

TPACKing for the Student Learning Centre Digital Strategy

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Providing academic support for a diverse tertiary population requires the inclusion of a digital approach. However, in order to develop a digital strategy, there is a need to provide an all-encompassing reflection on how to integrate technology. This paper aims to report on Auckland University of Technology (AUT) Student Learning Centre (SLC) current progress in the digital space, while providing direction to its future development. This paper combines technological knowledge with content and pedagogical knowledge to design SLC's future developments. It also provides an analysis of current SLC digital presence developments and addresses possible future directions. Recommendations reinforce the need for an overall learning strategy, and address the affordances of Web 2.0 for this project. These recommendations and reflections are important for setting the foundations for a pedagogically solid digital development.

Keywords: academic literacies, digital strategy, TPACK, technology enhanced learning

Introduction and background

Student learning centres work with diverse tertiary student populations towards the development of academic literacies in an increasingly digital landscape. The Auckland University Technology (AUT) Student Learning Centre (SLC) assists students in making the transition to university academic culture and approaches to teaching and learning that they may be unfamiliar with. Working with both undergraduate and postgraduate students, areas of focus are academic reading and writing, numeracy, digital literacy and other essential skills, such as time management. Online, the SLC provides static, textual, learning resources. Beyond that, the SLC is now envisioning a redefinition of its digital presence which taps the affordances of Web 2.0 and enables pedagogies that are responsive to the needs of learners.

The choice of digital technologies to support student academic literacies learning is vast. Whatever choices are made must be grounded in appropriate pedagogical approaches which meet both the needs of learners and also fit the academic literacies content with which they engage. The SLC is at an exciting stage in the development of its digital presence. Application of Koehler and Mishra's (2009) model is informing the SLC's digital strategy as it: consolidates and enhances its current website; and establishes a plan for its future online presence that harnesses the potential of mobile Web 2.0 technologies while enabling the SLC to work with learners in multiple ways across multiple contexts. The aims of this paper are to report on the SLC's current progress with the theory driven enhancement of its online presence and to provide a trajectory for its future development in a mobile Web 2.0 teaching and learning environment. The paper begins with an overview of Koehler and Mishra's (2009) model, which is the SLC's theoretical framework for learning design. A brief analysis of the SLC's current online provision is then outlined. The paper concludes with potential trajectories and recommendations for future SLC online provision of academic literacies content which both meets the needs of SLC staff and learners and harnesses the potential of Web 2.0.

Theoretical background: TPACK

Educators often reflect on the role of technology in their own teaching practices. Koehler and Mishra (2009) offer a useful model to reflect on the role of pedagogy and technology in teaching and learning. One of the main achievements of this model is that it separates different types of knowledge, while recognising existing cross dependencies. Thus, educators can use a framework to reflect on content, pedagogy, and technology, which are the foundations of the Technological Pedagogical And Content Knowledge model, or TPACK.

Content knowledge

Content knowledge is knowledge related to a specific field of study. This includes, but is not limited to, knowledge about theories, concepts and frameworks, as well as well-established practices within a specific field of study (Koehler & Mishra, 2009). Within this paper, the content explored is academic literacies, which has been understood as the act of reading and writing in an academic context. However, this is an oversimplified concept, as students in higher education require a suite of different literacies (Lea & Street, 1998). Thus, the

concept of ‘multiliteracies’ explored by Cope and Kalantzis (2009) not only includes written and oral language, but also visual representation, audio representation, tactile representation, gestural representation, representation of oneself, and spatial representation. These sets of skills, perhaps with a digital component added to Cope and Kalantzis’ (2009) model, are an essential driver behind the development of a student learning platform.

Pedagogical knowledge

Pedagogical knowledge refers to the processes and practices related to teaching and learning. Additionally, pedagogical knowledge supports a reflection on social, developmental and cognitive frameworks of learning, as well as an understanding of the target audience, and the environment (Koehler & Mishra, 2009). Although Koehler and Mishra (2009) address pedagogy, they use the term in a generic way. However, pedagogy can also be understood as a simple passive transmission of knowledge (Canning, 2010). The concept of Andragogy started to become popular in the 1970s to highlight a special distinction in adult learners, who have self-responsibility for the process (Blaschke, 2012). However, Heutagogy, as Kenyon and Hase (2010) define it, is the process where the learner is ready to learn and determines what and when to do so. This allows the learner to capitalise on a sense of ownership of the learning process, enhanced by the self-identification with the overall process of learning (Bhoyrub, Hurley, Neilson, Ramsay & Smith, 2010). This concept is clearly connected to Dale’s (1970) concept of active-learning. According to that model, active learning occurs when learners are exposed to a direct, purposeful experience by ‘doing’, instead of ‘passive’ experiences, such as reading.

Technological knowledge

Technology knowledge includes both knowledge of older technologies, such as books and whiteboards, and more recent technologies, such as mobile devices, digital content, and the Internet. The focus here is on digital technologies and what teachers might do with them. Web 2.0 situates tertiary education in a world where students only need an internet connection and a device with internet connectivity to have immediate access to media rich sources of information and other people (McLoughlin & Lee, 2010). Tertiary students are also increasingly making use of wireless mobile devices, such as smartphones and tablets, for learning whenever and wherever they are (Kukulka-Hulme et al., 2011), enabling them to connect with other learners outside of the traditional classroom context (Merchant, 2012). This trend was also observed in the recent *AUT Student Electronic Engagement Survey* (Vulinovich, 2013), with students increasingly demanding mobile wireless access on campus. This can enable new ways of working with existing pedagogies, such as flipping the classroom by beaming video content of lectures online and then having students come to class to work on collaborative projects (Sankey & Hunt, 2013). Whatever the technology, it is essential for adoption to occur within a robust strategy. Boud and Prosser’s (2002) framework for the analysis of learning designs that utilise technology focuses on four key principles: engaging learners; acknowledging the learning context; challenging learners; and providing practice. Whichever digital technology might be selected, the learning design must follow an analytical process; otherwise, the technology can lead decision making, marginalising content and pedagogy.

The current SLC digital presence

The SLC’s online presence is on the main AUT website. Since early 2013, the SLC has been overhauling and augmenting its website in terms of layout, navigation and content. Previously, all content was textual and provided in lists. Whilst the information provided was of high quality, the layout (lists) did not reflect contemporary web design, resembling an online filing cabinet (Kelly, 2003). Google Analytics was used to generate statistical data on student use of the SLC site. This provided useful information about actual student use of the site, as opposed to qualitative data from students about what they might do (Arendt & Wagner, 2010).

Table 1: SLC webpage views from January-June 2013 & 2014

	Jan – Jun 2013	Jan – Jun 2014
Total SLC group page views	4,651	62,142
SLC home page views	1,859 (39.97%)	19,468 (31.19%)
SLC learning resources page views	232 (4.99%)	5,969 (9.56%)

Following the overhaul of the SLC website, the overall number of page views for the SLC group during Semester 1, 2014 was 62,412, representing a 1,341% increase over the previous year. Also, page views for the SLC printable learning resources were up to 5,969 (9.56% of the total number of page views for the SLC group; almost double the proportion for the same period during the previous year). The increased student traffic on the

SLC website is testament to its improved navigability, which has been coupled with a systematic awareness raising initiative about the SLC which began during late 2013. While these statistics have given the SLC cause for some celebration, the ultimate goal is to have a redefined digital presence that yields Web 2.0 affordances.

The current SLC online platform provides a base for the SLC to provide static information which students are able to access without the need to log in. For the SLC, there are content creation and management limitations on the usability of the website (Lee & Koubek, 2010). The interface is static, with the use of tables and images being the best available option in terms of web design. For students, the main limitations of the current platform relate to content layout, navigation, accessibility and responsiveness. The SLC area of the University website is located five clicks down into the site, so is difficult to find. The left-hand navigation menu only displays two levels of the website on any single page, so the SLC does not appear anywhere near the AUT website homepage. Once students eventually reach the SLC homepage and open a page, there is no indication in the left-hand navigation menu where that page is in relation to the other SLC pages. Also, many of the existing pages which contain large amounts of content require students to scroll down the page to see all of that content; research indicates though that people will normally focus only on what they can see when they first visit a webpage (Djamasbi, Siegel & Tullis, 2011). The website also does not address the needs of students with a disability, as information is purely textual, with no audio options. Finally, the AUT website is not responsive to different devices, meaning that content is not optimised for smartphones, for instance.

Once the update of the SLC website has been completed, the website will provide only static learning resources, comprised mainly of downloadable pdf files containing textual information. This situates the SLC's current online pedagogy firmly in a transmissive mode (Bower, Hedberg & Kuswara, 2009), and would place the student learning experience at the passive end of Dale's (1970) Cone of Experience.

The future SLC digital presence

Accurately evaluating how useful a website is depends on the system it is built on, the field it is within and its purpose (Lee & Koubek, 2010). After applying the TPACK framework, it appears that the SLC digital presence requires development if it is to meet the SLC's goals in terms of pedagogical approaches and content creation and management. The current website could be developed to enable the SLC in creating and managing its academic literacies content and realising its ideal pedagogical approach with students, affording a more learner centred experience. From the student perspective, the content could then be flexible in terms of what they see, and how they can both navigate around and interact with it. The current website would not address the issues of navigability and responsiveness, though. Alternatively, a new open website could be developed with the specific content, teaching, learning and technology requirements of the SLC and its students informing the design process. This would be a one-stop-shop for AUT students to access SLC services from whatever device they use. There are three main reasons why an alternative platform is desirable: creative control over content; enhanced student experience; and seamless integration with the SLC workflow system.

Web 2.0 creates potential spaces for social networking and participation (O'Reilly, 2005). Accepting that mobile learning via Web 2.0 affords anytime anywhere learning, the SLC now has an excellent opportunity to work flexibly with students, providing them with more personalised learning experiences. A Web 2.0 space, incorporating the functionality of a website such as Storify, would create opportunities for student generated content. Storify is a blog style website that enables users to curate stories by collating what is reported about them on social media sites, such as Facebook, YouTube and Twitter. In one of several Community of Practice research projects (between the AUT Centre for Learning and Teaching and AUT faculties) which explored the pedagogical use of mobile social media, Cochrane worked with Journalism lecturers to shift assessment practices (Cochrane, Antonczak, Gordon, Sissons & Withell, 2012). The assessment involved students using Storify to collate comments from social media on a current news item, and then using mobile devices to provide critique of the social media comments. Compared with more traditional essay assessments in previous semesters, student work on Storify demonstrated both more critique and creativity. The SLC envisions such redefinition of student academic literacies learning as a goal of its future Web 2.0 presence. To develop their critical thinking skills, for example, students could use social media to research a topic of their own choosing and then curate their own story on the SLC web portal, employing given critiquing tools and academic vocabulary relevant to the task. Such activities could help realise the SLC's aspiration to a heutagogical approach (Kenyon & Hase, 2010), and enable learning to shift from a passive experience (as allowed by the current SLC digital presence) to an active one where students would be learning by doing (Dale, 1970).

Recommendations

Future development of the SLC digital presence must be informed by an over-arching strategy which can provide vision for the needs of the SLC and its students and inform appropriate technology use. Pending the implementation of an institution wide strategy, since early 2013 the SLC has been developing its own digital content strategy. The two key strategic strands are provision of digital learning resources and administration. Having applied the TPACK framework to inform its digital strategy, the SLC makes the following recommendations for the development of its digital presence:

- provision of academic literacies content which engages and challenges AUT learners
- pedagogical approaches which acknowledge AUT learners' contexts and provide opportunities for them to practise what they are learning
- creation and management of digital learning resources which meet the SLC's content and pedagogical goals

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Please cite as: Bassett, M., & Silva, P. (2014). TPACKing for the Student Learning Centre Digital Strategy. In B. Hegarty, J. McDonald, & S.-K. Loke (Eds.), *Rhetoric and Reality: Critical perspectives on educational technology. Proceedings ascilite Dunedin 2014* (pp. 730-734).

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