

DEVELOPING STUDENTS' PROFESSIONAL DIGITAL IDENTITY

Thomas Cochrane¹ and Laurent Antonczak²

¹*Centre for Learning And Teaching, Auckland University of Technology, Auckland, New Zealand*

²*COLAB, Auckland University of Technology, Auckland, New Zealand*

ABSTRACT

In contrast to the myth of the 'Digital Native' and the ubiquity of Facebook use, we have found that students' digital identities are predominantly social with their online activity beyond Facebook limited to being social media consumers rather than producers. Within a global economy students need to learn new digital literacy skills to prepare them to become active participants of professional networks. In this paper we explore a case study consisting of the development of a six-week elective course that aims to develop students' professional digital identity, by leveraging a community of practice network of global educators modeling the educational and critical use of mobile social media.

KEYWORDS

Digital identity, digital literacy, mobile social media.

1. INTRODUCTION

Since Prensky (2001) postulated the rise of digital natives the concept has taken on almost normative acceptance among higher education (Lang, Vargas, & Conover, 2007; Moore, Moore, & Fowler, 2005). The digital native myth has had the dual effect of lulling students into a false sense of techno-superiority and scaring technophobic lecturers into avoiding the use of mobile and social media. However the concept of digital natives has been debunked by several critiques (Helsper & Eynon, 2010; Sheely, 2008; White & Le Cornu, 2011), and recent studies (Beetham & White, 2014) have shown that students are predominantly consumers of social media and do not automatically translate their social Facebook usage into the development of critical and professional online networks or communities. Thus we argue that the crucial role of the lecturer has not been superseded by mobile and social media, but is made even more necessary by the demonstrable lack of student critical skills in these spaces.

1.1 Digital Identity Formation

In today's globally connected society employers are increasingly checking potential employees online profiles in order to determine their suitability as a part of the employment process. Thus digital literacies are now a core skillset for students and lecturers (Littlejohn, Beetham, & McGill, 2012; McLoughlin & Burgess, 2009; Walsh, 2008). The formation of digital literacy skills involves several conceptual shifts, including: moving from teacher-centred pedagogies towards student-determined pedagogies or heutagogy (Luckin et al., 2010), a focus upon epistemic knowledge construction (Danvers, 2003), moving from technology adoption as substitutionary towards enabling task redefinition (Puentedura, 2006), and a focus upon creativity as reinitiation of new ideas (Sternberg, Kaufman, & Pretz, 2002). We have attempted to scaffold these conceptual shifts by the development of a framework for creative pedagogical design.

1.2 A Framework for Creative Pedagogies

Laurillard (2012; 2013) argues that curriculum design should be treated as a design science and become a collaborative process, rather than an ad hoc solo pursuit undertaken by lone educators. The authors of this

paper have found that a collaborative curriculum design process that is informed by a chosen set of theoretical pedagogical frameworks is a creative way to breath new life and fresh ideas into course design. We have detailed the development of a mobile social media framework for designing creative pedagogies (Cochrane & Antonczak, 2014; Cochrane, Antonczak, Guinibert, & Mulrennan, 2014), and summarise the latest version of our framework in table 1.

Table 1. A mobile social media framework for creative pedagogies (modified from (Luckin, et al., 2010))

	Pedagogy	Andragogy	Heutagogy
Locus of Control	Teacher	Learner	Learner
Course timeframe and goal	Initial establishment of the course project and induction into the wider design community	Early to mid-course: Student appropriation of mobile social media and initial active participation	Mid to end of course: Establishment of major project where students actively participate within an authentic community of practice
Cognition Level (Danvers, 2003)	Cognitive	Meta-cognitive	Epistemic
Knowledge production context	Subject understanding: lecturers introduce and model the use of a range of mobile social media tools appropriate to the learning context	Process negotiation: students negotiate a choice of mobile social media tools to establish an ePortfolio based upon user-generated content	Context shaping: students create project teams that investigate and critique user-generated content. These are then shared, curated, and peer-reviewed in an authentic COP
SAMR (Puentedura, 2006)	Substitution & Augmentation Portfolio to ePortfolio PowerPoint on iPad Focus on productivity Mobile device as personal digital assistant and consumption tool	Modification Reflection as VODCast Prezi on iPad New forms of collaboration Mobile device as content creation and curation tool	Redefinition In situ reflections Presentations as dialogue with source material Community building Mobile device as collaborative tool
Supporting mobile social media affordances	Enabling induction into a supportive learning community	Enabling user-generated content and active participation within an authentic design COP	Enabling collaboration across user-generated contexts, and active participation within a global COP
Creativity (Sternberg, et al., 2002)	Reproduction	Incrementation	Reinitiation
Ontological shift	Reconceptualising mobile social media: from a social to an educational domain	Reconceptualising the role of the teacher	Reconceptualising the role of the learner

The framework was used to guide the design of a six-week intensive elective course that focuses upon students developing professional online profiles and digital literacies.

2. CASE STUDY

During 2013 the authors collaborated on the development of a series of four courses to be part of a mobile social media minor. In semester one of 2014 the authors collaborated on developing a short six-week introduction to the mobile social media minor. We decided to base the course design upon modeling the formation of professional global networks by inviting input into the course from members of our own

established open educator networks: icollab (Cochrane et al., 2013) and MoCo360 (Cochrane, Antonczak, Keegan, & Narayan, 2014). By inviting members of these networks to become guest lecturers throughout the elective we created an authentic example of the professional use of mobile social media tools for global communication and collaboration.

2.1 Designing the Elective

The context of the elective was a six-week optional course in the second year of a bachelor of Art and Design degree. The predominant demographic of the potential enrolling students were second year graphic design students, however the degree also attracts moving image and video production students. The design of the elective was based around several desired student outcomes, whereby students will be able to:

1. Demonstrate understanding of mobile ‘smartphone’ (and tablet) device technology and the unique affordances of mobile social media.
2. Create a range of mobile ‘pathways’ in relation to moving image
3. Establish a collaborative mobile social media ePortfolio
4. Establish a professional digital identity and online presence

Table 2 outlines the modified shortened schedule of the mobile social media minor redesigned as a six-week intensive elective course.

Table 2. Developing a new media elective based upon our mobile social media framework.

Topic	Week	Guest Lecturer	Cognition level	Assessment activities	Conceptual shift	PAH alignment
Introduction to mobile social media and the power of collaboration	1	Colombia	Cognitive	Establish personal digital identity via G+ and Twitter. Introduction to a global network	From social to professional identities	Pedagogy
The power of an online profile	2	AUT Journalism	Meta Cognitive	Creating promotional videos via Vine	Teacher guided	Andragogy
The power of social media curation	3	UK	Meta Cognitive	Establishing a shared personal workbook via Wordpress	Student negotiated	Andragogy
The power of an eportfolio	4	Design Professional	Meta Cognitive	Establishing identity within a global professional community (Behance)	Student negotiated	Andragogy
The power of collaborative production	5	Mobile App Developer	Meta Cognitive	Collaborate in a team-based project as content creators using Vyclone	Student negotiated	Andragogy
Participation in a shared journey	6	Ireland	Epistemic	Presentation of ePortfolios and reflection on new digital identity perspectives	Student directed	Andragogy to heutagogy

In the following section we expand upon the summary within Table 2.

2.1.1 Assessment Activities

As the course was a short six-week elective we wanted to keep the assessment activities as practical as possible, and focus upon students developing skills that they could build upon in their later courses within the degree. The key points covered during the six weeks of the elective included:

- An overview of the paper and the ethics of the expected course culture of open sharing and collaboration
- A critical introduction to Mobile Social Media
- Smartphone and tablet technology affordances
- ePortfolios and Web2 tools
- Exploring creativity enabled by Mobile Social Media
- Exploring mobile tools to use for future online collaborations
- Discussing some examples via a series of case studies

These were assessed by three activities including: the production and sharing of a six-second self-promotional video using Vine (summative), evidence of engagement in the course community via mobile social media (formative: evidenced by posts on Google Plus community, Twitter, and creation of a video channel on either YouTube or Vimeo), and the collation of students' online profiles and work in progress using Behance as an ePortfolio (summative). A course outline and assessment criteria were shared with the students on Google Docs and linked into the course Google Plus Community.

2.2 Participants

The first iteration of the elective course involved fifteen-second year bachelor of design students and the two authors as collaborative lecturers. One of the first course activities was a survey of the students designed to identify their previous experience of mobile social media. The results indicated that while the majority of students considered themselves “digital natives”, their mobile social media activity was mainly limited to Facebook (100%), text messaging (93%), Web browsing (93%), Calendar (86%), YouTube viewing (86%), Google Maps (72%), and Instagram (64%) usage, with limited use of mobile social media within educational contexts. All of the students owned a mobile phone, with 85% smartphone ownership (64% iPhone, 21% Android), all of the smartphone owners used 3G/4G mobile broadband as well as the University WiFi network. All students also owned either a laptop (64%) and/or a tablet (43% iPad, 7% Android). Table 3 provides a summary of the SurveyMonkey results of students' use of mobile social media within education, indicating that the majority of the elective course activities were new to their educational experience.

Table 3. Student participants' mobile social media usage in education survey results

Activity	Usage %	Activity	Usage %
Watched PODCasts of lectures	10%	Created your own PODCasts	0
Mobile Web searches	50%	Twitter	20%
Text messaging	40%	Mobile Blogging	10%
Recorded & uploaded mobile video	20%	Recorded & uploaded mobile photos	30%
eBooks or iBooks	20%	iTunesU	0
Augmented reality	0	Soundcloud	0
Blackboard App	30%	QR Codes	10%
Skype	0	G+ Hangouts	0
Google Drive	0	Geolocation activities	0
Collaborative Wiki editing	0	None of these	10%

2.3 Results

In this section we briefly analyse some of the curated course content that included: mobile social media streams, student workbooks and reflections on their Wordpress blogs, student ePortfolios on Behance, livestreams of face to face guest lecturers, and archived guest lecturer hangouts on YouTube.

2.3.1 Mobile Social Media Analysis

We used a Google plus Community as a course hub, and curated social media streams via a course hashtag (#autmsm2014) using TAGBoard for student activity on Google Plus, Twitter, and Vine. Table 4 provides a summary of mobile social media use associated with the elective.

Table 4. #autmsm2014 mobile social media activity summary

Mobile social media	Activity
Map of geotagged #autmsm2014 Tweets http://goo.gl/maps/vvBgm	179 tweets from 20 users
Google Plus Community http://is.gd/Vy5NHY	96 posts and 150 comments
TAGBoard https://tagboard.com/autmsm2014/182047	320 posts
Vine video production http://vinebox.co/tag/autmsm2014	30 Vine videos
Example ePortfolio interaction on one Behance profile	187 views 26 appreciations 7 follows
Wordpress workbooks	14 Wordpress workbooks with an average of 12 pages each.

TAGSExplorer (Hawksey, 2011) was used for a more detailed graphical Twitter analysis of the course hashtag usage (#autmsm2014), shown in figure 1.

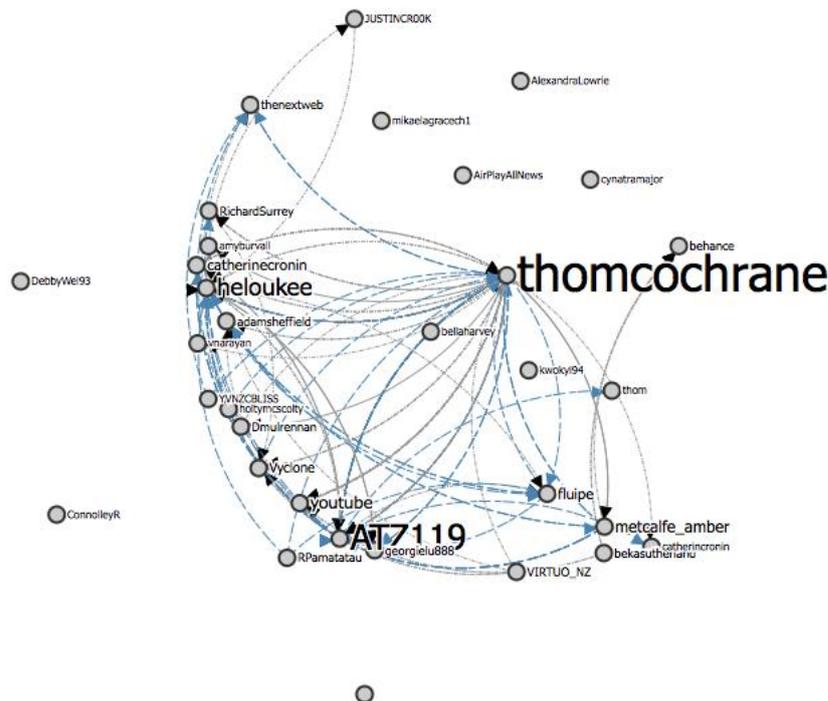


Figure 1. TAGSExplorer for #autmsm2014

Figure 1 illustrates that the key conversational nodes using the course hashtag were the lecturers, While many students are represented by isolated nodes Figure 1 also identifies the beginnings of a couple of students becoming conversational nodes as they built up confidence throughout the six weeks of the course. Figure 1 also illustrates the reach of Twitter as a tool for facilitating a connected network with associated social media sites and guest lecturers from around the globe.

2.3.2 Examples of Student Work

As an introductory course activity students were invited to collaboratively edit an interactive course Google Map by locating links to their online profiles and examples of Vine videos as points of interest. The map data was also exported into a mobile augmented reality browser as an example of the contextual affordances of mobile social media. Students used Vine to create a short six second stop motion representation of their design expertise, reflected on their course experiences and establishment of their social media profiles on their own Wordpress blogs, and curated the beginnings of a personal professional portfolio on Behance.

Links to example student work:

- Example Student Promo Videos <http://www.youtube.com/playlist?list=PL2-TasqEeWBUeWdsfLlrnjyug9g1L9ICl>
- Example Student Workbook: <http://richardsurrey.wordpress.com>
- Example Student Behance ePortfolio: <https://www.behance.net/RichardSurreyDesign>

Overall we were pleased with the level of creativity and reflection evidenced in student contributions to the elective community (see Table 4 for a summary). Table 5 provides a summary of summative course assessment results for the first elective cohort in 2014.

Table 5. #autmsm2014 course assessment results summary

Assessment	Results
Vine video	B average
Behance Portfolio	A- average
Course pass rate	100%

The assessment criteria for the two summative assessment activities was broken into four categories:

- *Media*: Demonstrate care and control of appropriate media and materials through every stage of the design process, including final work and workbook, showing attention to detail.
- *Design effectiveness*: Demonstrate the ability to resolve macro- and micro-aesthetic issues, with a particular focus on visual features (images, semantic).
- *Design content*: Demonstrate an understanding of the experience of a viewer or an audience.
- *Process and participation*: Demonstrate the ability to critically reflect on your work and that of peers by actively participating in class discussions and critiques.

Submission required students to post the following in the elective Google Plus Community:

- *Behance* URL
- *Brand Yourself* video URL
- Wordpress workbook link containing reflective statement, references, tests, experimentations, work documentation, self-analysis, and course content with annotations.

2.3.3 Student Feedback

Student feedback on the elective course was very positive, and students posted reflections on their course experiences on their Wordpress blogs and/or as short video reflections. Two indicative examples are included here.

When coming into this course I personally thought that it was about designing apps and had no idea to what we actually were going to do. When first explained what the course was about I thought I knew a lot already as was on a few social media platforms but I was wrong!! This course brought forward so many ideas and creative ways into how we can brand ourselves on social media platforms in a professional way, not only this but how to connect and interact with other devices to make life so much easier! I thought this course was really good as our generation seem to think they know everything about technology because we have grown up with it and experienced change first hand. I have learnt so many new techniques to get my work out in the open, portray myself and also most importantly to me tools that will help me save a lot of time in the future for working on projects together with people. I thought that the interaction with other lecturers and interested parties all over the world was amazing, it was awesome to get an insight from people on the other side of the world and find out the similarities and differences in teaching and learning platforms but also learn from what they had to say to heighten our interest and knowledge of our particular course. Thank you so much! I will definitely benefit from this course and hopefully will see you again in the future. (Student1, 2014)

Working as a creative person in today's industry requires an in-depth knowledge of how mobile social media is intrinsically linked to how we work and how we promote ourselves as professional people. Without this class I would have a hard time creating an active online presence which could potentially become a job opportunity, I am grateful to *my lecturers* for helping me realise the importance of social media and its real life application. I feel as though I am now equipped with the basic tools to move forward as a professional designer and promote myself as a brand more effectively. (Student2, 2014)

The impact of the elective course on the formation of students' digital identity was evident in student reflective feedback on their Wordpress blogs as illustrated above.

3. DISCUSSION

We attempted to design the course as a potentially transformative learning experience and measure this by integration within the course assessment criteria that included recording of student process and participation: "Demonstrate the ability to critically reflect on your work and that of peers by actively participating in class discussions and critiques as well as engaging online via *Google+ Community*". Table 4 provides a summary of the course activity, and it was clear that students' previous lack of active participation with online networks and communities beyond Facebook meant that their first engagement in a Google Plus Community was definitely a learning experience.

Students expressed the wider curriculum impact of their #autmsm2014 elective experience as they sought to integrate some of these experiences into other courses and projects. Thus the elective course built students' self-esteem and confidence in the professional and critical use of mobile social media, particularly with respect to moving from local networks and interaction with their classmates to experiencing a network of international experts and support groups.

One of the limitations of the six-week elective format has been Time. In spite of a general positive feedback from the students, we noticed that there wasn't much participation and engagement outside the class time. Based on previous experiences, we believe that this situation could be improved by scheduling an open three-hour session or open workshop for better support and one-on-one mentoring in-between each new guest-lecturer intervention.

3.1 Future Developments

While Laurillard (2012) highlights that "The basic argument is that a 21st century education system needs teachers who work collaboratively to design effective and innovative teaching, and digital technologies are the key to making that work" (Laurillard, 2012, p1), we argue that students and lecturers need more professional and disciplinary guidance in terms of online Ethos and practices. Therefore, we shall further investigate issues relating to ethics and privacy within a creative environment. The next design step is to take these findings into consideration and to refine the strategies and schedule of the *Mobile Social Media* minor.

We received interesting feedback from one of the guest lecturers who suggested converting this academic Elective series into an industry-based workshop to support professional development and to enhance mobile knowledge and proficiency as well as mobile social media engagement beyond the context of higher education.

4. CONCLUSION

By using a framework to explicitly design an elective to explore digital identity formation we found that students underwent an authentic transformative experience by actively participating in the elective. By becoming an active member of a supportive community of practice the students' initial misrepresentations, fears or reservations were mitigated and new forms of open online practice became part of their professional toolkit. We hope to extrapolate this experience across the wider curriculum in the future.

REFERENCES

- Beetham, H., & White, D. (2014). *Students' expectations and experiences of the digital environment*. Bristol, UK.
- Cochrane, T., & Antonczak, L. (2014). Implementing a Mobile Social Media Framework for Designing Creative Pedagogies. *Social Sciences*, 3(3), 359-377.
- Cochrane, T., Antonczak, L., Guinibert, M., & Mulrennan, D. (2014, 28 February to 2 March). *Developing a mobile social media framework for creative pedagogies*. Paper presented at the 10th International Conference on Mobile Learning, Madrid, Spain.
- Cochrane, T., Antonczak, L., Keegan, H., & Narayan, V. (2014). Riding the wave of BYOD: developing a framework for creative pedagogies. [Journal]. *Research in Learning Technology*, 22.
- Cochrane, T., Buchem, I., Camacho, M., Cronin, C., Gordon, A., & Keegan, H. (2013). Building global learning communities. *Research in Learning Technology*, 21(ALT-C 2013 Conference Proceedings - Building new cultures of learning), 1-13.
- Danvers, J. (2003). Towards a radical pedagogy: Provisional notes on learning and teaching in art & design. *International Journal of Art & Design Education*, 22(1), 47-57.
- Hawksey, M. (2011). Twitter: How to archive event hashtags and create an interactive visualization of the conversation. Blog posted to <http://mashe.hawksey.info/2011/11/twitter-how-to-archive-event-hashtags-and-visualize-conversation/>
- Helsper, E. J., & Eynon, R. (2010). Digital natives: where is the evidence? *British Educational Research Journal*, 36(3), 503 - 520.
- Lang, J., Vargas, J., & Conover, C. (2007). A Net Gen Perspective: Technology in Higher Education. *Educating the Net Generation*, 2007(9 May). Retrieved from <http://www.educause.edu/LibraryDetailPage/666?ID=ELIWEB075>
- Laurillard, D. (2012). *Teaching as a design science: Building pedagogical patterns for learning and technology*. New York: Routledge.
- Laurillard, D., Charlton, P., Craft, B., Dimakopoulos, D., Ljubojevic, D., Magoulas, G., et al. (2013). A constructionist learning environment for teachers to model learning designs. *Journal of Computer Assisted Learning*, 29(1), 15-30. Retrieved from <http://dx.doi.org/10.1111/j.1365-2729.2011.00458.x> doi:10.1111/j.1365-2729.2011.00458.x
- Littlejohn, A., Beetham, H., & McGill, L. (2012). Learning at the digital frontier: a review of digital literacies in theory and practice. *Journal of Computer Assisted Learning*, 28, 547-556.
- Luckin, R., Clark, W., Garnett, F., Whitworth, A., Akass, J., Cook, J., et al. (2010). Learner-Generated Contexts: A Framework to Support the Effective Use of Technology for Learning. In M. Lee & C. McLoughlin (Eds.), *Web 2.0-Based E-Learning: Applying Social Informatics for Tertiary Teaching* (pp. 70-84). Hershey, PA: IGI Global.
- McLoughlin, C., & Burgess, J. (2009). Texting, sexting and social networking among Australian youth and the need for cyber safety education. In P. L. Jeffery (Ed.), *Proceedings of AARE International Education Research Conference*. Canberra: Australian Association for Research in Education, Melbourne, Victoria, Australia.
- Moore, A., Moore, J., & Fowler, S. (2005). Faculty Development for the Net Generation. In D. Oblinger & J. Oblinger (Eds.), *Educating the Net Generation* (pp. 11.11-11.16): Educause.
- Prensky, M. (2001). Digital Natives, Digital Immigrants. *On the Horizon*, 9(5), 6.
- Puentedura, R. (2006). Transformation, Technology, and Education. Retrieved 18 February, 2013, from http://hippasus.com/resources/tte/puentedura_tte.pdf
- Sheely, S. (2008). *Latour meets the digital natives: What do we really know*. Paper presented at the Hello! Where are you in the landscape of educational technology? ASCILITE 2008, Melbourne.
- Sternberg, R. J., Kaufman, J. C., & Pretz, J. E. (2002). *The creativity conundrum: A propulsion model of kinds of creative contributions*. Philadelphia: Psychology Press.
- Walsh, M. (2008). Worlds have collided and modes have merged: classroom evidence of changed literacy practices. *Literacy*, 42(2), 101-108.
- White, D. S., & Le Cornu, A. (2011). Visitors and residents: A new typology for online engagement. [Peer-reviewed journal on the Internet]. *First Monday*, 16(9).