when particular technologies are useful, in what capacity, and when to engage them needs to be considered. Importantly, teachers and students also need to know when not to engage them - when to allow analogue deployment of ideas, discussion of concepts and even silence to percolate through online and offline spaces. Students need not be demonised as irresponsible technology users in relation to their education, but instead can offer advice to instructors to guide their use of online, mobile and digitised devices to reconfigure these relations positively. This reflexive interaction can manifest in new ways to construct the curriculum to model and mobilise moments where technologies are centralised, cultivated and creative and then marginalised, silenced and separated for different pedagogic purposes and outcomes. An astute unpacking within the context of education strategies, effective learning and mobile, digitised devices that permeate through everyday lives can reveal new lessons being learned at all levels of education.

In the first section of this paper, the propagation of ubiquitous computing will be discussed to better understand the contexts in which students are functioning and deploying technology inside and outside the classroom. In the second section, the ways in which movement between multiple screens can disengage students from learning will be unpacked. How student attention is mobile and fragmented will be examined to consider the ways in which time is activated in education and might offer a rethink of the relationships between learning and digital technology. In the third and final section, the place of a decelerated curriculum that integrates, hails and tracks, but also hesitates and hampers technologies in education will be positioned as a possible mechanism by which to encourage students and staff to ponder and politicise the way in which digital technologies can be combined with the analogue to facilitate learning.

# Youth and Ubiquity

Digitally literate students are increasingly populating classrooms. This generation is often referred to in the popular media (DeGraff, 2014) and by other educators (Palfrey and Gasser, 2008) as 'digital natives', meaning that they possess a particular multitasked literacy and a variety of attention strategies that enable them to leverage the power of digital devices in a myriad of circumstances and simultaneously manage their analogue experiences. Accordingly, "these young people having grown up with computers and the Internet are said to have a natural aptitude and high skill levels when using new technologies" (Jones, Ramanau, Cross and Healing, 2010, p. 722). This philosophy suggests they are accelerated, multiliterate learners with high levels of adaptability and mobility between different genres of entertainment and educational frameworks. Education theorists have sought to harness new and effective ways to capture the attention of this cohort who are pulled between their screen lives and their offline interactions. The trope of 'attention' is framed as the battleground for new educational interests and instructions. Sue Bennett (2012) has argued that these students offer a convergence for reframing educational practices and policies.

It is argued that the existence of the digital native makes dramatic educational reforms necessary because traditional education systems do not, and can not, cater for the needs and interests of young people. As a result, outdated schools and universities and outmoded teaching simply alienate students from learning, leaving them disengaged and disenchanted by education's failure to adapt to the new digital world. (p. 213)

However, the prevalence of the digital native may be overstated. While digitally literate students do possess unique multisensory interactions, these skills do not necessarily translate effectively into efficient learning strategies. 'Digital natives' still need to be taught interpretive and critical engagement skills that cannot evolve through exposure to digital devices and interfaces. Students may be "immersed in social media, consumer electronics and video games, but they are not nearly as proficient when it comes to using digital tools in the classroom" (Toliver, 2011, p. 60). Assuming that critical literacy arrives through exposure to digital devices does not effectively service the incoming (or outgoing) generation of university students and produces an instructional gap between what teachers assume these students know and what knowledges they really possess. Interpretive skills must be taught, reinforced and activated throughout learning experiences. For teachers, addressing the proliferation and integration of screens within everyday lives becomes the key struggle for effective teaching and learning. Understanding how screens reinscribe relationships with the real and the mediated reshapes knowledges and how they circulate through an educational landscape. The scale of screen interactions and the rise of ubiquitous computing offers new terrain through which to consider the connections between the self, information, knowledge and expertise.

Ubiquitous computing describes the conditions of being surrounded by screens and computer interfaces whereby "information technologies and telecommunications ... [are] embedded into everyday objects, the environment and even the human body, to allow wireless and seamless identification and connectivity" (Hua, 2012, p. 40). The prevalence of these devices makes them invisible. Thomas (2006) argues that "the key technological requirement within a pervasive scenario is that technology recedes into the background, that it is unobtrusive, inconspicuous – it does not attract attention" (p. 48). We are so used to their presence that we do not even see them as screens or devices

anymore. This invisibility means that we do not question their role nor identify these objects as barriers or problems to social, political or educational interactions. They are more likely hailed as effective social, professional and educational lubricants that create accelerated efficiencies in information management, interpersonal interactions, and knowledge distribution. Access to fast and cheap broadband service means we have "an opportunity to be online all the time" (Petersen, 2007, p. 84) meaning that ordinary and everyday activities and chores are punctuated by the computer, the screen or device, situating screens centrally within the ordinary and mundane. This is more than having the TV on during the day while moving in and out of the room where it is located doing household chores, for example. It means having access to a screen and different types and styles of screen-based interaction at all points of mobility. As a result, the boundaries between public and private, entertainment and education, leisure and work begin to collapse.

# Spaces, Screens and Self

The proliferation of screens within our everyday lives creates a particular flavour to our engagements with others and our understandings of self. At all levels these experiences are now mediated. Connection and communication is defined via poking, liking, friending and texting. Meaningful relationships are crafted in hyperlinked, timelined and tweeted contexts and commitment extends to liking posts, favouriting tweets, and upvoting reddits instead of actual interactions with people in linear time. Asynchronous communication creates the façade that we are interested, invested and engaged with other people's lives, but also obsessed with our own profile and crafting the right update to create a "controlled casualness" (Pascoe, 2010, p. 124) in managing our digital identities. The curation of these intimate, public and private spaces of the self provides a nexus for critical interrogation of the mediated nature of identity and the seduction of screen cultures for the archiving and curating of relationships. The function of small screens in alienating "users from other occupants of the space in which they reside, as users wander around engrossed in their handheld devices" (Cao, Oliver, and Jackson, 2008, p. 88), for example, serves to remind us of the ways in which different spaces are regulated by digital and analogue technologies. Cao, Oliver and Jackson (2008) identify the different functions of "public spaces, social spaces and private spaces" (p. 88) which govern behaviour. Within these macro-spaces are a number of subspaces like personalprivate spaces, which include "a telephone booth on the street" (p. 89) and social spaces that are semi-public like "schools, libraries and theatres" (p. 89). In each of these, the use of technology is contingent. In the age of mobile devices and ubiquitous computing, behaviour once exclusively contained within the private has moved into the public creating a blurring between these spheres. While this appears to offer a greater range of permissive behaviour, the blurring of boundaries has emerged in an age where public (and private) spaces are also increasingly regulated via "more surveillance" (Eriksson, Hansen and Lykke-Olesen, 2007, p. 33) including CCTV and cell-phone meta-data collection that seek to contain and control public and private behaviours. According to Cao, Oliver and Jackson, (2008) this can lead to conflicting expectations and attitudes towards the deployment of digital devices. The integration of private information (passwords, banking details), public activities (events, profiles), and interpersonal interactions (Facebook, geo-social networking) on mobile devices as individuals move through public or semi-public spaces means that "the very visibility of such behaviour has potentially undesirable consequences in that is it likely to negatively affect the integrity of a person's interactions and communication with other occupants of the space" (p. 91). It also means that post-PRISM privacy has corroded and the premise

that "social life is a continual shift between intermittent presences" (Wang and Stephanone, 2013, p. 439) in a free and frivolous manner can no longer be effectively sustained as people 'check-in', Instagram, Snap-Chat, and update.

When these devices move into the teaching space, the tensions between the social, private and public dimensions of that space situates the use of technology as a mediator between these experiences. The blurring of behaviours, attitudes and realities constructs a culture where "self-disclosure and self-exhibitionism have become prevalent, not only because of the private expressions of self that can easily be posted online but also because they promote online sociability with "networked publics"" (Wang and Stephanone, 2013, p. 444). Students use this increasingly normalised interaction with the world and the self to mediate and moderate their engagement with education and learning. They understand their sphere of importance through digitised devices and use the technology available to them to integrate learning nodes into their experience of the everyday. The professional, the public, the personal and the intimate blur as screens mediate engagements in multiple environments. Their 'networked publics' pervade and perpetuate. While this might appear to offer the potential for a seamless and integrated 'pervasive learning' which is described as "a social process that connects learners to communities of devices, people and situations so that learners can construct relevant and meaningful learning experiences, that they author themselves, in locations and at times that they find meaningful and relevant' (Thomas, 2006, p. 45), it can mask the situations and circumstances that limit rather than extend capacity for learning. Access to a portal, device or screen does not equate to access to an education. The skills required for effective learning are integrated and deployed beyond the screen. When access to digital technology is serviced as an essential for effective delivery of educational product to students-as-consumers, the constructs of education are diminished and teacher's roles as experts is denied. Instead they become facilitators, providing unit content uploaded into the cloud where students can download, decrypt and distribute into assignments and tests. Teachers must model knowledge for students, display its contrasts, conflicts and capacities. While understanding the ways in which students are connected to digital resources and online oeuvres is important to effective instruction in an age of ubiquitous computing, understanding when and how to log-off, disconnect and slow-down is essential to information management and knowledge development. Preparing students for more than the soliloquies of surfing online and beyond data mining towards reflexive, engaged and critically consciousness citizenry requires a radical rethink of the role and function of digital technologies – not to deny their place within an effective education, but to understand the ways in which they are both useful and how they might limit, reduce or block a transformative educational experience.

# **Information Overload**

The frame and function of ubiquitous computing is also structured through the constant and easy access to information. Typing keywords into the blank text box of Google has become normalised and for students it is a seductive solution to an uncomfortable and awkward struggle with knowledge. Googling is easy and fast. It removes difficult decision making as students click on the first listing returned – barely moving beyond the first page of results. They often do not understand how to discern between reliable and unreliable knowledge, useful and useless resources. Google masks this process and through its Page-Rank algorithm simply returns the most popular result. For students "a word or phrase is typed into a friendly box. Even if it is spelt incorrectly, the algorithms will return information to the user. It is not quality data, but

is the informational equivalent of a Big Mac, Fries and a Coke" (Brabazon, 2011, para. 6). This information is then, most often, uncritically and unreflexively incorporated into assignments or answers. It is rarely engaged with, questioned, processed or interpreted. Students move seamlessly from one screen to another, copying and pasting their search result directly from the site into the assignment and slotting in the EndNote citation. Searches are conducted on their mobile phones, results emailed or texted to other accounts where it can be deployed on yet another screen. This dance between screens disengages students from learning while they instead copy, paste, slide and swipe. Research suggests that screen technology adds layers of complexity to students' engagement with scholarship that might be efficient for time management but are not always productive for learning. The mobility of text and the hyperlinked environment – while particularly useful for students with disabilities – is also limited and limiting by a whole range of factors including "typeface differences, pixel count, stroke width, and font smoothing" (Polonen, Jarvenpaa and Hakkinen, 2012, p. 157) that reshape how text is read and understood in predictable screen use. While these elements are also important to off-screen reading abilities, when taken in consult with screen resolution and display technology where "certain features of the LCD screen, such as refresh rate, contrast levels and fluctuating light interfere with cognitive processing" (Mangen, Walgermo and Bronnick, 2012, p. 66), not only can there be an increase in eye-strain, but "knowledge transition from the episodic memory (indexed by Remember responses) to the semantic memory (indexed by Know responses) appears to be dependent on the nature of the presentation format (screen versus paper)" (Mangen, Walgermo and Bronnick, 2012, p. 62). Subjects tend to remember less of what they read from a screen than what they read from paper. While there is conflicting debates about the impact on comprehension, studies have demonstrated that the "hypertext structure tends to increase demands in decision making and visual processing and this additional cognitive load ... impairs reading comprehension performance" (Mangen, Walgermo and Bronnick, 2012, p. 61). The act of scrolling down a web-page for example, tends to function as a distraction or shift in focus that impedes the absorption of information in a digital environment.

For students used to having access to information at their fingertips and scanning the screen instead of reading, it is difficult to get them off the search engine and into databases. This difficulty is born out in Cinque and Brown's (2015) data that demonstrates the overwhelming bulk of students in their study using Google over databases (152 vs 17) (p. 12). For time-poor, time-stamped individuals, downloading is the default dialogue. It is not considering, caching, and criticising. It is also difficult for teachers to explain why they should not Google their way through their education because this requires reflexive understanding of the differences between information and knowledge that students may not yet grasp. Too often this distinction is conflated. This means students have little trouble Googling information online and replicating it in assignments. They struggle however, when moving into higher level instruction where more complex deployment and interpretation of that information is required. The structures and strategies of processing and understanding the information they gather is crucial to the means by which knowledge is generated. This is an uncomfortable process because students often fail to realise what they do not know. They are confronted with ideas that stretch their comprehension and world views that challenge their own. This can be an incredibly stressful process and the desire for the comfort of the easy answer, the seductive search engine and the Google text-box can call a student back to the platform without ever letting them explore what it means to be a learner in the spaces between the online and the offline. Tara Brabazon (2011) argues that this is the essence

of instruction – unpacking where challenge lies and building vocabularies of knowledge so that understanding can expand.

The problem with Google is that a searcher can only enter vocabulary and terms they already understand. If a student does not know who Etienne Balibar is, then he or she cannot add his name to a search for postcolonialism. Therefore, Google will always make the searcher comfortable, finding what is already known, in a basic language (para. 10).

For screen saturated students, who are mobile, connected and communicating, all of their digital flexibility masks a structural disconnect from education. They are connected to information – swimming in a sea of data – but without the literacies to process and interpret that data, they can only ever replicate what is already known – about a discipline and about themselves. The challenge is how to integrate the screen cultures and multiliterate capacities they embody with a critically reflexive pedagogy that can move them beyond swiping and liking. In order to achieve this outcome, it is important to teach through time. Mobilising a decelerated curriculum can assist students in managing multiple information inputs and outputs by requiring focus and attention onto tasks. This requires a type of course syllabus that explicitly provides spaces for contemplation built into the course content and assessment outcomes where students must move between digital and analogue interfaces and in that process, slow their movement and understanding of ideas. In this variability of speed, new possibilities emerge for thinking, understanding and experimenting with ideas.

### The Seduction of Slow

A decelerated curriculum involves structuring a syllabus, lectures and assessment or any one of these to force students to slow their engagement with course concepts, readings or other interactions. It is born out of an age of stream-lined or fast-tracked education that is designed to accelerate students through their course to the end of their degree. As employment is increasingly seen as the end-point of education, getting students through their degrees and into the workforce as quickly as possible has become the impetus of higher education structures. Decelerating the curriculum is also mobilised out of the circumstances of information saturation and ubiquitous computing where data percolates throughout our daily interactions leading to an abundance of information skills but fewer abilities developed in relation to scholarly interpretation, management, and assessment of that information. A decelerated curriculum offers the opportunity to slow down, think, and reassess ideas at specific points of the unit or course. By creating nodes of slow in specific units, deceleration can become a trope that students deploy as a skill or tool throughout their educational interactions, and that teachers can perpetuate and propagate across a course.

Jennifer L. Roberts, an art historian from Harvard University, has students in her art history course choose a single work of art to write an 'intensive research paper' on. As part of their research requirements, they must spend three hours observing their chosen work of art. She affirms "the time span is explicitly designed to seem excessive" but also that "crucial to the exercise is the museum or archive setting, which removes the student from his or her everyday surroundings and distractions" (Roberts, 2013, para. 4). Through this strategy Roberts (2013) encourages the students to slow their engagement with the world around them.

I want to focus on the slow end of this tempo spectrum, on creating opportunities for students to engage in deceleration, patience, and immersive attention ... Every external pressure, social and technological, is pushing students in the other direction, toward immediacy, rapidity, and spontaneity – and against this other kind of opportunity. I want to give them permission and the structures to slow down. (para. 3)

Via this deceleration, students learn to see different things in the painting and learn to re-encode the function of sight from an instant, immediate sense to a nuanced and slowly evolving experience. Students are learning not to just see, but to look and to 'perceive'. In terms of how knowledge is developed, teaching students to not just see words on a page, but to comprehend, process, unpack and problematize them, is also an important part of the academic experience. It is not only isolated to the visual arts, but to the experiences of observing, processing and understanding a variety of knowledges.

To remove distraction, encourage focus and attention to a specific idea, problem or concept is what we require of all students. The digital world in which they are immersed is structured to delay or displace this attention – to substitute it with easy answers and quick downloads, hyperlinks to the next story, page or site. For students, the velocity of movement between screens functions as an acceleration of attention where multiple inputs are gleaned, swiped and scrolled through. Consciousness is never allowed to settle, coherence does not emerge. Instead there is movement from one hyperreal context to another.

In terms of teaching and learning outcomes, movement through curriculum at speed, sifting through course concepts and pasting together assignments, is counterproductive. Students need to learn processing techniques to unpack ideas and allow them to percolate, connect and create. bell hooks (2010) describes the importance of "work[ing] for knowledge" (p. 10). Difficult ideas may take an entire semester to evolve sometimes an entire year. It is in reflexive understanding of the purposes and practices of acceleration and deceleration that students can learn to harness technology and disconnect from it when it is counterproductive to learning outcomes. Constructing a decelerated curriculum can assist this process. Considering how the course information can be structured and built through the term or semester can offer tremendous opportunities to focus students on particular tasks and ideas. Taking more time with assignments can demonstrate the ways in which pondering concepts can be fruitful and effective. Thinking is not just located in the tutorial or classroom, but spills out in the everyday. Strategies for effective learning must involve tactics that enable students to disconnect from their hyperreal swipe and like screen-based environments to merge with the analogue and the "thoughts ... [that] are the laboratory where one goes to pose questions and find answers, and the place where theory and praxis come together" (hooks, 2010, p. 7).

# Languages and Literacies

A range of these tactics have punctuated educational literature as new methods for teaching and learning within accelerated and changing environments have been envisioned, tested and theorised by a variety of educational theorists. Moving students through multi, transitory and complex learning environments have been well defined and offer key points for contemporary consideration when seeking to decelerate student movement through ideas and in-class interactions. The multiliteracies project was one such endeavour culminating at the end of the 20<sup>th</sup> century to reconfigure education for a shifting global multicultural working and interacting environment. Marked as a way of

teaching that moved education beyond "mere literacy" (The New London Group, 2000, p. 5), a concept characterised by teaching "centred on language only, and usually on a singular national form of language ... conceived as a stable system based on rules such as mastering sound-letter correspondence", (The New London Group, 2000, p. 5) and into multiliteracies that emphasized interactions that are dynamic, transitory and controversial. The focus of the multiliteracies project was to account for diverse media and identities within the teaching and learning space. Christopher Walsh (2007), for example, activated "screen-based textual forms" (p. 79) as a mechanism for students to "fashion critical responses to problems across all subjects in the curriculum" (p 80) and generate a reflexive sense of their relationship to education. These students nurtured through the multiliteracies project were able to think and operate strategically in their own learning. Multiliteracies was a way to facilitate complexity, multiple experiences, and different attentions within and through methods that harnessed design platforms and pedagogic provocations to offer progressive alternatives to staid teaching and learning practices that were structured for empowered, singular and nationalised identities and learning modes. Within this view "a pedagogy of multiliteracies ... focuses on modes of representation much broader than language alone" (The New London Group, 2000, p. 5) and these foci allow for complex and multimodal literacies and identities to emerge and resonate within teaching allowing multiple experiences to claim space within pedagogy. These principles can be deployed within a media- and communication-rich environment to identify, facilitate as well as critique the mechanisms of movement between multiliteracies now moving across screens, and between analogue and digital capacities.

Key to the effective deployment of multiliteracies within curriculum is the activation of Design concepts. The New London Group (2000) argue that "learning and productivity are the results of the designs (the structures) of complex systems of people environments, technology, beliefs and texts" (p. 20) that allows spaces for diversity – of ideas, people, theories and assessments – but also permits focus, structure and stability to frame theoretical investigations. This modality of designing within mulitiliteracies takes three dominant forms: Available Designs, Designing, and The Redesigned. Available Designs are "the resources for Design" (p. 20) which "include the 'grammars' of various semiotic systems" (p. 20) that are available within texts but also activated within the curriculum and specifically 'spoken' via , lectures, tutorials, and assessment. These are the foundations constructed by the curriculum designer to provide the framework which the learner draws upon as a vocabulary to mobilise their learning.

# Assessment and Acceleration

A decelerated curriculum aesthetic and ethic was deployed in the assessment structure of a unit I taught entitled "Media and Social Context". Spaces were created, deliberately, within the timing of assessments and structure of in-class work to extend the time that students could spend with ideas. The module aimed at developing the literacies of students in identifying and unpacking ideologies within media texts. Originally the assessment asked the students to do definitional work around ideology, conduct textual analysis, and in the final assignment, write an essay involving ideological analysis of a text of their choice. It packed in as many skills as it could across all assessment points. The unit was aimed at international students and they struggled with working within a 'western' context where the knowledges and meanings taken up as normal (ideologies) within the social framework were foreign to them. The work was too fast for them to fully understand and develop the ideas that were required of them within the time frame for the submission of the assessments. Just when they were grasping one idea, as well as

working to improve their essay writing and comprehension, they had to abandon it for another concept, or add another layer of complexity to their writing and processing skills that proved overwhelming. Four years ago, I changed the assessment and instead of asking the students to complete a different set of tasks at each assessable stage, had them build their knowledge through progressive assignments designed to extend the time on each task and build that temporal interaction further as their movement through the unit evolved. I began to compose an ethic of deceleration through the assessment pathway that was not unique or special, but could open space for bigger ideas about teaching, learning, time and knowledge to form and reform throughout the semester.

The students began by selecting their topic and composing a single sentence thesis statement. They were also required to provide a rationale for their statement outlining why the topic was important and how it was situated within the context of the unit.

#### **X**Select your topic

- Look through the weekly topics for the unit listed under the headings of media, identity and society, and select an area of interest.
- Select a media text that will shape and frame your interest in this topic. You will use this text, or portion of it, as an example to demonstrate the application of your ideas in your essay.
- Devise a thesis statement or question to answer that involves your topic of interest and deploys your chosen media text as an example

#### > Write

- A one-sentence thesis statement or structuring question for your assignment. It must be clear, concise and clarify your intention.
- A 200 word rationale for your research project on what you hope to achieve, why your research project is important and what relevance it has to Media and Social Context.

#### Read and Annotate

Select 5 sources from the course Reader that you believe will be relevant to your essay. Compose an annotated bibliography that is referenced correctly, formatted clearly, and connects the reading you have completed to your research topic with relevance and coherence. Annotations should be no longer than 100 words each.

#### **≢** Submit

Your thesis statement or question 200 word rationale 5 source annotated bibliography (500 words)

Accompanying this rationale the students selected five articles from the set reading for the unit and composed an annotated bibliography assessing what the material would offer their argument. This built their knowledge slowly in the first part of the unit.

The second assessment was an extended annotated bibliography requiring the students to source an extra ten resources not located in the compulsory reading for the unit. The composition of these ten resources was prescribed. They needed a monograph, a chapter from an edited collection, two refereed articles, a website, a blog, a relevant Facebook page or group, a podcast, YouTube clip and newspaper or magazine article. The objective was to encourage comparison between the different types of resources to understand their different usage and relevance to and within

academic work, while also continuing and reaffirming the use and sourcing of reading that began in assignment one.

§ Students must now do extra research to assist with their research essay. You must gather together an extra 10 resources **not** located in the course Reader that will form the research scaffold for the project. Use the library databases, Google Scholar, and the Directory of Open Access Journals to help you.

• In the second part of this assignment, students must present a structure for their essay. This may be presented in any way you wish. But you must convey clearly the structure and direction of your argument. This part of the assignment should be no longer than 500 words.

#### **≢** Submit

Revised or refined thesis statement Annotated bibliography (1000 words) Structure for your essay (500 words)

The second component to the assessment involved supplying an outline for the structure of their essay and the sections and major themes they would address. They had to unpack, in detail, what they would write about, what resources they would use and how these might link together. Through this strategy, the students had to connect their reading to their topic and expand this knowledge across a variety of resources, reaffirming their ideas. This then flowed into the final assignment which involved the students drawing together the objects and articles from assignments one two and writing their essay for submission. By this final stage, the concepts have been written and rewritten multiple times, students have filtered their ideas through the reading and refined their thesis statement. They have spent over 8 weeks with the same topic.

You have now completed all the required preparation for this assignment. Now, go and write your essay.

## **₽** Submit

Research Essay

Importantly, this is not a new or revolutionary type of assessment structure. Brabazon (2008) refers to this framework as "building an information scaffold" designed to move students through complexity in their research practice. But when aligned with a consciousness of speed, it can offer new modes to think and teach through that also critically connect technology, spaces and screens

In this example of an assessment structure evoking a decelerated curriculum, staged assessments were used to help students project-manage their learning. In this case, the grammars of academic language were engaged as students were asked in their assessment to 'design' their own thesis statement for a project they intended to spend time with. They had to pull together their understanding of academic language to compose a working thesis statement that deployed a popular media example mobilising

cultural studies theories of readership, race or class, for example. The grammars of the popular must be fed into and through the grammars of academic writing to compose a thesis statement that is clear, concise and that articulates the core structure of their intended argument. The students activate Available Designs under the multiliteracies model to codify their understanding and to build new ideas into that framework.

The students engaged with the Available Designs to transform and reinterpret meaning. They moved through a process of 'designing' their project by reading extensively, composing an annotated bibliography of available and relevant sources, and offer a structuring format for the evolution of their argument. Via this strategy their "Designing transforms knowledge by producing new constructions and representations of reality" (The New London Group, 2000, p. 22). The students moved through a slowed and slowing research process whereby their imagined project is codified, reengaged and transformed by their reading. They must maintain a rigorous connection to the protocols of academic writing and essay structure, but through these means, the students themselves are transformed as they struggle with the complexities of the material that they are deploying. They find new 'representations of reality' and new directions to take their argument that bring together fresh combinations of ideas.

In their final assignment, where they write the essay they have taken an entire semester to compose, research and design, they enter into a mode where there is space for The Redesigned, characterised as a moment that "is the unique product of human agency: a transformed meaning" (The New London Group, 2000, p. 23). This 'meaning' is not just in the development of their understanding of unit ideas and principles, but also of the time over which this knowledge evolves. In this space the students have the potential to see themselves as transformed as well as the meanings and knowledges they have been deploying and struggling with the entire semester. The process of writing mobilises identity, knowledge, complexity and rigor to redesign time, space and consciousness revealing a new series of possibilities for the self, for knowledge, and for learning. They have grown and recodified their project using resources they are familiar and unfamiliar with, and developed conclusions that have emerged out the time taken with designing and applying efforts at staged moments throughout the semester. This process of 'redesigning' has transitioned the students from information managers into knowledge bearers which has meaning within the arguments that they can now make, but also in the temporal understandings they have about the way knowledge evolves.

The potential in this decelerated assignment structure dialogues with Mary Macken-Horarik's (1998) model of literacy where the objectives involve moving students from everyday experiences into applied, theoretical and then reflexive knowledges. Student knowledge cannot and should not be assumed. It must be built, cultivated and provoked. This takes time and requires nuanced understandings of how digitised and analogue interfaces interact to make meaning and offer different design capacities and capabilities for students to harness. The danger with contemporary learning structures that over emphasize accelerated digitised interactions with information is that students never move beyond the experiential. These devices and demonstrations extend their already cultivated 'experiential economy' codified through inspirational memes and uplifting viral videos mobilising an emotional pornography offering feel-good functionality but does little to extend, challenge or transform. Moving students into rationalised and engaged critical and interpretive spaces cannot be rushed or run-over in the desire to accelerate them through curriculum outcomes. Time for consideration and the cultivation of consciousness can be engaged with thoughtful and decelerated curriculum structures.

A decelerated curriculum is one that offers students time and teaches them course content through strategies that reveal how knowledge is developed, managed, archived and accessed. Instead of asking the students to focus on content, weekly outcomes and questions to consider, they focus on processes that mobilise information into critically engaged networks of knowledge. It is these interfaces between information, digital devices, knowledges and classroom practices that offer space for a decelerated curriculum to emerge out of teaching interventions designed to cultivate consciousness via attention management anchored in slowly evolving skills and strategies for writing and researching. Often, this involves a focus on research protocols, but can take other forms as well. In my classroom, students can learn the unit content through a strategically mapped assessment designed to cover the entire study period. It is a straight-forward scaffolding exercise where one assignment is built through a series of stages. It is not radical or revolutionary. But at each stage, the student is not rushing towards an answer or a conclusion but slowly peeling back layers of information, reformulating ideas and allowing concepts to percolate into more complex ones. These layers radiate outwards to create an ever evolving network of knowledges that convey the intersecting and complex intersections of information sites. By learning to manage these interfaces and spending the time immersed within them, the students learn to judge and rank resources as well as allow ideas to evolve and change. They begin with one idea that through a series of conceptual challenges becomes a network of ideas that must be supported, validated and legitimised by their expertise in information management. They map a digital, hyperlinked interaction over and through analogue activations of the evolution of knowledge. As a result, the students slowly work their way through the unit and move from data mining managers into reflexive knowledge developers.

A decelerated curriculum offers space to rethink how students grow, harvest, prepare and develop their knowledge. The aim is to move them beyond the accelerated, shortterm outcomes of a functional education - reinforced by the drive towards employable skills - and to reclaim a view of knowledge as connected to a functional citizenry. This is not a matter of reverting to 'traditional' or redundant education codes or out-of-date learning strategies, but rather, to draw on those pasts and resituate them by activating a learning structure that deprioritizes the current festishization of information. It utilises the ubiquity of computing but frames it within spaces of and for disruption - to not allow an easy download and disengaged dialogue with knowledge - but to provoke struggle with information. The purpose of a decelerated curriculum mobilized through course and unit interventions is to enable and to validate a network of ideas instead of atomized interfaces and interactions with course content. Through these interventions a an authentic decelerated curriculum can emerge where students begin to see connections across modules, units, courses and entire degrees which enables space for reflection and reflexive deployment of knowledge, information interfaces and archives. This process reframes the purpose of education to allow procedures of complexity to emerge. Through a decelerated curriculum ideas are cultivated, nurtured, and dispersed rather than downloaded, disposed of and discarded. There is pleasure in this type of learning where concepts build, fold back on each other and reveal new opportunities to think, define, analyse and assess.

Governed by strategies aimed at becoming reacquainted with knowledge, the technologies and experiences of ubiquitous computing can find an important place within education. The purpose of my assignment structure is not to remove digitised interactions from the students' experience, but to diversify their experience with digital and analogue resources, times and materials. They can use these interactions to assess and explore the different speeds attached to different information and knowledge processes. Through these means the students not only learn unit content, but they also begin to understand how to manage information within their highly networked and

connected lives and transform it into knowledge. They learn how to control and contain, but also when to disconnect and disengage. Creating the time and space to think is fundamental to an effective education. Often the speed at which we move students through the curriculum, cramming as many outcomes as we can into assessment structures, we lose the resonance of a single idea, fully developed and processed that can transform and enlighten in ways that are effective, challenging and enriching.

# Biographical statement:

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