Social networking and teacher professional development.

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Strand 3 – Redefining Education

ACEC2014- SOCIAL NETWORKING AND TEACHER PROFESSIONAL DEVELOPMENT

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Abstract

In 2012, a research project was implemented to investigate the possibility and effectiveness of instituting a personalised and virtually networked mode of professional development to promote teacher confidence and competence with Information and Communications Technology (ICT) and its use as a key component of their pedagogy. The aim of the project was to examine the advantages of online modes of professional development where an online network of teachers was built without any face-to-face contact and where the approach for professional development was personalised and self-directed. Six geographically removed schools in Queensland were involved, with twelve teachers participating over the school year supported by a mentor. A Social Networking Site- wall.fm was used to facilitate private and public communication. Findings reveal that if demand driven dialogue and a sense of presence is created to support the development of an online network it can sustain engagement without the need for face to face interaction, and that varying levels of instructions are required of the mentor to support teachers’ personal agency within a self-generating professional development model.

Key words: professional development, social networking, ICT pedagogy

Worldwide, teachers are gaining access to ICT, online tutorials are available, and digital curriculum resources are accessible and are continually being developed - the digital classroom is a reality. However, teachers’ ability to use digital tools in their classrooms, that is, practicing the digital pedagogies required for the effective implementation of ICT, is not yet in evidence amongst the majority (Dunn & Rakes, 2010; Ertmer & Ottenbreit-Leftwich, 2010; Al-Zaidyieen, Mei & Fook, 2010). Teachers are expressing the need for effective professional development that will enable them to create new visions, teaching practices and learning spaces that are technologically enhanced (Goldman & Lucas, 2012). It has long been established that teacher change in pedagogy when using ICT will not come about through a training approach (Watson, 2001). This study will suggest, supported by evidence, that effective professional development is driven by the teacher through self-directed pathways supported by an online networked community that includes teachers from all educational levels. Such a professional development approach provides teachers in any school across Australia with the ability to utilise current technologies such as social networking sites (SNS) to research and direct their engagement through self-generating content at any time during the school day. The link between the Australian Curriculum and the enacted Australian Curriculum is the support provided to all Australian teachers so they can design and implement effectual 21st-century learning opportunities. To understand the process of teacher professional development underpinned by social networking, the following research questions were formulated:

1. Can online professional development in a SNS sustain engagement without face to face contact?
2. Can professional development involve self-generating content instead of course work?

By moving professional development into a context that is not limited by time or space, or the need for face-to-face communication, it is anticipated that professional development can become an embedded part of teachers’ everyday practice. Two literatures will be reviewed to frame the research. These include an exploration of professional learning through SNS and elements of effective professional development.
Background Literature

Social networking sites

The advent of Web 2.0 tools has generated, among other things, social networking sites (SNS). Boyd and Ellison (2007, p. 211) provide a clear definition: “SNS are web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system”. The term ‘network’ carries with it an important disposition to the way communication tools are used within sites. Networking does not necessarily mean that people are looking to meet new people; rather, they are primarily communicating with people who are a part of their extended social network or professional circle. What is important with SNS is that people are able to make visible their social connections and therefore, provide potential connections between individuals that would not otherwise have been made (Haythornwaite, 2005).

In regard to primary and secondary education, one of the first moves to learning online has been to employ a learning management system (LMS) because of its use in higher education systems. LMS like the Blackboard platform direct students to engage in ways that are different to SNS. LMS serve as management systems that support administrative concerns and use communication management tools more frequently than interactive tools (Dalsgaard, 2006). LMS also engender teacher-centred pedagogies for distributing course content. This has impact on how content and user interaction occurs. In a LMS the instructor provides the content, which is central to activity, whereas in a SNS the content is generated by the user and interaction is the central activity (Mott, 2010).

Engagement between user and the content is also different. For example, an instructor in a LMS may pose a question in an online discussion board and each student posts a response, replicating traditional question-and-answer mode. In contrast, discussion in a SNS is self-directed or student-centred (Brady, Holcob & Smith, 2010). Veletsianos, Kimmons & French (2013) suggest that a SNS fosters the use of participatory pedagogies and are able to support interactive discussions. Interaction and content are more free-flowing and therefore are more difficult to control. This is why tensions arise when SNS have been used in higher education as personal and professional boundaries for instructors collapse (Marwick & Boyd, 2010) and the sites are not conducive to teacher-centred pedagogies.

Developing a sense of community is critically important to student engagement in any online learning environment – LMS or SNS – especially if students do not meet face to face. The tools used in a SNS facilitate the sharing of information. This, plus personal profiling and a user’s sense of social presence are key factors that promote a networked community (Cobb, 2009; DeSchryver, Mishra, Koehler, Francis, 2009). LMS have been described as tools that fail to provide users with the social presence necessary for more robust and valuable networking experiences that are essential for learning (Minocha 2009; Velesianos, Kimmons & French, 2013). Therefore, social presence and its critical relationship to building a sense of community online indicate the potential of SNS in teacher professional development.

Elements of professional development

There are many similarities in the research identifying the essential elements of professional development. First and foremost, when professional development is concerned with transformative outcomes, that is, enabling a change in teacher beliefs and practices, teachers’ current mindsets need to be made conscious so that through professional activity these beliefs can cause tension to enable reformation and inform new practices. Teacher change (in belief and practice) occurs during professional development when teachers’ verbal reflection, supported by written reflection, is actioned with critical discourse that is based in collegial formations. Teacher action is best embedded within an investigative context such as a classroom-based inquiry. These elements of investigation, reflection and constructive dialogue are represented in action research models of teacher professional
development (Herbert & Rainford, 2013; Prestridge, 2013; Subahan Mohd Meerah et al., 2010).

Bannan-Ritland (2008) offered a model based on teacher-led research involving the design and cyclic testing of instructional materials (that include the use of technologies). The model is called ‘Teacher-led Design-based Research’ (TDR). The teacher is considered a researcher, implementing action research methodology. The TDR process consists of: teacher immersion in experiences that involve deep learning; constructing meaning from current experiences; focusing on how students learn; developing sustainable innovative practices and developing collaborative research competence.

Markauskaitė and Reimann (2008) also developed a design-based inquiry model to support teachers’ engagement with ICT. They describe a similar process for teacher-led research: problem-design-implement-monitor-evaluate-reflect-disseminate. Their model is encapsulated in three spaces: design space, collaboration space and decision-making space. Each of these spaces includes a range of interconnected digital tools that can help with the inquiry process.

Summary of literatures

The rise of the SNS with its disposition for a sharing and knowledge-producing exchange logically suggests a merge with teacher professional development. Teachers are not restricted to time and place, their classrooms can be the sites of investigation with reflection and constructive dialogue enabled though tools embedded in a SNS. Teachers can create their own social presence through personal profiling and interest groups can be formed that enable further social networks to develop. A networked community has an opportunity to grow within the SNS through participatory pedagogies. These features of SNS for professional development will be examined in the remainder of this paper.

Method

This study drew upon data from the ‘Virtual Professional Development: enabling teachers to engage with digital pedagogies’ project funded by Griffith University and six Queensland schools as Industry Partners. The project investigated the possibility and effectiveness of instituting a personalised and virtually networked mode of professional development to promote teacher confidence and competence with ICT and its use as a key component of the teachers’ pedagogy. The aim of the project was to examine the advantages of online modes of professional development where a networked community was built without any face-to-face contact and where the approach to professional development was personalised and self-directed. This project aligned with the implementation of the Australian Curriculum, which was used as a premise for examining teachers’ technological pedagogical content knowledge (TPACK). The schools were chosen to represent all educational levels, from primary to secondary and included independent and Catholic colleges, single sex and multi-campus sites and were located across Queensland. Twelve teachers participated over the school year.

The professional development program utilised an action research model where the elements of investigation, reflection and constructive dialogue were actualised in a year-long program. Teachers were asked to develop an Action Learning Project where ICT was considered as a central tool in the learning phase. The professional development program was designed to support the flow of the school year. Term 1 required teachers to make conscious their beliefs and practices through an online survey; Term 2 involved the introduction of the SNS with opportunity to develop and plan the Action Learning Project; Term 3 involved each teacher implementing and monitoring their Action Learning Project and Term 4 involved redesign and reflection. A mentor was enlisted to facilitate the professional development. His role was to establish a sense of community within the SNS, to encourage engagement with and among the teachers online, to guide and direct pathways for learning associated with a teachers’ inquiry and to challenge and make teachers’ think deeply about how their students learn and their own ICT beliefs and practices. Table 1 presents examples of teachers’ Action Learning Projects:

Table 1 Action Learning Projects
Prep/year 1  Use of iPads with specific apps to support literacy and numeracy development in the early years.

Year 5  Use of Twitter as a collaborative tool to build students’ knowledge about communicate globally.

Year 7  How can student blogs be used as a reflective tool during the planning of Kids Connect Project?

Year 10  Does the use of a online class environment to support student engagement at any point support their learning of subject matter?

Years 11 and 12  Create a connected Learning Community so students can receive peer and community feedback on their films in development stage to inform production.

A range of communication and Web 2.0 tools were used to implement the online professional development. These included email, a discussion list through Google Groups, Skype for one-to-one teacher and mentor discussions and wall.fm as the project SNS. Wall.fm provides an environment where both public and private online communities can be created. This became the central site where teachers created their personal profiles, published and shared curriculum materials and blogged their Action Learning Project progress and commented on each other’s reflections.

Case studies were the primary form of data collection to study teachers’ engagement in the professional development program. Case study is well recognized as an approach to support the investigation of particular phenomenon (such as professional development) within a real-life context while employing multiple sources of evidence. It provides a framework for allowing researchers to “engage with and report the complexity of social activity” and “to represent the meanings that individual social actors bring to those settings and manufacture in them” (Stark & Torrance, 2005, p. 33). For this paper, three teachers were chosen based on their divergent approaches to engagement in the professional development program. Data is drawn from pre and post surveys, teachers’ personal profile pages, discussion forum transcripts and teacher’s final reports collected over the one-year period.

Following transcription, a broadly based thematic approach was adopted for the analysis of the data. In the approach chosen, a theme is “a pattern found in the information that at the minimum describes and organises possible observations or at the maximum interprets aspects of the phenomenon” (Boyatzis, 1998, p. vii). Coding of the data was approached with knowledge of the elements of professional development derived from the literature- investigation, reflection, constructive dialogue, networks. During this process attention was paid to the identification of levels of engagement in the online professional development activities and the progress of the Action Learning Projects. Anonymity is gained through the use of pseudonyms for all participants.

Results

Case study 1- Working with the mentor

Amy was a year 4 teacher who described her use of ICT as embedded in all facets of her teaching. She believed strongly in the use of ICT as it “changes how and what students’ learn”. She felt confident to try new approaches and rated herself as highly competent. She described the way she used technologies:

*I would use ICT daily in my classroom for a variety of things – research, blogging, Imovie, podcasts, and everything else in between. We have recently invested in a ‘green screen’ which I’m excited to test out and use in the classroom. This year and last year my class made and updated a web page, which*
was a big success. The students uploaded work samples and podcasts, made videos that posted to Youtube which then embedded into their page, uploaded photos, wrote weekly blogs and commented on other students’ pages.

In this excerpt Amy is confident to try new technologies and uses ICT to enable students’ to present their work with some evidence of student collaboration. This would be considered as supporting existing curriculum outcomes (Downes, et al., 2001) through the use of a mix of teacher-centred and student-centred pedagogies (Ertmer, et al., 2012). Through this professional development opportunity Amy wanted to try something different, she wanted to authentically use communication tools as she felt this was missing from her ICT pedagogical approaches. Her Action Learning Project was to:

...move towards more collaboration through ICT in my teaching for the students to not just ‘post’ or ‘find’ information, but to share, work with and engage with the digital world through the global community.

Amy in her planning documentation expressed an interest in using Twitter (a new tool) in the context of the 2012 Olympics, as this could be leveraged for communication on a global scale. She had no idea on how to set up a Twitter account and thought it would be like an email account.

Her approach to the professional development program could be considered as underpinned by the mentor. Amy was quick to provide her planning material for the mentor. She was focused on using Twitter, which helped her limit and direct her engagement with her colleagues online and or with further materials and opportunities. She engaged with the mentor though Skype sessions regularly to re-develop her plan and once the connection was made with an Australian Olympic diver, worked in unison with the mentor on how best to facilitate the Twitter exchange with her students. There was a period of intensity where Amy, the mentor and the diver worked as a triad to ensure the communication with the students was effective. This involved the use of hashtags and Twitter handles to filter conversations from the rest of the Twitter stream. Through Amy’s refection on the project outcomes her professional learning was not solely about Twitter, and surprising herself, it was about the development of students’ substantive questioning techniques:

We learnt about open and closed ended questions, which I didn't predict would come from the inquiry. We learnt to ask questions that didn't have a yes or no response. I also learnt about using Twitter or other social media mediums to ask questions that kids are asking in the classroom.

It can be seen that Amy engaged in all elements of professional development- investigation, reflection and constructive dialogue with the support of the mentor who used participatory pedagogies. However, she did not take advantage of the social networking opportunities. She preferred to engage in substantive dialogue with the mentor. Planning documents from other teachers gave her ideas but she did not comment or build connections with other colleagues in the SNS. Her sense of a networked community came from her contributions about her project. Overall, she “felt less pressure” with this mode of professional development as there was no face to face meetings as it fitted into everything else she had to do.

Case study 2- School approach

Led by Wilma, the Teacher Librarian supported by the school curriculum co-ordinator, Kate, and engaged in collaborative planning with classroom teachers, a whole school approach was adopted for this online professional development opportunity. As the key driver for the Action Learning Project, Wilma situated the project within her teaching context, the school library. She considered herself as moderately confident with implementing ICT with some technical competencies. Her main goal for using ICT was for “developing student content understanding, extension activities and information gathering”. This would be considered as using computers as an information tool (Tonduer, et al., 2007) primarily driven by teacher-centered pedagogies (Ertmer, et al., 2012). With this leadership direction a collaboratively constructed Action Learning Plan was submitted to the mentor and posted on the SNS for peer review. The goal was:
Does a library wiki encourage engagement with reading and lead to improved student learning outcomes? This will be achieved through collaborative curriculum planning with classroom teachers to link the use of Web 2.0 tools with the learning intent of the Australian Curriculum that has been planned for the term. A particular focus will be developing a library site that students and teachers can contribute to in order to promote reading and literature in the library.

Wilma and her team expressed an interest in building a library wiki that would be a repository for student work. Her plan was to “explicitly teaching literature content from the year level planned units of work incorporating appropriate ICLTs during library lessons and establishing the library wiki/blog so that staff and students can post work”. This evidences her current ICT beliefs and practices for productivity outcomes (Prestridge, 2012).

Their approach to the professional development program was different to Amy. The team formulated the plan and sought the mentor’s help mainly for refining their initial planning and getting some practical advice on implementation. The mentor led two Skype sessions for this refinement process. The main advice provided by the mentor was on the design of the project related to using wikis to create opportunities to transform student learning, particularly by building a sense of community among students and enabling students to co-create knowledge rather than using the wiki as a transactional tool. Originally, Wilma intended the wiki to be more or less a broadcast space that the library staff would use to promote books, reading activities etc, with student interaction limited largely to rating and commenting on books particularly for Book Week. This intent was enacted and in Wilma’s words:

This inquiry enabled students and teachers to engage in the study of literary texts. They examined literature by analysing the ways in which authors use particular devices and techniques to influence readers. They then responded to literature using a variety of online tools to represent their ideas, experiences and opinions. These were displayed on the library wiki to be shared with the whole school community. They included book trailers, book reviews and photo galleries. Through participation in these experiences, students were enthusiastically engaged with literature.

Evidenced here is the implementation of ICT that matches Wilma’s existing beliefs and pedagogies. It has been established that teachers’ adopt ICT into their teaching without changing their practice (Donnelly, et al., 2012; Ertmer et al., 2012; Kim, et al., 2013). The project outcomes shows some level of transformation about the wiki tool based on the fact that Wilma and her colleagues had never created or managed a wiki before. However, the greatest outcome for Wilma came at the end of the project evidenced in her reflection. She stated that:

Towards the end we explored the idea that wikis can be used to give learners both agency and ownership (individually and collectively) of learning particularly if they can be supported to develop and publish more sophisticated forms of responses to texts and even have ownership of the structure, policies and publishing processes for the wiki.

It can be shown here that once Wilma had experimented with the wiki tool and gained more confidence and competence, she began to open up to the idea that the mentor had seeded, that is, the wiki as a collaborative knowledge building space. With regard to professional development, Wilma and her school team made limited use of the social networking opportunities, only benefiting from the sharing of project ideas, and for Wilma the sharing of technical problems and how these were overcome. Their main orientation was to gain knowledge and understanding in the planning phase of the project through reading other teachers’ projects and through Skype sessions with the mentor. Reflective contributions only took place at the end of the project.

Case study 3- Independent approach

Coming into this project and being a recent graduate, Jackie sees herself as a competent and confident user of ICT who tries to embed technologies into all aspects of teaching and learning. She states that
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she uses “teacher-directed tasks that require students to analyse, experiment and think about the concepts under study”. Her goal for this project was to extend her pedagogies by focusing more on student use and specifically reflective task. Her Action Learning Project and description follow:

*How can blogging be used as a reflective tool during the planning of Kids Connect? Each week students were asked to write a blog post reflecting on their learning experiences during the planning of Kids Connect - a 2 day ICLT conference completely organised and run by the students and attended by around 200 teachers and students from schools around Queensland. The aim was for students to reflect upon the challenges they faced each week and how these were overcome, as well as the new knowledge and skills that they were developing each week.*

There are two items of interest here. Firstly, based on Jackie’s competency with her use of ICT in her classroom and even though she was a recent graduate, she was asked to take on this major role for an ICT conference. Secondly, the use of reflection to support the learning process through blogs could be considered innovative based on the fact that the major task is management/administrative. Jackie’s pedagogy and underlying ICT beliefs represent Mama and Hennessy’s (2013) diversifying approach in that it encourages autonomous learning and reconceptualises the teacher’s role in view of students’ needs.

This confidence in both her competency and pedagogy enable Jackie to be an early adopter (Rogers 1962, 2003) in the professional development opportunities. She was a key participant in the SNS through dialogic activities such as the forums and comments on other teacher’s projects. She also had a Skype session with the mentor to further develop her plan. This was mainly focused on the difference between blogs and other authoring spaces (e.g. wikis) and what kinds of blogging models would support the kind of student participation she had in mind. At the beginning phase Jackie was concerned with how to enable student reflections, seeking advice on how to direct, monitor and provide feedback on blog posts. In this planning phase she was most active connecting with her peers in the SNS, but once it got to implementation, she took an independent route.

The constructive dialogue in the professional development program made Jackie think critically about her use of ICT as she states at the end of the project she was able to authentically use ICT to engage students in real world issues and solve authentic problems that inquire into student generated questions. She states that:

*I found some students were keen bloggers and others were more reluctant. Similarly, some students were very open and honest in their reflections, while others were somewhat superficial. However, I believe that overall, the students were successfully engaged in reflecting on their learning and experiences.*

Her reflection indicates a diversifying pedagogical approach and demonstrates different beliefs and pedagogies to what she used prior to this professional development. Constructive dialogue was the key to Jackie’s engagement and helped her think more deeply about her use of ICT. She stated that the online professional development fitted well into her classroom activities. Jackie’s approach to the professional development could be considered as independent in the fact that she was intensive through social networking at the planning phase and quickly tapering off though implementation and reflection. This may be due to her confidence and competence with ICT.

**Conclusion**

This study has investigated a model of professional development that had two innovative components: the use of a SNS as a platform and underlying process for professional development, and the opportunity for self-generating content rather than modulised content. The professional development model appropriated core elements of professional development, through teachers’ engagement in investigation, reflection and constructive dialogue. Each teacher designed and implemented an Action Learning Project based on their own pedagogical needs and interests and situated within their school based curriculum and constraints. An online networked community was established virtually through...
teachers’ engagement in forum discussion, Skype sessions, emails and profile pages that included reflective posts, professional information and planning documentation. Responding to the two key research questions, it was found that the content free demand drive model of online professional development enabled teachers to engage in ways that were responsive to their needs and interests and professional school contexts and sustained teachers involvement to varying degrees without any face to face contact. The opportunity to enable professional development without limits of time and place was considered beneficial. This demand-driven model influenced both the nature and timing of the support activities and services provided as the onus for endorsing and authorising activities was on the teachers rather than on the mentor. Activities and services could be offered but not mandated and teachers’ responses were critical to informing decisions about what further activities and services were to be offered.

This study contends that professional development can effectively be implemented in a SNS where a networked community is established to support the elements of investigation, reflection and constructive dialogue and the development of social presence to enable teachers to embrace the advantages of online networking without the need for face-to-face communication. Online professional development can be considered a mechanism for self-renewal where teachers’ beliefs and practices become the focus and influence of the design of professional development through self-generating content and self-directed pathways for learning. Finally, this study proposes that effective professional development is driven by the teacher through self-directed pathways supported by an online networked community that includes teachers from all educational levels.

References


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