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Greg Shaw & Jon Mason

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Editorial: Narrative inquiry and critical professional reflection

Greg Shaw

School of Education,
Charles Darwin University, Australia

Jon Mason

School of Education,
Charles Darwin University, Australia

The scholarship of teaching and learning (SoTL) is now recognised as an important part of a university academic's teaching work. This recognition has emerged during a period of significant change over the last 10 to 15 years in which universities have opened up to be more inclusive and today a much higher percentage of people undertake a university education than was the case in the past. Along with changes in the funding of universities, students and governments are expecting better learning outcomes, better learning experiences and better value for money courses. University teaching academics also are now more concerned about the quality teaching and learning and how it is appraised. The engagement in the scholarship of teaching and learning by academics not only provides opportunities for improved learning outcomes from a university experience, but also provides opportunities for academics to engage in scholarship and research of their practice.

This Special Issue of *Learning Communities* brings together a collection of papers that make use of narrative inquiry to document aspects of learning communities and the culture and infrastructure that supports them – from an *experiential* perspective. Each of the papers brings a different voice and tells a different story; and, each narrative teases out issues beyond the story, issues that sustain inquiry.

As a formal research methodology narrative inquiry has emerged as a relatively recent entrant to a growing range of options characterised as qualitative research (Andrews et. al., 2008; Clandinin & Connelly, 2000; Webster & Mertova, 2007). Yet, at its core is an age-old art – storytelling. As far as we know all pre-literate societies have used story as a means to communicate, nurture and preserve cultural knowledge. When borne of experience, narrative evokes an authenticity and this is compelling not just for the listener or reader but also the researcher. And, it is an art that will likely endure many transformations and revolutions in the way we routinely communicate.

The articles in this collection also represent descriptions and analysis of critical reflective practice. Researching teaching practice is not a new phenomenon, particularly in teacher education. Numerous authors have described benefits and approaches of reflective professional practice (Allard et al., 2007; Brookfleld, 1995; Schön, 1987; Dewey, 1933) and others of applications of this such as in action research (Kemmis & McTaggart, 1988; Mills, 2002) and also practitioner research (Craig, 2009; Dadds & Hart, 2001; Menter et. al., 2011). However, it is still not broadly adapted as an aspect of professional practice across all discipline areas of university teaching (Loughran, 2005). All of the authors in this edition are university lecturers, or as we prefer university educators. They come from a broad range of discipline areas and their teaching activities range across undergraduate and postgraduate programmes. In this collection they demonstrate some of the useful outcomes that can be achieved through a process of critical reflection of practice both to better understand practice and also to lead towards ways of improving their own teaching for better learning by their own students. And, they do this primarily through a personal narrative enquiry approach.

For the authors in this collection the use of narrative inquiry also provides a refreshing alternative to the common approaches to research and reporting often used in educational research. Most of the papers here have adopted a particular approach within this genre with the *researcher as participant*, adopting reflective journalism to varying degrees combining perspective that results in a documentation of something personal and social as well as something located in a particular time and place, encapsulating and presenting in one process the streams of thought, of recall and story, along with the personal critical commentary all striving for understanding and meaning.

This collection though is not just a personal indulgence by each author. These authors are active university educators; professionals, in that they are striving to improve their practices, to help their students to learn. What they provide in these papers is an opportunity for other university educators to read the stories and reflections, to imagine the contexts and the times, and to have opportunities to resonate and to likewise consider their own stories and reflections on their practice. We certainly hope that this is the outcome for you, the reader; that you might learn from these experiences, and thus join in with this learning community, which is reflected in this special edition.

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Reflections on university teaching in China: A personal narrative inquiry

Shuling Li

Shaanxi University of Science and Technology, Xi'an, People's Republic of China

vicky0865@126.com

Greg Shaw

Charles Darwin University, Australia

greg.shaw@cdu.edu.au

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Abstract

University teaching academics who want to better understand and develop their teaching for improved student learning can often benefit from experiences in a completely different culture and setting. When university academics travel to another country and participate in teaching there they are often confronted with challenges to their assumptions and approaches to teaching. This paper explores through a narrative enquiry approach the cross-cultural experiences of two university lecturers; one from China and one from Australia. Through their stories here and their reflections on these and reflection on literature they examine their beliefs and practices, and through this try to better understand the assumptions that they hold and how to challenge these in order to be better teachers. The paper provides some other insights into teaching and learning practices within Australia and within China and in particular how the significant changes of higher education in China are both having impact on teachers and learners and are requiring changes of both teaching and learning approaches, Finally, in sharing these experiences the authors provide an opportunity for the reader to similarly engage in processes of personal reflection, and they open up the possibility for other dialogues in this Learning community.

Introduction

All over the world university teaching and learning has undergone significant changes since the last century. Such change is an international phenomenon, though some countries have experienced quite dramatic changes while others have undertaken very little change. Some are still using approaches common over a century ago. In this article a Narrative Inquiry approach (Trahar, 2009) is used to explore differences and similarities of approaches to university teaching and learning in a Chinese and an Australian university. This paper is primarily based upon stories of our experiences and our reflections on these, in an attempt to better understand the contexts in which we work and our practices and the practices of our colleagues.

Shuling's experience as a university teacher over the last 24 years provides her with an opportunity to consider the changes that have taken place in university teaching in China, particularly in English language teaching where she works. In addition to her experience as a teacher at university in China, she recently had the opportunity of a one-year visiting scholar experience in Australia, which allowed her to observe and experience teaching and learning in that context and also to reflect upon her own practices and the practices of her institution.

Greg has had 26 years' experience working in an Australian university and has also gained some experience of university teaching and learning in China over the last 15 years as an adjunct professor in two institutions.

This paper provides a critically reflective opportunity using Narrative Inquiry to investigate and comment upon contemporary university teaching and learning in China. The paper also makes some comments about lessons that can be learnt from practices in both Chinese and Australian contexts. Additionally, it also provides us with opportunities to think further about our work as university teachers and how we can further develop our practices and also help others who are working in our institutions to think more broadly about our teaching and learning practices.

University teaching in China

As is well known, China is a large country with an extremely large population – over 1.37 Billion people. With university admission quotas booming since 1999, student numbers have increased rapidly. By the end of 2012 there were over 2,500 universities and colleges in China, with more than six million new enrollments and nearly 24 million enrollments in total (China Statistical Yearbook, 2013). Over 60% of Chinese high school graduates go on to university study, which is up from 20% in the 1980s (The New York Times, 2010). Undergraduate and graduate student numbers from Chinese universities are increasing at approximately 30% p.a. since 1999 with the number of university graduates quadrupling between 2002 and 2008 (Li, et.al., 2008), and under the current policies and trends this shows no sign of abating.

This boom in graduates in higher education in China has helped provide skilled professional labor for the developing and growing economy. However, for society generally, significant issues have also emerged because of this boom. First, there is evidence of a qualification creep linked to graduate unemployment across many sectors in China. The strong economic development of China continues; however, the number of graduates of universities has outpaced generally the number of jobs available to them. In the past, a bachelor degree may have been quite adequate for employment in a well-placed job. However, increasingly because of the number of bachelor degree graduates, employers are taking the better graduates or graduates with master degrees. Thus, there is increased pressure on graduates to continue on to a master degree in order to be able to get a job. These days though even having a master degree is not the automatic guarantee of an appointment in a favorable position that was the case only a few years ago. We are starting to find a situation where graduates with master degrees have to take lower level appointments or take positions in 'unfavorable' rural and isolated areas, and some graduates are not able to get employment (Kuo, 2013).

The second issue is that with increased numbers attending universities and limited growth in the numbers of universities, program numbers and class sizes have increased dramatically. Academic staff numbers in universities have increased as well, however, academic staff increases have generally not kept pace with the growth in student numbers, and therefore there has been an expansion in individual teaching workloads. Increased workloads and increased student numbers have required some adjustment to pedagogy used. However, many teaching at Chinese universities follow a 'traditional' lecture and transmission model approach (Van Dijk, et.al., 2002).

Universities, and the staff teaching in them are under pressure to increase the number of graduates, and increase the quality of student learning. Additionally, as Chinese universities strive to gain international recognition, university teachers are under pressure to increase their own academic standing, such as through research and research publication particularly in international journals and conferences (Mohrman, 2008).

As a university teacher in her institution Shuling is expected to improve her own practices and help other colleagues improve their practices to achieve better outcomes for the department and the university. These outcomes include teaching more students, improving teaching practices, improving their own academic qualification and increasing publication outputs. In order to help facilitate improved quality of university teaching the Government provides funds for staff to upgrade the qualifications and to gain experiences, knowledge and skills. These new skills and knowledge can then be passed on and be of benefit to other staff and students. Shuling recently received a one-year scholarship provided by the China Scholarship Council to visit an Australian university as a Visiting Scholar for a year. The idea of the scholarship was to provide her with a sustained period of time to undertake learning and research and have experiences within an Australian university context that she could then draw upon, learn from and apply to her own teaching as well as to share with colleagues.

Greg is a senior university academic having worked in Australian universities for over 26 years. He has also worked in China as an adjunct professor, and is a member of a Chinese research Institute based in Beijing. Greg's work in China has involved him regularly with teaching undergraduate as well as postgraduate classes. He has also worked with staff in both these institutions in developing their research and teaching capacity.

A critically comparative Narrative Inquiry approach

Research in education can generally be classified under two broad categories: quantitative research and qualitative research (Ary, et.al, 2010, p22). In China, quantitative research is by far the dominant paradigm in education. However, increasingly qualitative research approaches are being recognised. Qualitative research is about trying to understand the details of phenomena. It is about trying to understand the meanings and nuances of what is going on. It is not about numbers and statistical analysis but is about the meanings and understandings that people apply to the world as they see it.

Narrative inquiry assumes that we can come to an understanding, and express and give meaning to our lives through stories (Andrews et.al, 2008). Narrative inquiry draws upon hermeneutics and phenomenology and involves gathering of narratives (written, oral, visual) that are focusing on the meanings that people give their experiences, seeking to provide "insight that (befits) the complexity of human lives" (Josselson, 2006, p.4). Narrative inquiry is inherently personal and it is conducted from the perspective of people and their stories. In the case of this research paper it is conducted from our perspectives. Therefore, the research and the reporting of it here is primarily from a first person perspective, which is typical (Said & Zhang, 2013, p.221) of this academic genre.

The research that this paper describes involved us each engaging in the process of developing 'narratives' based on our experiences as teachers at university. Either concurrently with the development of the narrative or subsequently we have engaged in processes of critical self-reflection. In part these reflective processes were assisted by conversations with others; with colleagues and peers, and with other university academics.

Shuling as a visiting scholar first engaged in a process of attempting to articulate, in writing, her understanding of her perceptions and also her recollections of her experiences. Having collected this writing she further developed her understanding of her views through the discussions that she had with others that helped her to challenge assumptions and in this activity she engaged in processes of critical self-reflection. A reading program that she undertook also assisted this process of critical self-reflection.

Having the luxury of one year at a university as a 'scholar' and without having administrative or teaching responsibilities provided her with some wonderful opportunities to engage in reading literature. However, the engagements of her inquiries led her into researching other literature that could help her understand and provide meaning. This rich journey of engagement across a whole range of literature that she had not had previous opportunity to access, nor had the time nor inclination to read, opened her mind to both a greater understanding of teaching and learning and education in general, and also raised more questions. The more she read the more she realised she needed to read more.

Shuling's reflecting and learning

My reflections began soon after my arrival in Australia:

> *When I first arrived at the university I was both curious and confused at what I saw and felt. Many things were different to my previous experiences, and I had some problems matching my expectations based on my experiences in China. For example, I desired to take photos of the university gate but I could not find 'a gate' like we have in China, where universities typically have walls around them and a defined gated entrance. When I looked for shops on campus to buy my daily necessities and food, there was none. The whole campus was extremely quiet at seven in the evening. Even the architecture was different. Most of the buildings were oddly-looking, neither cube-shaped nor rectangular block. The tallest building on campus was no more than four levels and some looked a little shabby outside, but the university seemed well equipped and spacious inside and out, though I thought it was hard for any strangers to find their way around easily.* (From reflective Journal)

I was unfamiliar with the environment that I had come to. At first this unfamiliarity was with the physical environment, but as time went on other aspects of the teaching and learning environment contrasted with my experience.

The university was located in a moderately sized regional town and provided research and education services to the state (province). The university serviced an extremely large area comprising one fifth of the total landmass of Australia, but beyond that the university had substantial student numbers coming from all across Australia and also from overseas. In China nearly all students attend university full-time on campus, and live in dormitories on campus. Face-to-face attendance at classes is compulsory. However, this is not the case in Australia. At my Australian university over 70% of the students were not located in the town of the university and consequently could not attend face-to-face classes. The university has developed an alternate to face-to-face teaching using Internet based technology and other approaches. I found this very difficult to understand. My own experience as a student then subsequently as a teacher at university presented such a contrast in teaching modes compared to this Australian university. I could not understand how students could effectively learn if they were not in a physical classroom and listening to and interacting with a teacher face-to-face. As an English teacher, being able to hear and see students and provide feedback on their responses is important to me. Additionally, I could not understand how it was possible to 'trust students' that they were actually paying attention and learning.

In order for me to come to a better understanding of what was going on in these 'classes' that were taught at-a-distance, I attended several sessions presented by a number of different lecturers. This required me to use my computer to log-onto to a Learning Management System (LMS) that was used for the interface between students and teacher. The LMS allowed text

communication, audio communication and video communication between the participants over an Internet connection. Activities in these classes typically comprised a lecturer presenting some information, raising questions, and requiring students to engage in 'discussion' either using the audio/video feature and/or a texting box similar to what might be used in social networking software. In addition, within this LMS the lecturer had placed articles and texts and other information online that the students were expected to access and read. There were also exercises and activities located in this space that students were expected to complete, some of these being part of students' assessment.

One of the things that struck me with this online learning approach was that participation ('attendance') in most cases was not compulsory. Indeed, of all the classes that I observed less than half of those students actually enrolled in the course attended timetabled class sessions, and yet some of these students went on to successfully complete all of the assessment tasks and were allowed to pass the course. Much of the learning that was taking place was occurring outside of the actual 'class' experience. I found this disturbing because my own experience and my beliefs, and these practices were certainly not the practices of my own university.

In addition to observing and experiencing online teaching and learning, I participated in a number of face-to-face classes on campus. I also had the opportunity to observe students on campus and their behaviour in and out of class.

> *Students' behaviors surprise me. They are free to come and go during class hours. Some wear slippers or flip-flops with boys wearing shorts and girls wearing spaghetti strap blouses. Some middle-aged or even gray-haired students are on the campus studying for a Bachelor's Degree and this is hardly seen in Chinese universities where people in their thirties are rarely seen doing undergraduate study except for some special training programs.* (From reflective Journal)

The Australian university has about 25,000 students. However, since a large percentage of these are studying at-a-distance the actual number of students that might be expected on campus would be about 7,000. Additionally, approximately 65% of the students are undertaking the course of study part-time, and many of these were mature age, with families and were already in employed work. There never seemed to be a large number of students on campus. This was unexpected. At my own university during a teaching semester the campus abounds with students and just like at my own university there are student amenities such as a cafeteria, coffee shops, post office, a bookshop, medical center and gymnasium and also a student club. However, at my university in China there are many more of these amenities including, canteens, banks and coffee shops, supermarkets, a gymnasium, a post office, some bookshops and bakeries, small shops selling snacks and grocery, a hospital for both students and staff, several outdoor public sports facilities, several printing houses, many newsstands. Just as is in China, students in Australia were seen frequenting on campus venues, although sometimes there seemed to be more staff than students at these facilities.

Face-to-face class activity also had some familiar as well as some quite unfamiliar elements to them. As is indicated by my extract above I was quite taken aback by the dress codes and behaviors of students. Students dressed very casually, and some as if they were going to the beach or a party rather than attending classes. Even some teaching staff dressed very casual and I did not consider this very 'professional'. This was different to my experience where students are expected to dress to certain standards, even if the standards are not written down. Female students are expected to be quite reserved in the dress code and both males and females are expected to be neat and tidy. At my university most staff dress in very 'professional' ways wearing formal business attire reflecting what I believe to be the professional standard of a university lecturer.

It was not only the ways in which students and staff dressed that disturbed me but a more general sense of informality that seemed to reflect the culture and the environment of the institution. I observed that often some students came late to class. At my university in China this is frowned upon and students are usually disciplined if they do come late - but in any case it infrequently happens. However, in Australia it was typical for students to wander in after the class had started, and even leave during the timetabled class or prior to the class finishing. Although, I did note that some students had at least the courtesy of letting the lecturer know that they were leaving. Also, the Australian academics did not mark an attendance roll. At my Chinese university this is a formality observed in every class at the beginning and or at the end of the class, where class attendance is noted in a formal roll and students who do not have permission to be absent need to provide a reason for that absence to the lecturer with the attendance records collected by the department head. In my university class attendance is a critical and essential part of the university learning experience and indeed constitutes part of the assessment. Students that do not attend classes are unable to pass that course, whereas in Australia attendance was more often not compulsory. Such considerations of attendance may also reflect differences that I observed in teaching practices and pedagogy.

Besides differences in teaching practices and pedagogy, there are also some similarities. In both universities academics prepare course outlines, which indicate the learning outcomes to be achieved, assessment tasks to be completed and assessment requirements and an indication of the content to be covered. The teaching academics in the Australia university were generally well prepared for their teaching, as are my colleagues at my home university. However, this preparation is somewhat different.

In the Australian university, as I have indicated, an LMS is used as a place for academics to locate information about the course as well as content and links to content on the Internet. Preparation then requires the academic to prepare, develop and collect materials and locate these within this LMS space sometime before the class is actually taught. The content, by and large, is not central to the actual ‘class’ teaching, but students are directed to this as a part of the course experience and are expected to engage in it. However, at my university lecturers prepare an outline of the course to be covered indicating the assessment details etc. and an overview of content. The actual content though is taught during the class sessions and students are expected to take notes. Occasionally, handouts of printed material are also prepared and distributed in class. Often these materials come from courseware available on CDs for teachers that are attached to textbooks. Content presentation is a central part of class activities at my university.

There were also differences in approaches to teaching and techniques used. Within my university the face-to-face class is the central and dominant location of teaching, whereas in Australia, the online LMS is used, ‘teaching’ takes on a broader form. Because of the limited time available and the amount of content to be covered Chinese university classes tend to be more often information presentation sessions. However, in my English classes in addition to the presentation of information I also allocate time for activities, particularly to practice spoken English following forms and models that I introduce. The Australian university classes that I observed, while they did have some information presentation, tended to have more time to class discussion and student responses.

One feature of the learning environment and culture, that was different across the two institutions was that in Australia students seem to be more willing to engage in discussion than my Chinese students, to make comments, and to raise questions and issues, even at times questioning or taking counterpoints to those of the lecturer. This rarely happens in China where the teacher is held up in respect of his or her knowledge and it is the teacher that is

expected by the students to hold the knowledge and transmit this knowledge, whereas in Australia there seems to be a greater focus on knowledge generation by the class with the teacher's role being more the facilitator.

Greg's reflections and learning

I have been doing work in China since about the year 2000. On many occasions I had the opportunity to undertake teaching activities in the various universities that I visit, or that I have an adjunct position with. I am by nature a teacher. I began my career as a high school teacher and I guess many of my teaching characteristics have been formed by this experience and also by my own experience as a learner in school and at University. I have noticed a shift in teaching and learning in China over the last 15 years, which I think to some extent reflects the opening up of China and the increased access that Chinese have to international ideas and yet, there are still stark differences between the teaching and learning cultures of China and what I experience in Australia. I would characterise these differences as mainly being variances in the way that students interact with their teacher and with each other. In China it is nearly always difficult for me to get students to spontaneously ask questions, or to engage in a free flow and open discussion. This is less the case with graduate students but the issue still exists.

Recently I had the opportunity to teach a graduate class. This was quite a different experience in many ways. I undertook the graduate class with a small group of Masters of education students located in a western China University by using the software Skype. Every week we would connect for a one- to two-hour tutorial. I set readings and an outline of topics to be covered, and used the tutorial time to highlight key issues and to have students report on their reading and interact with me and each other through discussion. Initially, it was extremely difficult to get the class to engage and it took all of my skills of coercion and questioning to achieve this. One of the difficulties was the awkwardness that students experienced in working in English as a second language, and I think probably also their not being used to this approach to teaching, the technology, and also the pedagogy that I modelled. Through our discussions they indicated that they were more used to a face-to-face class where the "professor" dominated and delivered content. They were not used to themselves having to take on a major role within the learning environment and to present content through their discussion around their readings. Despite working with this group for a whole semester, and even visiting them on several occasions before and during this teaching event, they never really made the adjustment to a dynamic learning community centred on a social constructivist pedagogical approach (Richardson, 2003).

In dealing with this situation both I and the students made adjustments. Some of these adjustments related to the technology but primarily the adjustments related to their adjustments to learning and my adjustments to teaching. I was constantly reminding myself of the issues that they were trying to deal with. Reading academic articles in English around terms and issues that in most part were new to them, their struggle with communicating in English and then their struggle with coming to grips with this strange professor from Australia who kept on asking them their opinion and ideas. Over the semester subtle adjustments occurred. Their English improved, my Chinese did not. Yet more importantly they started to learn how to learn, to have free-flowing conversations and interactions, even though they still had some way to go in this.

Issues

Since the 1990s, there has been increased empirical research on teaching and learning within Confucian-culture backgrounds (Watkins & Biggs 1996; Watkins & Biggs in 2001; Chan & Rao in 2009). These, and many other publications are helping our understanding of the differences in learning environments and pedagogical approaches between Chinese and Western contexts. However, the research has been dominated by studies in Hong Kong and other non-mainland Chinese contexts. Little attention though has been given to understanding the impact of culture on learning environments and comparing Chinese and western university teaching and learning contexts.

Learning environments

The concept of learning environments is important and basic preconception of many learning theories, and it is particularly important under constructivist learning (Duffy, et.al., 2012). Some writers described learning environments as incorporating physical (constructed elements) (Skill, & Young, 2002), historical, cultural, and political and ideology components (Sleeter, 2012), as well as incorporating the ecology of the learning environment including student characteristics of school social system and the culture in which it is embedded (Wilson, 1995).

Other scholars define the conception of learning environment directly. Hiemstra defines a learning environment as "…all of the physical surroundings, psychological or emotional conditions, and social or cultural influences affecting the growth and development of an adult engaged in an educational enterprise" (1991, p. 8). Also similarly Fraser states: 'Learning environment refers to the social, psychological and pedagogical contexts in which learning occurs and which affect student achievement and attitudes' (1998, p. 3).

In more recent years, and as is evident from some of the description above the concept of learning environments now comprise virtual as well as physical spaces. "The "spaces" where students learn are becoming more community-driven, interdisciplinary, and supported by technologies that engage virtual communication and collaboration" (Johnson, et.al., 2010, p. 4). ICT and the Internet are increasingly playing a central role in university teaching and learning (Jamil & Shah, 2011).

For some time two distinct modes of university education were recognised: on-campus and off-campus modes. However, recently the concept of blended learning is increasingly being recognised and actively addressed within pedagogical approaches (Bonk & Graham 2012). Blended learning involves teaching and learning activity that include both face-to-face and at a distance teaching and learning. While there has always been an aspect of 'blended learning' in any university learning experience—in that students engage in learning outside of the class—it is only recently that educationalists plan explicitly to use blended learning approaches. This involves adaptation of existing distance education approaches with the use of the Internet and ICT.

Learning is something that happens within an individual and normally only happens when an individual is inclined towards learning. While learning can occur in a range of environments and can happen under a range of approaches, there are optimal environments and approaches that have been identified. The relationship between optimal learning environments and effective learning are well established. Effective learning environments have a strong connection to student achievement (Harrington & Enochs, 2009; Ellis, 2005; Biggs, 1994 &1996) and to student motivation (Busse & Walter, 2013).

Culture and learning

As we engaged in processes of critical reflection we tried to understand our cross cultural experiences and contrast these with our experiences and professional work in our home culture. We came to realisations that culture is fundamental to not only our own beliefs and practices but also to those around us, staff and students.

Bull (2005, p. 167) states "Culture is not only the way we do things. It is our attitudes, thoughts, expectations, goals and values. It is the rules of our society the norms that tell us what are acceptable and not acceptable in our society." Our own beliefs and practices were formed and informed by our own cultures and experiences. For Shuling this includes her broader culture of being brought up as a Chinese citizen, and experiencing a formal Chinese education that drew its roots from Marx's and Lenin's philosophical position, and her informal cultural education through her life experiences in Chinese society, where the norms and values, while also drawing to some extent on Marx's and Lenin's philosophical positions, also draw upon Confucius ideologies beliefs and practices.

In a general sense, social norms tell us which of our actions are permissible. Social norms keep our daily lives in an ordered and patterned existence (Zhang, 2005, p. 237). Social norms are also described as "expectations for proper behavior" and "typical behaviour that is considered appropriate" (O'Donnell, Reeve & Smith, 2012, p. 195). As such, the social norms that we hold within the society in which we live guides us in what are appropriate or inappropriate behaviors. For both of us, Shuling and Greg, we carried our social norms into our professional practice, and in both cases these were contrasted with the experiences that we had.

Cross-cultural research over the last couple of decades has contrasted the culture and social norms between East and West cultures. Four contrasts can be identified from this research. The first is individualism versus collectivism. Hofstede (1980; 1986; 1991) develops a four-dimensional model of cultural differences and collectivism versus individualism is one of them. Many researchers recognise China as a collectivistic culture, which sees harmony as having the utmost importance over anything else, and Australia is seen as an individualistic culture (Zhang, 2005, p. 33).

The second contrast is modesty versus self-assurance. Modesty, as a virtue, is highly valued in China. Zhang (2005) suggests that modesty is a universal quality of human beings and it is regarded as one of the factors that lead to success in Chinese society. Bond (1994, pp. 41-46) concludes generally that Chinese culture gives more attention to modesty than typically occurs in Western cultures. In Chinese culture, being modest is often a way to show respect to others. So it is not surprising to find that many Chinese students in Western classes have introverted personalities, which sometimes clashes with the pedagogy and what their Western teachers want.

The third contrast is shame versus guilt. Cheung (1986) lists this as a popular distinction between Chinese and Western cultures, commenting that Chinese society is shame-oriented. Yeung and Tung (1996, p. 57) observe that Western societies, influenced by Christianity, operate on the basis of guilt. Zhang (2005, pp. 37-38) notes a difference which lies in "… how the members of the two cultures perceive self and others; the Chinese people are more concerned about how they are viewed by others. Therefore, there is a greater degree of face saving effort than in individualistic societies such as Australia."

The concept of 'face' or '*mianzi*' in Mandarin is often roughly translated as 'honor, respect, prestige and reputation', but in fact, it is more than all these. Ting-Toomy (1988, p. 215) defines 'face' as "a strategy that protects self-respect and individual identity." In China, people always

put high value on saving 'face' and maintaining 'face' remains at the very core of a person's being. On the other hand, loss of 'face' will be avoided at all costs to save individual and family humiliation. So typically Chinese students will strive to avoid loss of 'face', both theirs and others. This explains why Chinese students more often ask clarifying questions rather than taking controversial positions or challenging their teachers' authority.

The fourth contrast is effort versus ability. Under the influence of Confucian philosophy, Chinese culture emphasises endurance, hard work and great effort (Yang, 1986), and Chinese people typically consider that these virtues lead to academic success (Watkins & Biggs, 2001).

Teaching is a cultural activity. It occurs within cultural complexity and requires sophisticated use of language, which is also culturally bound. Therefore, in order to optimise teaching and learning it is critical to have understanding and appreciation of the cultural context in which it occurs (Chan & Rao, 2009, p.172; Biggs, 1996b).

Examination orientation

In Chinese culture formal examination is a key component of education. This is in part derived from the Imperial Examination System established in the seventh century. National examinations dominate the Chinese school system, and teaching and learning are centred on achieving success in these examinations (Lewin & Lu, 2012). Because of the dominance of examination, teaching and learning in schools tends to be driven by the examinations. There is a general focus on information delivery, on content cramming and on mastering examination techniques (Huang & Chen, 2008). Chinese students learn knowledge acquisition while students in Australia have a greater focus on problem solving.

Shuling's culture, practices, and thinking

My teaching practices and beliefs about education have been formed by my own experiences and my culture. My current practices are focused on helping students learn English and so I have a high level of focus on skills acquisition. Reading, writing and translation tasks dominate the English curriculum that I teach and there is an emphasis on grammar, whereas listening and spoken English activities are not strongly represented. While students get a good grounding in English they do not necessarily have a good grounding in applied English and in understanding the cultural contexts that English is evolved from and used in. While I believe, and it is my experience, that my teaching is efficient, I am not convinced that a depth of understanding is achieved in the student learning. One reason for this is the examination processes that we use, which tend to be paper-based, summative and 'academic'.

English as a second language teaching in Australia uses similar approaches and techniques to those that I use. However, constructivism is a dominant educational pedagogy that is used in Australia and in Western educational context generally. Chan (2001, pp. 181-203) examines the effects of constructivist instruction, popular in Australia, on Chinese students' learning and understanding. She indicates that the different constraints imposed on teachers by the educational contexts limit their beliefs and practice. Because of the focus on examinations in China, I have to make sure that my students still perform well in their examinations. As a result of my scholarship and my observations of constructivist approaches used in Australia I now better understand the educational advantages of this approach. However, it would be difficult for me to implement constructivist approaches in the same way at my university, as there is still a high level of incompatibility with the cultural beliefs and practices of my colleagues and the institution. Chan notes:

> *For whatever instructional innovations, teachers play a pivotal role in the instructional process. If the approaches were implemented without teachers' understanding, it (the practice) would not work whether it is based on the Eastern or Western traditions* (2001, p.198).

Teaching is about achieving student learning. If our goal is to have good teaching then we need to be focused on effective learning and to do this we need to consider the student, their ways of thinking, their previous experiences, and their cultural expectations.

However, what is understood as 'good teaching' varies across cultures as well. British students describe a good teacher as "…to arouse the interest of students, explain concepts clearly, use effective instructions, and organise activities" (Jin & Cortazzi, 1998, pp.740-756). Whereas some Chinese students describe a good teacher as: "…the ability to deliver a high quality lecture distinguishes a good teacher from a poor one;" and also, a good teacher has "…a well-prepared and clearly structured presentation with the intent to help learners understand the content step-by-step, has deep knowledge, is able to answer questions, and is a good moral model" (Chen & Bennett, 2012, p. 684).

So what does this mean?

It is rare in our work as university teachers that we have the opportunity to take time out to think about what we do. A packed timetable, large classes and structured programmes and curriculum dominate our lives as university educators. Having time to observe practices in another institution in another country with opportunities to critically reflect upon our own practices has been extremely positive for us. It has helped us to strengthen our understanding of teaching and learning, of learning cultures and environments and what really is important as opposed to our culturally ladened assumptions. Our initial experiences in different countries and different institutions with different cultures were quite confronting. However, this confrontation, including engaging in scholarship has helped us further think about our own practices and those of our colleagues.

In terms of university teaching Chinese universities have, by and large, followed Western models. Indeed, Chinese universities in many ways are similar to universities found in other countries, particularly as China continues to internationalise Higher Education. Chinese universities have followed international curriculum and pedagogical approaches, though typically these changes have lagged significantly in time behind those of leading universities in the west. Pedagogical approaches in Chinese regional universities have not changed a great deal for decades, and it is in this area that we believe some of the most significant changes will occur and need to occur. The culture of higher education currently practiced in China is deeply embedded in both staff and students, and also more broadly in the community. Changing culture is difficult and takes time.

What is more important from our perspective is that engaging in a cross-cultural professional experience, and then in a process of critical reflection on this experience, articulating this through a narrative inquiry, has helped us to examine our own beliefs and practices, and to begin our own processes of culture change. As we are able to share these experiences with others and compare and contrast our experiences so we engage in a learning community, or a community of professional practice in which we can all learn. Surely such an outcome presents not only opportunities and benefits for us (Shuling and Greg), but also for others. Well we hope so.

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Critical personal reflections on professional development within a complex learning environment

Deborah Prescott

School of Education, Charles Darwin University, Australia

deborah.prescott@cdu.edu.au

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Abstract

This article presents my professional reflections about what I am learning as a team member of two large units in the Graduate Diploma of Teaching and Learning. Critical personal reflection and narrative analysis are used to explore my professional learning journey, particularly in relation to my 'primary colleague', the most experienced team member. This narrative critically reflects on tensions between my developing understandings about learning and teaching in higher education and how learning best takes place. The literature supports learning and teaching approaches that disrupt the status quo, foster complexity and cultivate true collaboration and transdisciplinarity.

Guiding my reflections is how I have been helped by my primary colleague and, in turn, how I may be able to help others towards more collaborative, reflective and transdisciplinary workplace practices in spite of working within isolating course parameters. How can we each make space (physical, virtual, collegial, temporal and mental) to engage in collaborative workplace practices that turn the focus of teacher education more towards complex, transformative learning? Collaborative work is time-consuming and, in my experience, thoroughly effective and deeply satisfying.

Collegial dialogue within my team has occurred in the complex context of improving the learning of our students and has included such wide-ranging topics as: philosophies of learning, effective pedagogies, environmental sustainability, the scholarship of learning and teaching, political and industrial issues, and transformations to teacher education and schooling. These conversations deepen what I am able to bring to my students' learning and create synergies between professional reflections and student learning processes that inform each other.

The complex learning environment

The Graduate Diploma in Teaching and Learning (GDTL) is a mature, one-year, full-time course in the School of Education that is approaching the end of its life cycle. The Australian Institute for Teaching and School Leadership (AITSL) mandated in 2011 that any pre-service teacher course must be a minimum of 18 months in order to be nationally accredited in Australia. Semester 1, 2014 is the last intake of students and we will teach out the course through Semester 2, 2016.

Charles Darwin University is fortunate that the GDTL accreditation was extended several times because it attracts many students. This highly diverse cohort comprises students who: bring the full range of previous degrees (e. g. Visual Arts, Accounting, Outdoor Education, etc.); live in Australia and in other parts of the world; are about 85% external enrollees; fulfil professional

placements in the entire range of schooling levels and environments; are almost all mature-aged and relative newcomers to learning technologies, and; juggle home, work, leisure, work-integrated learning and study. I am constantly amazed at the demanding schedules that these students set for themselves to succeed at this course within a one-year timeframe.

For seven years I have been team-teaching with the same full-time lecturer (my 'primary colleague') in two large units entitled Teaching the Curriculum/Integrating Literacy and Teaching the Curriculum/Integrating Numeracy. From time to time we have been allocated an additional one to two part-time lecturers and up to three casual markers. Under current workload guidelines, one unit with the enrolment of 450 (enrolments in one of these units recently reached 650) calls for at least four full-time staff for a year of teaching, which is applying a notional EFTSL (effective full-time student load) of 30. However, both my primary colleague and I had considerable, additional work allocations.

In addition to workload considerations, these units (two of three non-practicum-based units in the GDTL) carry a wide-ranging brief that normally would be spread across many disciplines and topics, like sociology, educational policy, educational inequalities, and history of education. As well as the diverse range of student backgrounds and teaching situations, the units also address relevant curriculum frameworks from multiple jurisdictions and pedagogical approaches, literacy (and digital literacies), numeracy, reflective practice, ICT in education, philosophy of education, professional literacies, and problem-based learning. Furthermore, either unit can be the initial or terminal unit for students and that requires extra support (on entry) and requests for early grade release, for example (on exit).

Accordingly, staff assigned to one or more of these complex, multi-dimensional units are consulting with each other on a daily basis – formally and informally, in person or online, in or outside business hours – on teaching approaches, responding to student need, consistent management of issues, unit and assessment re-design processes, and ongoing moderation. I found this team work one of the most satisfying aspects of working on these units.

In spite of these challenging parameters, our team has had a consistently low rate of 'assessment continuing' marks (requiring lengthy administrative follow-through), a negligible failure rate, few problematic complaints, a relatively low number of extension requests, and manageable email and phone contacts. When marking, it is important that the responses to the assessment tasks are widely varied – fore-fronting context – with the result that plagiarism is difficult to execute and students are publicly sharing their entire assignments for peer review before and after staff assessment!

Guiding questions

The questions guiding my reflections are how to help my colleagues be more effective teacher-educators, address big questions (not always administrative ones), reduce frustration through more collegiality (adopt less isolated work practices), and align the way we do business with our educational philosophies (resist simplistic responses to complexities). Because I have been helped and inspired – enormously – in my professional work, I want to relate how my increased understandings could be used to help other staff members towards similar experiences. However, this isn't as easy as a simple list of instructions!

One way that my primary colleague and I have conspired to 'spread the good news' about our work is to recruit different staff members to be part of our team. So far, over seven years, we have had four additional permanent staff working within these units and experiencing innovative assessment and learning practices. The process of collaborative planning and the

innovations springing up in our meetings (and the research between planning meetings) has been successful because it has capitalised on the need-to-know, just-in-time basis rather than an add-on to teaching and research priorities.

Transformative literature

In this section I examine the literature in different contexts supporting epistemological shifts in teacher education and pedagogical approaches (for both teacher education and schools) which would have a profound positive effect on learning for the 21st century. I chose resources which disrupt the status quo and enact a philosophy which better prepares us to face an uncertain world. My primary colleague introduced me to many of the texts that I have examined in this critical personal reflection.

Changing tertiary environment

One of the strong themes underpinning our professional conversations has been how our pre-service teacher education could more accurately reflect transformative learning. Morin's *Seven complex lessons in education for the future* (1999) is a seminal work that should be central to teachers' reflections. Reading Morin's 63-page book repeatedly over the years, I have recognised many of the 'complex lessons' we have used in redesigning our units: detecting error and illusion, principles of pertinent knowledge, teaching the human condition, earth identity, confronting uncertainties, understanding each other, and ethics for the human genre. Not only does Morin address teachers' and teacher educators' work, but he also believes environmental concerns should be fundamental. So far, in my experience, environmental sustainability (I use this label for its familiarity, not necessarily its accuracy) has not been fore-fronted in our teacher education courses. Later in this article, I note more resources about the importance of making education for environmental sustainability integral to teacher education.

Major (2011) records a self-study in a New Zealand context about her teaching also in a Graduate Diploma of Teaching course. She clearly articulates the tensions she feels in reconciling the philosophy underpinning her pedagogical approaches with the philosophy of the 2007 implementation of the NZ curriculum and its inquiry-based directive, in particular. I found many parallels to the contradictions I observe in pedagogical practices in higher education that do not align with new conceptualisations of knowing.

In a nursing education context, Northedge (2006) explores the historical picture about how tertiary education has struggled making the transition from teacher-led courses to student-centred learning. This was brought home to me earlier this year, when I attended a seminar on 'Flipped Classrooms' (Educause, 2012), that tertiary educators are still struggling with didactic pedagogies versus student-led learning methods. My experience with TAFE and adult ESL pedagogies set me up for pedagogical approaches which are more aligned to a 'flipped classroom' and I was surprised to learn that this wasn't so with many tertiary educators.

Davis, Sumara & Luce-Kapler in *Engaging Minds* (2008), take this debate between teacher-centred or student-centred pedagogies a leap forward suggesting that the notion of 'centre' can be an event – not a person or object. Teachers should deliberately design the learning event so that people and ideas 'bump into' each other around this 'emerging possibility' (Davis, et al, 2008, p. 200). Our assessment tasks – events – in our GDTL units have allowed emerging possibilities to arise in student-led discussions in a decentralised interactive structure. Active learning develops over the semester with about 200 students regularly participating in discussions. What is the critical mass that allows students' ideas to bump into each other in the context of an online Discussion Board? In other small, teacher-centred units, the likelihood of lively discussions around an emerging possibility is reduced.

Davis, et al (2008) mention Fernandez & Yoshida's (2004) *Lesson study: A Japanese approach to improving mathematics teaching and learning*. They present a collaborative and dialogic approach to planning maths lessons, helping me start to articulate both the approaches my team and I use to plan tutorials and seminars, and more deeply understand the assessment tasks that we set for our students, which include 'illustrative classroom dialogue' (a very insightful aspect of the tasks). Our team's approach is certainly collaborative: in short, intense periods, we revisit what students understood in sessions previously; the directions students are taking in their discussions currently; what students need to know now in order to complete the assessment tasks successfully; how to meet students' needs in a session. This just-in-time planning is thoroughly dialogic, contextual and reflexive in its focus.

There is another level to *Lesson Study* (as conceived by Yoshida & Fernandez) that is missing in our School context and that is course planning collaboration. The Japanese schools referred continuously to the school priorities and vision in order to keep all teachers working on collective goals. In our School, we are overwhelmingly individuals, working on separate units, without reference to the overall principles or course goals to guide us purposefully. My team's units are minor exceptions.

Ramsden (2003) makes the important point that changing the nature of tertiary teaching does not fall just to the individual lecturer: "Focusing on this level alone is likely to create frustration, conflict and, ultimately, regression to the status quo" (p. 9). This is precisely what, I believe, is happening in our School as we struggle with workloads and multiplying units and courses in a tightening economic environment. In my team, we have been able to continually improve our learning and teaching because of our collective reflection and innovation.

Online learning and teaching is a strong reality in higher education especially at CDU. Relying on our learning management system (even the term 'management' mitigates 'learning') for innovation frustrates attempts to turn the spotlight onto transformative pedagogies. Many of the support tools encourage didactic teaching.

Learning and teaching for social change

The problems in schools highlighted in the media haunt teachers and teacher educators: Indigenous students showing marginal NAPLAN improvement; crackdowns on professional teaching standards; rising costs of education, etc. The solutions put forward, however, are short-term, mechanistic, under-funded and political.

Engaging Minds by Davis, Sumara & Luce-Kapler (2008) is my new 'bible'. They highlight emergent insights rather than perpetuate the myths of 'precise definitions, unambiguous classifications… and irrefutable logic'. By their own admission, they aim to 'unsettle popular beliefs about formal education' via the core themes, 'complexity, interdependence, emergence, and transformation' (p. 5).

I chose *Engaging Minds* as the prescribed text for a new unit 'Researching Classroom Practice' because it brings attention to why our assumptions about learning and teaching need to be disrupted, particularly as applied to teacher education. Part C, 'Teaching frames,' in this text brings some insight to my professional reflections. The authors ask, for example, 'How can teaching simultaneously be about disciplining and empowering (p. 158)?' These are the kinds of questions that supply the 'disorienting dilemma' or 'enabling constraint', setting the scene for discussions around a rich, problem-based task, and enabling process-oriented (versus content-driven) learning. Other stakeholders in the unit, 'Researching Classroom Practice', did not endorse my choice of text. The focus, it was thought, should be on what is commonly mistaken for 'researching'; that is, how to distinguish between qualitative and quantitative methodology, for example, and how to write up a research report.

Northedge (2006) asks the same questions as Davis, Sumara and Luce-Kapler – What is knowing? Learning? Teaching? – in the context of a large, diverse course in nurse education. Northedge defines learning as 'a process of becoming increasingly competent as both a user of various specialist discourses and a participant within the relevant knowledge communities' (p. 19) which resonates within my personal journey. His emphasis on creating discursive environments affirms the approach we have taken in our conversations and our units.

I wrote the paragraphs above (Learning and Teaching for Social Change) before reading Edwards-Groves, Anstey and Bull's (2014) book, *Classroom Talk*, and immediately recognised what I had long suspected: there is a strong link between enabling school classroom talk, collaborative professional learning in pre-service teacher education and the transformation of teacher practice. The authors are adamant that this transformation requires continual collaboration within strong learning communities and dogged research into teaching practice. My MEd thesis (Prescott, 2006) instilled a deep appreciation for the role of talk in learning, thinking and writing. Now, in the GDTL units, I can see that not only does dialogic learning occur within our teaching team, but it also better ensures that our students (and their students) will have the opportunity for more dialogic learning in spite of a strong legacy of didactic culture in tertiary learning and teaching.

Environmental sustainability is an abiding force in my life. I am intrigued by Bamford's article (1999), *From environmental education to ecopolitics: Affirming changing agendas for teachers*. His position is that relationships between humans and the physical environment are the bases for holistic curriculum (like Morin and Jardine) in order to examine complex differences (such as power relationships) to improve the ways all creatures live in the world. As soon as teachers focus on the processes of learning, resist the simplistic, mechanical world view predominating in education, and draw heavily on the transdisciplinary and complex community contexts, teachers 'move into realms that are counter to existing dominant values' (p. 170). But teachers themselves 'legitimate dominant cultural values…' and '…need to escape their own enculturation' if they are to genuinely address environmental concerns (p. 171). Recently, I have become convinced that in order for behavioural changes to 'stick', teachers need to apply pedagogical approaches akin to the approaches we have applied in our units. This (environmental) layer of meaning to transformative pedagogies is driving much of my reading currently.

David Jardine's *Pedagogy Left in Peace* (2012) was my (continuing) introduction to philosophers in education. The main premise of the book is that education requires free spaces to keep open possibilities of learning and teaching. Jardine makes some of the same points as Morin (1999) does: learning is context-dependent, ecological concerns are critical to how we come to know interrelatedness and wholeness, fragmentary disciplines are incapable of helping us towards deep knowing, uncertainty and impermanence must be accounted for in learning and teaching. Some of my 'ah-ha' moments came when I recognised (in this book and others) what my primary colleague had conceived of, planned for, insisted on and implemented in the units that we taught together.

I would like to offer an illustration of how we have created space for creativity. Our students often demand they be given an exemplar of a 'good' assignment so that they will know 'what we want'. We have consistently resisted publishing past assignments, partly because the assessment tasks change every semester and partly because Jardine says that the demand to be told is how truths remain hidden – we need to practice and cultivate knowing in order to know. Jardine says that 'you cannot practice this knowledge by yourself and alone and only within the confines of the devices you have already mastered because this is not how this knowledge is held in the world' (p. 126). Over time, becoming more experienced in the process of learning, makes you more able and willing to be 'left in peace' to let this process unfold anew. This place, however, is anything but peaceful and I know that my primary colleague is never at peace in his knowing.

Personal knowing unfolding

My personal narrative and critical reflection is grounded in Dewey's philosophy of education and his belief that we learn from experience and reflection on experience. I have narrated parts of my professional learning journey with a critical reflective lens and have attempted to capture memories over the past five years without systematic data collection.

Clandinin & Connelly (2000) also emphasise reflection in narrative enquiry in teacher education. I have sought patterns in this narrative that are meaningful towards my changing professional practice. Clandinin & Connelly's research framework helps me find these patterns and position my narrative within the 3-dimensional inquiry directions (inward, outward, backward, forward, and place-situated) it takes.

Construction (Davis & Sumara, 2012, suggest that *construing* is a more accurate translation from the French) of professional knowledge is understood as a relational and interactive process between colleagues and the contextual teaching aspects. Critical personal reflection, as I have experienced it, challenges simplistic notions of being a university lecturer – an expert of a discrete discipline working in isolation with a set of learning outcomes. Critical personal reflection validates individuals' experiences and accounts for the differences brought by individuals to the teacher education setting. My professional journey, in these units within this team, has affirmed that in a collective learning environment, 'Ideas can be sustained for a longer time, a greater variety of interpretations can be introduced, a broader pool of experiences can be drawn on. Two heads can be *much* better than one' (Davis, Sumara & Luce-Kapler, 2008, p. 69).

The act of writing this article has been important in reflection – writing as a form of analysis is difficult work (Altrichter, Posch & Somekh, 1993). Articulating the learning I have experienced is the active process of thinking-in-action and thinking with others:

> *Through respectful dialogue and conversations with multiple others, individuals come to know themselves and others, to know what they know and to construct professional identities* (Beattie, 2000, p. 4).

For the most part, collegial interaction, teamwork, dialogic learning, follow-up readings, university policy, etc. has been pursued in the context of our work in the Graduate Diploma units. Although these discussions have opened up whole new areas for me, the immediate use of new knowledge in marking assignments, responding to student requests, writing reports, composing assignment tasks and marking sheets, for example, have been an extremely positive and stimulating learning experience for me.

Critical personal reflections

In 2009 when we started working together, my primary colleague suggested we set about transforming the units *systematically*. We drew a mind map of the unit outcomes and aligned them (Biggs and Tang, 2009) with the assessment tasks and learning activities. Being systematic seems counter-intuitive to creativity and innovation but as my primary colleague and I (re)created the units, we talked about the design process, reflexivity and iterativeness. (I just looked up the definition of *iterative*: it has its roots in mathematics – *recursive*, and linguistics – *frequentative*, which are two areas of study by my primary colleague. This small parenthetical fact not only exemplifies iterativeness but also emphasises the transdisciplinary nature of knowledge connections that we all need to foster.)

A systematic approach to teaching does not preclude learning outside of the plan. In trying to come to terms with an apparent contradiction in my mind about how an approach to teaching can be systematic and still flexible, creative, innovative, and open to new and unanticipated

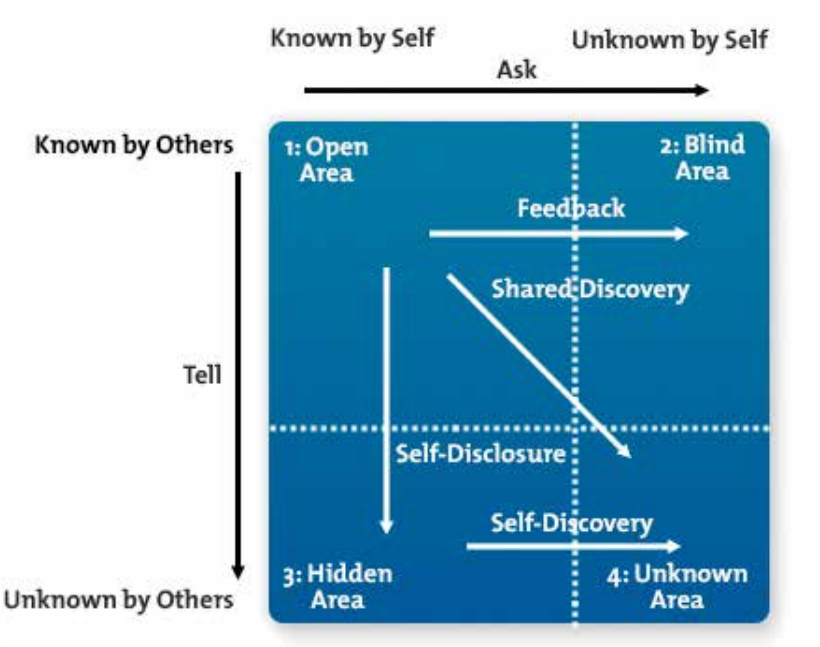
areas, our conversations touched on philosophy, engineering and ICT (additional areas my primary colleague studied comprehensively). Teachers need to have a strong philosophical basis in which to ground their pedagogical choices, articulate rationale for their teaching decisions, and make spur-of-the-moment responses that are based on underpinning ideals. Davis, et al, say, 'Knowing and doing are not different phenomena' (2008, p. 6). Do teacher educators make daily decisions based on their philosophies of learning and teaching? I am working on it.

I wondered aloud to my primary colleague about some of the rationale for doing things a little differently to the norm and copied his well-conceived learning designs. It was much later when I could articulate rationale myself that my professional development probably started to lurch forward.

The engineering domain helped frame our conversations about the design process and how non-linear it is, contrary to the simplistic models available in some units for pre-service teachers. We have tried to 'de-linearise' Learnline (CDU's online learning platform) to help students understand the complexity, iterativeness and connectedness of the themes running through our units. Indeed, our conversations have spanned the whole range of subject disciplines to explore cross-, multi-, inter-, and trans-disciplinarity (the approach which, we decided, is most fruitful for learning).

My primary colleague used the Johari Window for a lecture on professional reflection for Teaching the Curriculum 2 /Integrating Numeracy unit. I will attempt to use the framework of the Johari Window to illustrate aspects of my professional reflections in this paper. I found it more difficult than I first thought to fill in the four quadrants (Fig. 1). The descriptors accompanying the arrows on the diagram were particularly helpful in analysing the dynamic nature of my professional reflections.

Figure 1: *The Johari Window*



Source: © Mind Tools Ltd, 1996-2014. Reproduced with permission.

The object of the Johari Window is to increase the size of the 'Open' area through sharing discoveries and insights and working collectively. In the 'Open' area, some aspects about me are publically known: involvement in environmental sustainability activities; literacy and EAL/D teaching background; Master of Education (Teaching English to Speakers of Other Languages); focus on pedagogy in transformative education; interest in Indigenous teacher education. I find strong synergies between all of these areas for research, professional development and teaching responsibilities.

The 'Blind' area, I feel, includes most of the conversation topics that my primary colleague and I covered in the past 5 years whilst working on innovative approaches to learning and assessment tasks in our units. He introduced me to enabling features of technologies such as transclusion[1] and stretch-text documents (e.g., Tiddlywiki) for student assignments and collaborative programs for managing large student cohorts (e.g. 37 Signals, Formstack and WebMerge).

In addition, I became aware of how my primary colleague collected data over time in order to support decisions. At the beginning of 2012, I decided to revive *Academics Anonymous* (an informal group that shares research ideas fortnightly) and wondered out loud to my primary colleague what tack to take. To my surprise, he produced almost two years of invitations that I had sent out and had detected patterns amongst them!

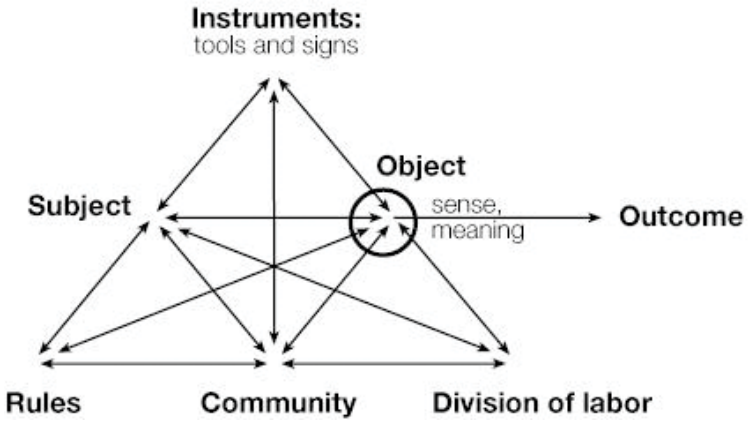
The importance of context was emphasised again and again in relation to our planning for learning activities, assessment design and assignment marking. During the development of our units I felt as if 'context' took on a life of its own and became the overriding factor in discussions with students, in interpreting academic literature, and in my own research. Recently, I surprised myself by discovering, whilst reading my minor thesis (2008) on Indigenous student classroom talk, that I had recognised the importance of context as well. So maybe this belongs in the 'Open' area of the Johari Window instead!

Conversations amongst our team members spanned the history of theorists and theories, evolution of Indigenous teaching approaches, narratives of philosophy development, logic, expansive learning, dialectical processes, complexity theories, communities of practice, activity theory, fractals, and cellular automata. Do I have a working knowledge of these complex topics? No, but I *have* begun.

Expansive learning and activity theory interest me most in the context of my own professional development. Engeström formulated the theory of expansive learning in 1987 and I learned of it in 2010 as my primary colleague and I reconceptualised a new BEd course. The would-be course was designed to cater to all pre-service teachers in whatever grade level and discipline area of teaching they aspired to – the unit 'Expansive Learning' was compulsory for all. I understand expansive learning as a concept of activity theory (Fig. 2). Theorists are (re)generating activity theory to incorporate: collective action to tackle pressing issues of humankind; a sense of local and global history; contradictions or 'wicked' problems (Rittel & Webber, 1973); and expansive learning.

1. Transclusion in computer science is the inclusion of a document (or part thereof) into another document by reference. Transclusion embodies modular design by allowing data to be stored (corrected and updated) only once and viewed in different contexts (Wikipedia, 05 December 2013).

Figure 2: *The structure of a human activity system*



Source: Engeström, 1987, p.78

In expansive learning cycles, 'nobody knows exactly what needs to be learned' (Engeström & Sannino, 2010, p.3) and we must learn new forms of activity for which there is no competent teacher. Our pedagogies must reflect this complexity, uncertainty and 'double bind' (Engeström, 2001, p.138). Expansive learning – akin to the approaches we have applied in our units – is more likely to be sustainable (in more than one way).

Amongst other 'Blind' areas, I have become aware of how important it is to invoke policy in making even the most mundane decisions about student extensions, for example. Most staff members regard policy as an onerous administrative necessity and one that is rarely called upon in routine tasks. However, answering student emails in accurate, considered, and formal (but not heavy-handed) language, demonstrates to the student that their individual circumstances are understood, are being taken into account, and there are logical and fair options available. These comprehensive emails take time to compose but I believe this one strategy alone minimises our email communication to a large extent. Once written and filed, they can be selectively recycled. When I compare notes with other lecturers, they exclaim, 'You must be swamped with emails and phone calls!' This reaction is indicative of workload expectations and to disparities between student and lecturer expectations of learning and teaching in higher education.

'Hidden' area (Fig. 1) aspects may include some things that I have chosen not to tell my team members because I am ashamed to have made some bad administrative decisions. However, I am fairly self-disclosing, so they may know more than I think they do. I am still uncomfortable in publicly sharing my insights outside my immediate team. I would like to push these boundaries and work harder at articulating my lingering doubts regarding using mark sheets instead of rubrics, for example.

The 'Unknown' area tends to be institutional elements and this formed an important aspect of patterns I detected with the help of my primary colleague. Institutional elements include assumed workplace practices that are deeply ingrained and, thus, very difficult to change or even call attention to. Examples of 'unknown' areas that need to be collectively examined to expose inefficient work elements in the institution are: how to tackle plagiarism without (more) layers of electronic detection; how to minimise AC (assessment continuing) marks; how to maximise transdisciplinary pedagogies through innovative course structure. Another illustration is the decreasing opportunity to work in the fulfilling environment of teams (as I have experienced), which, in turn, increases the feeling of individual isolation. Jardine (2012),

Engeström & Sannino (2010), and Morin (1999) strongly emphasise the crucial importance of recognising and drawing on the human need for participatory learning and teaching and 'collective cognition' (Davis, Sumara & Luce-Kapler, 2008, p. 68).

The 'unknown' area is gradually being whittled away (and simultaneously expanding!) the more topics that we delve into.

My primary colleague has an enviable depth of knowledge in environmental sustainability. In our conversations, we discussed the imperative to change the structure of Western hegemonic economic systems in order to sustain change in people's behaviour. (Social systems, too, are integral but generally more frequently discussed.) These conversations led to my emerging understanding that didactic teaching does not support the behavioural changes needed in order for education for environmental sustainability to 'stick'. Bamford (1999) refers to Bowers & Flinders (1990) where they suggest that the technicist approach (which, like didacticism, is still very much the dominant approach to teacher education and in classrooms) is the *antithesis* of environmentally responsive pedagogy. They define the technicist approach as one where there is compartmentalisation of subjects and students, measurement and testing of stable and well-defined knowledge, management and control, and individualised instruction. It may be too simplistic to make direct contrasts, but environmentally responsive pedagogy is more aligned to transdisciplinarity, forming discourse communities and networks, building on a strong language focus, and negotiating tasks and activities in democratic classrooms. I continue to try to articulate in more detail pedagogical approaches to environmental sustainability that are more likely to result in robust behavioural changes.

Patterns in reflections

The main theme running through the past five years is that of collegiality. Whenever my primary colleague started a conversation, I felt as if it was a huge investment on his part and a privilege to be part of the dialogue. When I offered some observations within the topics we explored, I found that he was a good listener as well as a thoughtful speaker – he was interested in my interpretations of things and how I was constructing meaning. I have tried to extend similar experiences to other colleagues.

Dialogic culture is even more difficult to establish amongst students on line within their tight schedules. Our problem-based assignments, however, triggered rich discussions amongst about one-third of students and resulted in some lasting student-student relationships. More importantly, participating students discovered that collegial dialogue and helping each other stimulated and maintained their own learning.

Time underpins quite a lot of the problems and solutions in my reflections. The time it takes to work within a team of this calibre and to explore ideas to the extent we did is a severely limiting factor with the workloads we carry. However, time spent in conversations usually led to smarter ways of assessing or marking, ideas for research, broader perspectives, keener insights.

I am becoming aware of just-in-time teaching and learning. In our units, we emphasise the learning process over content knowledge. My learning happens sometimes just in time to deal with our students' learning as it happens and questions as they arise. This means that we have to be watching, summarising, conversing and responding to student learning and not necessarily planning every detail of a tutorial, for instance, far in advance. To do this well takes a widely-read, broadly-experienced teacher (like my primary colleague). To do this well takes pedagogical free spaces (Jardine, 2012) where unanticipated – and thoroughly legitimate and meaningful – learning directions are likely to arise within complex tasks.

Another pattern in my professional learning, supported by the literature (I was relieved to learn), is *copying*. Davis, Sumara & Luce-Kapler (2008) refer to copying as a legitimate form of professional development and is typified by "nuanced give-and-take, …rich contextual detail, …ample opportunity to mimic, and …freedom to err without worry of reprimand" (p. 216). This strongly resonates with me but the valuable learning experience doesn't end there. I, then, have to be in the professional world, in my own particular way, in a context of my own making, and creatively re-enacting my own specialised discourse using my own voice and agency.

We are working in a tertiary education environment, the changes to which are coming from marketing surveys, new political leaders, various interpretations of student needs, schooling demands, curriculum implementation and research priorities – the changes are not necessarily coming from solid academic studies, deep reflective practices or genuine transdisciplinary collaboration. The changing environment is nothing new to the School of Education or university – and neither is our response to change. We allow other institutions to dictate the approach we take when research shows it isn't how students best learn. We allow ourselves to work in isolation when collaboration is more productive, satisfying and reflects a more accurate world view.

Work in progress

Although I have given some examples of how I have been helped in my university teaching and how I may progress my personal reflective journey, I recognise that this is a thoroughly personal and contextualised account and others must actively personalise and contextualise their own ways to be helped.

Although I cannot control how others engage in reflective practices, I can contribute by holding consistent *Academics Anonymous* sessions and inviting people to develop and maintain collective mindsets and collegial dialogues; keeping up momentum on projects which might be sidelined because of other priorities; actively pursuing my own directions and possibilities for research, now that I feel more confident about my contributions.

Reconciling the tensions between individual agency (issues of other staff members) and the collective need (furthering transformative learning) is an ongoing source of reflections for all academic staff.

Acknowledgements

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Digital Amnesia and the Demise of a Learning Community

Jon Mason

School of Education, Charles Darwin University, Australia

jon.mason@cdu.edu.au

Keywords: EdNA, collaboration, online community, digital amnesia

Abstract

Through presentation of a personal account of the emergence of Education Network Australia (EdNA) in 1995 through to its eventual demise some 15 years later this article uses narrative inquiry to reflect upon a number of critical issues regarding the sustainability of learning communities and of the digital infrastructure that is developed to support them. 'Digital amnesia' is introduced as a construct to describe practices that ultimately led to the disappearance of digital content and services associated with Internet domains associated with EdNA – and hence the learning community associated with it. EdNA's demise is described in terms of squandering social and community capital. The formation of a new entity and services intended to fill the service vacuum has shown little evidence of a sustainable approach or an understanding of the affordances of digital technology, particularly with regards to information stewardship. A number of lingering questions are teased out from the narrative and together represent a challenge for further inquiry.

Introduction

I suppose it could all start with once upon a time. A story that began with a vision of a connected community, of optimism and inspiration, the forging of a new way, a new world that harnessed possibility, of knowledge sharing and learning stimulated by abundance and the emergence of a new, and digitally connected, commons. A story with an intriguing mix of players: Ministers of Education of all political colours; a parade of chief executives, from insightful to self-serving; career bureaucrats with vision and ruthless, myopic zeal; a cadre of technology frontiersmen and women, on a grand expeditionary journey; and, a dispersed but collegiate team of individuals who worked their butts off pursuing a shared dream. Well actually, now that I've said it, that's not a bad place to start! The trouble is, this particular story is more to do with an ending, a betrayal, a failure of advocacy, and the impact of changed economic conditions that allowed a culture of bureaucratic blur to create the fuzzy logic that savings involved in shutting down the gold mine of social capital and networked infrastructure far outweighed any discernible value when, after all, the new digital commons was dominated by far superior services such as Google and Facebook. But in this telling of the story, the villains got their way and the unraveling took place facilitating their own career advancement.

For me, this story began in 1997 while employed as an IT Manager at the University of Melbourne. I was invited to participate in the development of a national project known then as Education Network Australia, or EdNA. This initiative was focused on maximising the benefits of the Internet for the Australian education and training sector through enabling the development of a

collective voice and collaborative infrastructure focused on quality information resources and knowledge sharing. By early 1998, a new national ministerial agency was formed to manage the functions of EdNA known as *education.au limited* and based in Adelaide. The agency commenced its life as a small team of eight professionals. I was appointed as Director of EdNA online services and soon discovered the privileged position of working for an agency whose whole mode of operation was consultation and collaboration with key stakeholders throughout the Australian education and training sector. I have documented the early history of EdNA elsewhere (Mason, 2000a, 2000b, 1998; Mason, Dellit, Trask, and White, 1999) so I don't intend to repeat that here in detailed terms - but what is important for this telling is that the early days were characterised by enormous optimism by the whole team in terms of how EdNA might be developed. After all, it represented collaboration on an unprecedented scale in the Australian education sector with an often-quoted metaphor invoked that the mistakes of earlier generations in building railway infrastructure of different gauges would not be repeated in the digital age. There was much to be gained from information and communications technology (ICT) and the transformation of teaching and learning was well underway, as was transformation of the broader economy in these early, heady days of the dot com boom. Significantly, the initial EdNA Directory Service of 1997-1998 was Australia's first database-driven website in education!

These reflections are documented here not as a way to single out individuals who committed a disservice, but to take the license that comes with narrative inquiry to say something that probably rings true for many former participants of the EdNA learning community. There are upsides and downsides in such an approach – the upside being that the data-centric approach to research underpinning of a lot of academic writing is explicitly avoided; the downside is it can easily be perceived as a rant. So, in pursuing a tried and tested middle way this particular narrative draws upon some documented evidence within an overarching narrative. The focus, however, remains the negative legacies of government-sponsored IT infrastructure, specifically the 'digital amnesia' that characterises a sloppy transition in departmental mindset from supporting infrastructure initiatives to deployment of services. Through discarding the baby with the bathwater the rebranding of government-sponsored digital services in the aftermath of EdNA's shutdown broke the IT infrastructure and failed to recognise the value of a vibrant learning community – of which there were approximately 35,000 active participants at the time of the shutdown (White, Thomas, Weldon, Lawrence, Galatis, and Tyndall, 2013).

EdNA the network and EdNA the service

Over time, the initial EdNA Directory Service became re-branded as EdNA Online for a very strategic reason: it was important to distinguish between the network of organisations, education departments, professional associations, committees, and individuals that comprised the network on the one hand and the functions of an evolving online presence on the other. It also became apparent that the EdNA Directory Service functioned as more than a directory of information and was initially focused on three main functions:

1. A portal and national directory, or who's who in Australian education and training;
2. A repository of educational resources screened for quality and relevance; and,
3. An online collaborative space in which many hundreds of email discussion lists were managed.

A fourth function evolved as almost inevitable in the early years: a contemporary and non-partisan national source on news and events relevant to the Australian education and training sector.

While this represented unprecedented collaboration in Australian education and training EdNA Online was vulnerable in terms of sustainability for two main reasons. Firstly, the committees that were responsible for its overall governance reverted to type (and hierarchical thinking) and were skittish about involving students – this is despite innovative proposals at the time such as building a student portal called echidna (EkidNA). Secondly, the Commonwealth Department of Education (under the auspices of various pseudonyms) had funded EdNA through a fund that needed to be dispersed, managed, and evaluated on an annual basis. In some ways, then, EdNA Online was never afforded the opportunity to become an embedded service and a symbol of systemic change because of the constraints of 'project think' prevalent in Canberra.

As a counterpoint to this vulnerability was the positioning of the peak advisory committee, the EdNA Reference Group, which had been formed earlier in 1995 and consisted of nominees from each of the three sectors – higher education, vocational education and training, and schooling (including representatives from non-government schools). In many ways, the formation of this consultative and advisory group was a master stroke of strategic planning and collaborative infrastructure which set the scene for the formation of a key subsequent committee known as the Australian ICT in Education Committee (AICTEC), which was still in existence up until the Federal election of 2013. Interestingly, it is unclear from its associated website (*aictec.edu.au*) whether the committee still exists. Somewhat ironically, the website presents very scant perspective on its history and little context in terms of dated priorities that demonstrates a culture of ignorance in terms of public information stewardship responsibilities.

Innovations at the cutting edge

Due largely to a workplace culture at education.au limited that 'walked the talk' there was no shortage of ideas for developing the core services associated with EdNA Online and more than once the Commonwealth department sought leverage from the initial implementation. Apart from managing the website through a devolved and distributed administration – that is, directly enlisting the buy-in of stakeholders – one of the earliest innovations was the development and wide adoption of a search API (application programming interface) that enabled copying some code from EdNA Online and using it on numerous other websites to facilitate remote or distributed searching of the central repository. This was achieved before the mainstream search engines did likewise. This approach informed subsequent unbundling of other services from the portal, although there is also an argument that the opportunity to unbundle its services was not addressed until it was too late.

However, not all attempts at leveraging EdNA for the development of online services were successful – the most notable being *edna.com*, an attempt during 1999-2000 in partnership with the publishers of the Australian Trading Post and build a commercial online trading site similar to eBay but exclusively for the education and training sectors. Considerable funds and committee time were invested in this exercise all to no avail.

A number of prominent drivers of change informed ongoing development and the general approach to innovation of the service, such as open source software and open licensing (Leeson & Mason, 2007) as well as the impact of the mainstreaming of social media. The central philosophy of education.au limited thus became very much focused on the design and deployment of "shared services" that contributed value to the "common wealth" (White, 2010; Ivanova, 2004; Mason, et al., 1999).

Probably the most compelling innovation in the latter years of EdNA Online (re-branded to simply *edna*) was the somewhat belated attempt to redress the policy of the early years to exclude students. The service developed as *my edna* and creatively branded using the edu

domain as me.edu.au had enormous potential to build further social capital and embed social networking into mainstream education and training. But the aforementioned career bureaucrats would have none of it.

'Guided' Evaluation

If the practices of government departments that were condoned, even cultivated, at the time took place in the business world then there would have been legal proceedings to follow. In hindsight, what took place could be described in terms of a classic breach of the Trade Practices Act, of 'misleading and deceptive behaviour' masked as an evaluation process that was both commissioned and guided – or in the words of one key stakeholder, "a sham". There was no real consultation with stakeholders who valued the service. Evidence for this is confirmed in responses to an online survey conducted in early 2014 in which 9 out of 10 former employees of the agency believed this to be the case and were not consulted.

It is pertinent to this paper that the documentation involving the evaluation of EdNA now just represents one item of the thousands of public documents that together represent "grey literature" that are no longer discoverable as a consequence of the EdNA shutdown (White, et al., 2013). Moreover, this document is no longer retrievable from the Commonwealth Department of Education website. Unfortunately, such a situation is not unique for websites associated with the Commonwealth bureaucracy partly because of the frequency with which their departmental names (and associated website domain names) change. During the lifetime of EdNA, the Department's acronyms included DEET, DEETYA, DEST, DEEWR, and DOE and there existed many more custom program websites that no longer can be found. Of course, a cynical perception of this state of affairs might see it as politically expeditious to engage in practices of 'digital document shredding' whenever there is a change in government.

Following the public disclosure of sensitive information from whistleblowers in recent years facilitated by Wikileaks and by individuals such as Edward Snowden it is fair to say that the age of surveillance that we are entering is being tempered or challenged by individuals who are incensed by the aggregate unethical actions of government agencies, although actions of these individuals is likewise perceived by some as not in the public interest while for others as courageous. On balance, it would appear that the principles of democracy are proving resilient as recent legislation indicates sentiment toward the whistleblowers. Thus, in Australia for example, the *Public Disclosure Protection Act of 2013* was enacted to safeguard whistleblowers in the public service (Commonwealth of Australia, 2013). It will be very interesting to see whether sham evaluations will continue to be sanctioned in this newly emerging environment!

Where the Network Ends?

Learning communities involve not just individuals as 'members', but individuals with role obligations and affiliations, individuals with multiple belongings who belong to organisations as well as communities of interest, individuals on the periphery – and individuals with diverse opinions. Importantly, networks are intrinsically open – they are not clubs, guilds, tribes, associations, membership organisations, or necessarily even communities. In my years at *education.au limited* I used an email signature with the words "healthy networks propagate" to convey this same idea. Networks are formed in the process of connecting and that is all – there is no requirement to sign up. They are also organisms, however, so they can die.

In its heyday EdNA always attracted vibrant debate, particularly through its initial discussion lists and later through the more developed open discourse of social media. As its online presence evolved from its initial function as a directory service to a resource-based and then service-

based portal it also began to take on a bloated, top-down look and feel. For some active and outspoken commentators – those who engaged in active discussion on a range of IT as well as educational issues – it was also perceived as being architected on closed rather than open principles and was criticized for it (Blackall, 2005). For anyone wishing to do a forensic audit on these discussions they will likely find that the negative perceptions of EdNA provided the kind of validation needed for those who wanted the online services decommissioned. It is also worth noting here, however, that debates about what constituted openness were also quite prevalent at the time between the open standards development communities, who were driven by the goal of achieving IT systems interoperability, and open source communities, who were driven by the wish to share code (Schwartz, 2003; Microsoft, 2003). Since then, discourse concerning the expanding "open agenda" in education has continued (Leeson and Mason, 2007).

Makers and Takers

In the network game there are makers and takers, and much of the social capital created for EdNA was the result of a balance tipped toward the former – passionate, active networkers creating pathways of value through the evolving digital infrastructure to support learning networks. In the process of fostering EdNA online communities the social capital generated was in the form of things like conventions and protocols for communication and knowledge sharing; development of trust and respect; project and program content; and a shared identity or sense of belonging.

Over time, *education.au limited*, progressively morphed from an agency focused on EdNA into a convenient outsourcing service for project management on behalf of the Commonwealth Department of Education (under various titles). It became an agency that managed multiple projects, some of which evolved into successful services such as the careers-focused service *MyFuture* – and some grand experimental failures such as *edna.com*, an attempt at creating a commercial market place a little like eBay exclusively for the Australian education and training sector. This shift in function to managing projects rather than building systemic services arguably became detrimental to the ongoing prospects of EdNA – indeed, to the lifespan of the agency itself – because it thwarted any possibility of embedding systemic change despite the overwhelming evidence of the latent potential value for it. Thus, the days for *education.au limited* as an effective broker of collaboration in the education sector became numbered. This is not the place to propose an analysis of all the reasons why partly because this vulnerability is perplexing given that the economy was awash with funds from the mining boom; moreover, related initiatives such as *MySchool* and development of the national curriculum were gaining traction.

A Shared Vision

For the initial distributed collection of supporters EdNA's value proposition was clearly as a meta-network connecting many different kinds of stakeholders within the Australian education and training sector (Mason, 1998; Mason et al., 1999; Mason, Adcock, and Ip, 2000). While the demise of EdNA might be explained in a number of ways it is relevant here to also consider what it still means to some of those stakeholders who were active participants.

> *All in all, the pioneering work of a large number of professional educators, educational leaders, researchers and experts has been lost to posterity, research and historical analysis.* (White, et al., 2013, p. 105)

As an exercise in validating my own reflections I also designed a short online survey in late 2013 and circulated it to ex-education.au limited employees. It was not intended to be a robust research instrument that might reveal irrefutable data but rather something that might just feel the pulse of key participants some years in EdNA's aftermath. From a dozen responses, all within a week of posting the request for input, the following remarks are typical:

> *Respondent 1: The outcome of the review seemed to have been determined before it was performed. It was a sham.*
>
> *Respondent 2: Like many, I was disappointed at the apparent short sightedness of whoever made the decision and disregard for both the community and the value of the knowledge and content in edna.*
>
> *Respondent 4: I don't think they were aware of how useful the resource was to the teacher in the classroom.*
>
> *Respondent 6: I was not surprised [it was decommissioned], as we had seen it coming for a long time. I was very saddened both for myself (I lost one of the best jobs I have ever had!); for my team (it was hard to see such a passionate, committed and talented team all lose their jobs); and for the users and potential users. I know that some aspects of edna had not kept pace with the times but believe that it could have been strengthened and revived.*
>
> *Respondent 7: What a wasted resource.*
>
> *Respondent 8: Shame for Australian education.*

Sustaining Digitally Enabled Learning Communities

Learning communities manifest in various forms and some endure while others do not. The first ever online learning community was formed in 1985 and known as The WELL (or the Whole Earth 'Lectronic Link). While originally a bulletin board this online learning community quickly became a benchmark for many subsequent 'virtual' communities. It still exists today, partly as a consequence of transforming into a subscription-based forum and partly because of its policy of non-anonymity and the fact that many of its members are well-known, such as Howard Rheingold. A question arises here: if the WELL could do it, why not EdNA? It might be easy to respond that it was because public money and politics were involved. However, there are plenty of examples to the contrary – a prominent one being the JISCmail communities in the United Kingdom (UK) which has hosted thousands of email-based discussion groups that commenced over 20 years ago. JISCmail was originally established through the UK higher education funding agency, the Joint Information Systems Committee (JISC), but with government changes over the last decade has evolved into a charitable company now known as Jisc. It also managed to seamlessly take over the function of its forerunner, Mailbase (Foster, 1997; Wikipedia, 2014). Perhaps such a move may yet be possible for a phoenix-like EdNA?

From a theoretical perspective Wenger (1998) describes the emergence of "communities of practice" from a lifecycle perspective:

> *Learning is the engine of practice, and practice is the history of that learning. As a consequence, communities of practice have life cycles that reflect such a process. They come together, they develop, they evolve, they disperse, according to the timing, the logic, the rhythms, and the social energy of their learning. Thus, unlike*

> *more formal types of organizational structures, it is not clear where they begin and end. They do not have launching and dismissal dates. In this sense, a community of practice is a different kind of entity than, say, a task force or a team.* (Wenger, p. 96)

This linking of community with learning is informed by the earlier work of Lave and Wenger (1991) and has been regarded as seminal in introducing ideas that connect culture and community with learning (Storberg-Walker, 2008). Historically, the discourse on communities of practice also emerged at a time when online communities were becoming established, and with the invention of the World Wide Web soon became embedded in the discourse and practice of digitally-enabled teaching and learning, particularly in higher education. Certainly, a search on Google Scholar will reveal that Wenger's works have in excess of 70,000 citations.

While Wenger's work can be shown to resonate as true for many participants of online communities other theoretical perspectives are also worth considering, particularly in relation to group dynamics. For example, in 1965, Tuckman introduced the 4-phase model of group dynamics, "forming, storming, norming, performing" which was later updated (Tuckman, 1984) to include a final phase, "adjourning", similar to Wenger's notion of dispersal. Despite the utility of such descriptive terms it is also arguable that an assumption is masked here that groups or communities necessarily have finite lifespans. But do they? Assuming so does not explicitly recognise the role of culture or that a learning community might be sustained across generations. A pertinent example in Australia is the resilience of some Indigenous knowledge over many millennia. If it can happen in such contexts, why not online?

A Failure of Advocacy

In an interview with Bernard *Lane of The Australian* in July 2011 I was quoted as saying "The demise of [EdNA]… represents a failure of advocacy at all levels." What I meant at the time was that no-one publicly stepped forward to advocate for continuity of the service – not the Board, not the CEO, not the passionate employees, not AICTEC – in fact, no visible beneficiary of the service, and certainly not me! The question then, is why? For my own part, having journeyed into 'independent' consulting I had learned quickly that any criticism of funding agencies would not be wise; and, a public coming out at the time berating the department would have brought an immediate stop to any future consultancy prospects. Perhaps in a similar way, other stakeholders felt likewise compromised – such is the impact that changes in political winds have. While the writing was on the wall for change the deeper problem was that no-one seemed adept enough to prevent the baby being dispatched with the bathwater.

So, while it is easy for embittered former employees to claim there had been little or no consultation during the evaluation, it is arguably more significant that there was no public debate and no evidence of the kind of advocacy that existed during the earlier vision and actualization phases of EdNA. Another explanation, in terms of natural lifecycle, is that EdNA had reached a "disintegration", "adjournment", or "death phase" of its learning community despite its high usage and participation (CIEL, 2011; Iriberri and Leroy, 2009; Tuckman, 1984). In the lifecycle perspective it is typical for an online community to move from maturity to dispersal due to lack of contribution or participation; however, in EdNA's case this was not so. EdNA's case, it seems, was more subject to the politics of sustainability. Yes, it was abundantly clear to employees of *education.au limited* that funding for both EdNA and the agency would come to an end – but there did not seem to be any evidence of discussions or consultations as to how the service might be alternatively sustained, apart from a few fanciful conversations over coffee.

Hand in hand with this failure of advocacy is a stark irony: one of the key policies of the Rudd-Gillard governments of 2007-2013 was the *Digital Education Revolution* (DER). In practice, what this meant was a range of programs focused on digital technology access in schools, such as laptops for students and specifications that focused on software systems interoperability. But the implementation of this policy meant very little for EdNA or how it might be leveraged – demonstrating perhaps how the DER, like EdNA, was just another 'project' to be managed only according to its own terms of reference. Project think, however, does not segue easily into a revolution.

Impermanence and Digital Amnesia

While document shredding is both a common and legitimate practice in situations such as protecting identity or privacy it is also a well-known practice that when governments change it can be used as a political maneuver to hide secrets, or just to make life difficult for the other side. Digital technology provides new affordances for how this can occur, although it is generally the opposite situation that gets media attention. In conducting a Google search on "digital impermanence", for example, the exact opposite term is suggested and populated onto the page of responses, namely "digital permanence" – a term used to caution people about their social media postings that will 'remain forever' and possibly hamper future job prospects.

A search on the term "digital amnesia" also reveals a broad usage. Commonly, it is used as a synonym for "digital obsolescence" when the pace of technological changes renders some digital formats inaccessible (Wikipedia, n.d.). But, it also describes: personal forgetfulness that arises from having to manage numerous passwords and locations where personal data might be stored (Urban Dictionary, n.d.); broken hyperlinks or "link rot" (Australian Library and Information Association, 2005); the loss of access to government information (Missingham, 2005); and, the loss of access to large amounts of personal data as a likely consequence of cloud-based suddenly closing down. Thus, as Grobman (2013) puts it "One day it [digital content] could all disappear because these companies [e.g., Facebook, Flickr, Wordpress, and Google] are not obligated to give back all of your content if for some reason they fold."

While all these various usages of the term can be meaningful the intended function in the title of this paper has been to invite inquiry as to what it might mean. Based on the foregoing narrative than a number of interpretations are plausible; however, the principal reason for using this term has been as an apt description for the online services and learning communities associated with EdNA which no longer operate with their digital presence having been erased from the collective digital memory of the Web.

The Lingering Questions

In the spirit of inquiry and not just storytelling this paper has set out to highlight some questions arising from the deployment and subsequent closure of EdNA. These questions are not only pertinent to the documented history of EdNA but have relevance to government-sponsored digital infrastructure in general and for the sustainability of digital infrastructure that supports digital learning communities.

- Why is all the so-called "grey literature" (national reports, white papers, discussion papers, etcetera) hosted by EdNA no longer discoverable on the web?
- Is it too late to retrieve components of EdNA given that the broader social and political context has shifted toward one where there is now significantly more public accountability?

- How can Commonwealth agencies be better held to account?
- How can the durability of URLs associated with government agencies and programs be ensured?
- How can the debilitating effects of 'project-based thinking' be countered, or at least balanced, in the expenditure of public money?
- What were the real agendas behind why such an iconic service such as EdNA had to be shut down?
- Why was there a "failure of advocacy at all levels" for maintaining EdNA?
- What lessons can be drawn from this account of the demise of a significant learning community?
- In what ways can nationally relevant digital infrastructure be developed in the future that safeguard the digital footprint of services for future generations to discover and reference?

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Finding the 'tipping point': A Framework for building an institutional learning community to improve learning and teaching

Deborah West

Charles Darwin University, Australia

deborah.west@cdu.edu.au

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Abstract

Universities are inherently learning communities in the broadest sense. Central to this and generally explicit in university mission statements are their goals in providing quality experiences for students. The scholarship of teaching and learning (SoTL) is a core element in the ongoing improvement of the student experience which embodies a valued scholarly research process. The idea of building an institution wide learning community with a focus on SoTL should therefore be at the heart of the university's agenda and a relatively easy undertaking. Yet for a range of reasons it proves elusive in many institutions. This paper explores the underlying issues surrounding this challenge and identifies a range of factors which lay the foundation for building a SoTL learning community. It begins with an examination of the key concepts of SoTL, learning communities and structuralism to set the scene. The paper then examines key literature and existing data on SoTL and concludes with the presentation of a framework for building an institution wide learning community which supports the improvement of learning and teaching for students using a SoTL approach.

What is the scholarship of teaching and learning and why is it important?

The scholarship of teaching and learning (SoTL) refers to a systematic approach to reflecting on teaching practice to improve outcomes for students. There are many definitions and approaches to SoTL within the literature but the work of Boyer (1990) in relation to scholarship laid a solid foundation for further development. Boyer outlined four key elements of scholarship: discovery, integration, application and teaching. The language and approach used within SoTL approaches is akin to the research process. For example discovery, refers to the contribution of knowledge; integration to drawing on existing knowledge to develop new insights; application to being able to apply this and teaching to being able to extend knowledge through sharing (Williams, Goulding & Seddon, 2013). As Hutchings, Borin, Keesing-Styles, Martin, Michael, Scharff, Simkins and Ismail (2013) point out:

> *In this, and in many definitions of SoTL generated in the years that followed, the emphasis was on intellectual work, on learning and teaching as areas for systematic study, and on a process of knowledge building.* (p. 37)

SoTL is therefore the scholarly approach applied to learning and teaching. It is not generally pure research but rather the application of research to learning and teaching with the intention being the improvement of teaching and learning and subsequently the student experience.

Typically, SoTL has a strong focus on the actions of the teacher, and their critical self-reflection of this, in attempting to help and improve student learning. Having a clear SoTL culture and approach is central to 'improving the ability of institutions to support student learning' (Martensson, Roxa & Olsson, 2011 in Williams, Verwoord et al, 2013, p. 50). It is foundational in this respect as it provides a clear framework for the development of an evidence base about how to improve learning and teaching including the links to student outcomes. While this is inherently what universities should be seeking to do, it is also an essential requirement in the current era of accountability and outcomes driven funding (Williams, Verwoord, et al, 2013). Yet as Williams, Verwood et al. (2013) point out, such a dialogue is unlikely to inspire academics to engage in this process. Rather it is the link to their identity as scholars, a drive to be the best possible teacher and links to careers which are central. However, these themes can converge to some extent as accountability might be a driver for structural change within institutions which can support the development of a SoTL cultures and the focus on the scholarly identity. With this brief overview of SoTL, we now turn to how learning communities might be useful to developing a SoTL culture.

Learning Communities

The term *learning community* is used in a range of contexts to mean a variety of things; many of which are vague and unhelpful (DuFour, 2004). Therefore it is essential to unpack and define our understanding and focus. To start we look at the concept of community. Plant (1974) in his seminal work on community development highlighted the key components of a community through a comparison with a group. He argued that a community is a relatively stable and permanent structure which is pluralistic and heterogeneous while a group is more specialised, transitory and relatively homogeneous. Quite obviously these operate on a continuum but it is the more lasting end of the spectrum – that is a community – something that is enduring, has a permanent structure and spans and engages the heterogeneous institutional population that we seek to develop.

Additionally, the work of Lave and Wenger (1991) and Wenger (1999; 2006) on communities of practice provides further parameters. Wenger (2006, p. 1) defines communities of practice as "…groups of people who share a common concern or a passion for something they do and who interact regularly to learn how to do it better". He also suggests that there are three critical characteristics which need to be present: the domain, the community and the practice. Essentially, the domain provides a shared focus, community the relationships and activities around that focus and practice is about building and sharing resources, knowledge, tools etc. It is the combination of these three elements that leads to a group becoming or being defined as a community of practice. While slightly at odds with Plant in relation to the key concept of communities, the work of Wenger highlights the role of learning.

DuFour (2004) poses some interesting questions in relation to learning communities which are useful in assisting to define what it is we seek. While obviously focused on the school context, these questions still remain useful:

> *What are the "big ideas" that represent the core principals of professional learning communities?*
>
> *How do these principles guide schools' efforts to sustain the professional learning community model until it becomes deeply embedded in the culture of the school?* (p.1)

The 'big idea' in our endeavour is to have an institutional focus on SoTL providing an environment which supports, encourages and values the SoTL approach. Rather than the

broader learning community which a university arguably is on a number of levels; we seek to have an explicit learning community which develops and guides SoTL endeavours. The next question is how this principle informs efforts by a university to embed a SoTL culture across the institution; that is a SoTL learning community.

Community development frameworks and structuralism tell us that we need to deal with the underlying conditions and structures that support such an approach. This is reinforced by the work of Williams, Veerwood, Dalton, McKinnnon, Strickland, Pace and Pool who argue that … "understanding the structure of the organisation one is trying to influence is essential for developing strategies to increase the value of SoTL work in a culture" (2013, p. 54). It is at this point that a sociological perspective is useful.

Structuralism

From a sociological perspective the concepts of structure, social constructivism, culture and agency all play a role in building a fertile environment for a learning community focusing on SoTL. A structuralist perspective indicates that "… human action should be understood as a product of an underlying social structure (or social system) …" (Van Krieken, Habibis, Smith, Hutchins, Martin & Maton, 2010, p. 5). In this context the institution itself and the broader tertiary sector have some elements that shape those who work within them and the relative value placed on such elements. Structural elements can therefore either support or hinder certain activities; in our context, the development of a SoTL learning community. It is from this perspective that this paper examines the underlying elements that are required to support SoTL development.

However, such structures are shaped by human behaviour and interactions and change over time – that is they are socially constructed and humans can act upon them (agency). As such, a learning community and the development of a SoTL culture can be influenced. In that sense, we can look for the lessons and take action to pursue this goal in a systematic way. It is said that there is a 'tipping point' in cultural change and it is this point that we seek to find.

Language is seen to be central to social construction – a point that we will return to in relation to the concept of SoTL and its relative place in institutions. Language is also central to the concept of culture and the shared understandings that are developed within an organisation. This suggests that as we seek to build a culture of SoTL, which underpins the learning community, attention must be paid to the language that is used and the ways in which the community views such language.

In order to consider how the above ideas from sociology as well as learning communities and SoTL come together in institutions we turn to two sources: the existing literature on developing an institutional culture of SoTL and an analysis of some existing data on nationally recognised expressions of SoTL.

Key elements for building a SoTL community

The literature

A range of factors have been identified as supporting a SoTL culture throughout the literature. First and foremost having institutional support at every level is essential to improve learning and teaching (Major & Palmer, 2006; Brew, 2012; Williams, Goulding and Seddon, 2013; Williams, Verwoord et al, 2013). Williams, Verwoord et al. (2013, p. 49) go further to imply a

clear strategy that 'coordinates the actions of individuals' within, across and between schools, faculties and central services. Their work is particularly focused on the development of learning communities and suggests that it is not enough to simply have the elements in place but that it needs to be actively supported, coordinated and acted upon.

Related to this institutional support is the clear valuing of SoTL. While it is common for universities to indicate that they value learning and teaching, they must go further to value the scholarly approach to improving this endeavour via outward and visible signs of such support. In a National Centre for Vocational Education Research (NCVER) study Williams, Goulding and Seddon (2013)

> *…observed that the scholarship of teaching and learning is regarded as a second discipline in higher education and is not recognised as equivalent to discipline based scholarship, is not necessarily part of core practice and is not highly valued. This was attributed to the structures for research assessment forcing the separation of teaching from disciplinary research and muting the work of the scholarship of teaching and learning.* (p. 29)

Both teaching and learning and research are critical elements of a university's core business, prestige and funding. Clearly there are some external drivers which lead to mixed messages about the value of teaching and learning vis a vis research. However, the key argument for supporting SoTL is that it improves the learning experience of students which is linked to retention and student satisfaction (as evidenced by the work of Brew, 2012) and a critical part of university funding. Measures such as retention and more recently success in awards are clearly included in government/institutional compacts. However, as a bonus to that SoTL work can generate publications and 'category 1' research funding.

Brew (2013) reporting on work undertaken at Macquarie University identifies various elements put in place at a structural level which resulted in an improvement of SoTL and subsequent improved outcomes for students. These factors formed a scholarship of teaching index that was used to drive change through rewards based incentives to the faculties and schools to further support SoTL. The index included a points based system to reward qualifications in university teaching, teaching awards at the faculty, university and national levels, publications and presentations on university teaching. While this was seen as the measure of SoTL, the change program was supported via very public and institutional and faculty level events and initiatives. The study found a statistically significant relationship between awards and a change in student experience in relation to their reporting of good teaching, appropriate assessment and generic skills. However, no significance was found against the same measures in relation to publication output. This is likely because awards are based on teaching practice with students where publications may or may not be related to actual practice. This would indicate that to improve student outcomes SoTL incentives should focus on the process related to awards.

Context however is important and the work of Williams, Goulding and Seddon (2013) highlights this point. Their study which examined the culture of scholarly practice in different types of institutions (Vocational Education (VET), mixed sector and higher education) identified a range of additional factors. Language was seen as critical in this study where the concept of research is not as widely embraced in VET as it is seen as removed from practice and largely theoretical. However, the terms 'scholarship' or 'scholarly practice' had far better traction. The idea of quality and how to achieve quality in scholarly practice was also seen as critical in mixed sector institutions suggesting that professional development in this area would be necessary for staff across the institution to gain a clear understanding of what is necessary and to improve the outcomes.

In their summary, Williams, Goulding et al (2013,) identified four key elements which are at the heart of scholarly practice:

> *Scholarship is a dynamic intersection between knowledge and practice; it is socially constructed and co-produced work; it is a form of learning, where scholars become self-critical inquirers; and it needs to be made public, with scholars accountable to their peers.* (p. 18)

These four elements have a clear connection to the value, role and necessity of building a SoTL community as well as identifying some critical elements in doing so. In terms of underlying elements, this work identifies the critical roles of praxis (action, reflection, action) and opening up our teaching practice to peer review.

Praxis or what Williams et al (2013) refer to as action, research/action varies according to sector both in terms of the value placed on it, how it is conducted and the role of theory and view of knowledge generation. It could also be suggested that the concept of praxis in relation to teaching and learning in and of itself is likely to be embraced more readily in some disciplines than others. As such, this is an element that should be addressed across any institution but probably more so in those with VET delivery as there is likely less reflection on actual delivery due to the structural nature of the sector. However, this is also connected to the way that staff build their professional identity – whether it is as a scholar, a teacher or related to a profession/trade. Williams, Goulding et al (2013) reflect that VET trainers are more closely aligned with their industry than those in higher education roles who straddle both their profession and their role as a scholar/academic. Yet, one could question the extent to which academics see themselves as a professional educator as well as a disciplinary expert. This suggests that in higher education, the scholarly/academic elements are largely in place but the idea of being a professional educator may need some further development while in the VET sector the concept of scholarly/academic elements may need enhancement. However, the valuing of the role of professional educator and application of scholarly approaches to one's own practice is the area for attention across both.

The idea of opening up one's work to peer review is common in the research arena via publication. However, it is less accepted and valued in terms of teaching and learning. Teaching in universities has often been seen as a somewhat 'private' practice undertaken by an academic in a discipline and shared only with the class rather than colleagues. While this is a changing to some extent with the introduction of peer review processes being required in some institutions, it is likely to be somewhat challenging and controversial. The idea of publication of one's teaching practice and scholarship is likely to be more acceptable than inclusion of peer review in the classroom but this does not show a link to improved student outcomes (Brew, 2013) which is at the heart of the SoTL approach. As such other methods of peer review of learning and teaching work must be incorporated and supported. Awards assessment are perhaps the highest level of peer review around teaching and as such it is useful to look at some of the data on success rates for institutions to find another perspective on structural factors that may affect learning communities.

Analysis of Awards Success

In an effort to try to further understand some of the structural drivers of SoTL, an analysis of success rates for Office for Learning and Teaching (OLT) (and formerly the Australian Learning and Teaching Council) citations and awards for teaching and learning for the period of 2009-2013 was conducted. While it is acknowledged that OLT citations and awards are only one

measure of SoTL, it can be argued based on the work of Brew (2012) that they are valid as well as being the most outwardly visible and prestigious expressions of the level of SoTL nationally in Australia. Designed to recognise learning and teaching excellence, the criteria on which citations and awards are assessed has at its core the SoTL approach (a reflective and evidence informed approach to the improvement of teaching and student outcomes).

The Australian Office for Learning and Teaching annually provide citations, program awards and teaching excellence awards. As the successful recipients are listed on the OLT website, the data is available publicly. However, there were some minor discrepancies in the data available where the total number and the institutional numbers did not tally. The impact of this on the analysis is limited as it was related to one year where the numbers only varied by two.

Results in each of these categories (citations, program awards and teaching awards) was analysed using basic frequency and cross tabulations in relation to the institution's location (metropolitan/regional), size (Equivalent Full Time Student Load (EFTSL)), predominant mode of delivery (on campus/distance) and student demographic factors (regional/remote NESB, Indigenous, Disability). The institutional data used in the analysis was sourced from the publicly available data on the Department of Industry, Innovation, Science, Research and Tertiary Education website.

What is perhaps most interesting for the purpose of this discussion is that there appeared to be no relationship between location or student demographics and consistent success in receiving *Citations for Outstanding Contributions to Student Learning, Awards for programs that Enhance Student Learning or Teaching Excellence Awards*. The following table shows the top ten institutions in terms of the total number of awards and citations received in the period from 2009 to 2013.

University	***Total number of citations and awards***
Queensland University of Technology	48
Griffith University	44
University of Western Sydney	44
Curtin University of Technology	42
The University of Melbourne	41
The University of Queensland	41
Deakin University	39
Monash University	37
Flinders University	36
University of Wollongong	34

In looking at the data more superficially, four institutions that appear in the top ten rankings (QUT, Griffith, University of Melbourne and Monash) and all are large institutions, with a predominantly on campus student cohort and teaching more than 80% of students in internal mode. While the size and the mode do not by default lead to success in teaching awards one might surmise that larger institutions are more likely to be able to allocate resources to support

the development of SoTL than smaller institutions. In terms of mode, work needs to be done to find ways to support and demonstrate a SoTL approach in diverse modes of engagement. While distance education has been in place for a very long time, the newer form of online learning is still in relative infancy in terms of pedagogical underpinnings and clear identification of what constitutes good teaching practice. It is also of course possible that mode is not a key factor but rather than the size plays a larger role.

Regional institutions (with 50% or more enrolled students classified as regional or remote) perform slightly better in the program and teaching excellence categories, with two in each of the top 10 lists (James Cook and Tasmania) whereas only one appears in the top 10 citations list (James Cook), and none in the overall list as presented above. There are likely to be a range of factors that contribute to this result but one possible scenario is the fact that regional universities tend to experience a higher rate of staff turnover making it more difficult to demonstrate a sustained improvement to teaching over a period of time on an individual basis (a key criteria for citations and awards).

It is also interesting to note that there are no dual sector institutions on the top 10 lists. While there are only a few of these nationally, it may also be connected to the cultural elements and complexity around the development of SoTL in such institutions as related to the work of Williams et al (2013).

Additionally, it should also be noted that despite Macquarie University putting in place a systematic approach to developing SoTL, they still do not appear in the top 10 list above. This might suggest that there are other factors in play beyond the structural elements.

While we can only largely speculate on the drivers behind these results in relation to SoTL, there are some trends which are worthy of consideration within a framework to increase the likelihood of success. These include improving and disseminating a SoTL approach for external/online education, identifying key infrastructure that is offered by larger institutions, putting in place strategies to ameliorate the barriers presented in regional areas.

Framework for a SoTL community

Reflecting on both the literature and the characteristics of successful institutions, we can draw together the range of factors that contribute to building a SoTL community. It must be acknowledged that the overall direction must be set by the executive of the university and that all elements must align consistently in order to support the first element: explicitly valuing SoTL. If there are mixed messages or a lack of support for various elements at a school or faculty level then the intention will be undermined at least to some extent. Each level of management must support the overall value of SoTL and demonstrate this through actions.

The following table highlights the key factors found through the investigation and also provides some suggestions of how these elements might be addressed.

Key element	*How?*
Explicitly valuing SoTL as important and equal to research across the institution	• Setting the agenda and ensuring all areas of the university are consistent in valuing SoTL • Explicit in the strategic plan • Ensuring resources are in place to support SoTL • EBA that equally values, counts valid SoTL outputs (e.g. category 1 funding, publication) • Promotion processes and outcomes that demonstrate the equal value SoTL • Ensuring staff have qualifications in university teaching • T & L awards and grants program in place • Rewarding SoTL at various levels (e.g. incentives for engagement and success in SoTL) • Employment framework that values 'professional educator' role equally to research
Resourcing to support SoTL	• Workload allocations that allow time for SoTL • Funding for small T & L Grants and Awards • Funding for and support for qualifications in teaching that embed the key SoTL elements • Funding for support services to assist with award and grant applications
Networks	• Building networks to strengthen SoTL across the institution; between sectors, across faculties and schools • Provide opportunities and strongly encourage peer review of teaching and sharing of teaching practice development/ innovations
Capacity building in SoTL	• Having an institutional SoTL plan to draw together the elements • Professional development for understanding SoTL at various stages (including induction) • Large and small activities to demonstrate importance and engage diverse academics • Openness to reflective practice • Peer review of SoTL components
Availability of SoTL tools	• Centrally held data available for use • Systems in place to easily collect data on L & T (e.g. analytics; data warehouse) • Streamlined ethics process for SoTL work • Professional development tools readily available
Embedding of SoTL in curriculum review and development	• Curriculum review processes required on a regular basis • SoTL aligned with and embedded in curriculum development and review processes
Language	• Using appropriate language that engages staff across the institution • Using language that demonstrates the value of SoTL

These appear to be the basic elements, however each institution will need to reflect on its own characteristics in order to put in place additional elements or contextualise elements. For example an institution that has a high rate of external delivery would need to be explicit about capacity building in relation to pedagogical approach for an online mode.

Universities with a higher rate of staff turnover would need to bolster networks to ameliorate the impact of this on the development of SoTL, perhaps placing more focus on team teaching leading to team citations or program awards. Dual sector institutions will need to carefully consider the language used and the translation of the SoTL concepts into an appropriate framework. The professional development in such institutions would need a greater focus on the SoTL process and how it can be achieved.

If we return to the concept of the learning community as defined by Plant (1974), the elements of the framework must come together to create, support and build a relatively stable and permanent structure. Rather than creating groups (which are largely homogenous, specialised and transitory) that are focused on SoTL we need to focus our attention on moving to the level of community (pluralistic and heterogeneous). In that sense, structure is critical to the endeavour but the operationalization of those elements is also vital. For example, networks should be built to cross disciplinary boundaries to bring in new ideas and share them more broadly. The discussion also needs to occur at a broader level than communities of practice which while useful remain largely localised.

In working on a range of projects related to SoTL (e.g., Southwell, West & Scoufis, 2008; Vilkinas & West, 2010; South Australia/Northern Territory Promoting Excellence Network, 2013, 2014) it has become apparent that while there is interest across institutions, it remains fairly localised and relatively small. Even for many of those engaged in the concept much work is needed in setting people on a path to SoTL beginning with what it is and how it can be carried out. However, as the key elements of the framework align, there is more likelihood that a tipping point can be reached.

Additionally, while the government is focused on scholarship as the ''dissemination' of knowledge and a 'commitment to the development of teaching practice" to distinguish it from research as 'the creation of new knowledge' (Probert, 2014), this does not appear to be sufficient. This takes a fairly limited and low level view of SoTL which is unhelpful in making improvements to student outcomes. For example, with the increasing reliance on online education and the changes that this is driving in education, it is vital that research and publication is undertaken to build a publicly recognised and evidence based approach to online teaching and learning. To be relevant and effective across the sector, the work needs to be undertaken on a much broader scale than those who teach (and research) education in the more traditional sense. In this context it is SoTL work and should be recognised as such. This will not only contribute to the knowledge base but also provide some benchmarks for effective evaluation of citations and awards that are related to the online environment.

Conclusion

The value of building a SoTL community is multifaceted. As demonstrated earlier a SoTL approach assists in improving the student experience of teaching. From an institutional point of view this is of great benefit through improved retention rates, student satisfaction outcomes, success in awards and grants, all of which are embedded in compacts with the government.

The inclusion of higher level elements along with a consistency of approach is likely to engage staff in the pursuit of SoTL to build a learning community. Key drivers for staff are likely to be

around promotion, improvement of practice, publicly recognised rewards (publication, grants and awards) as well as the ongoing development of scholarly identity. Of course this will vary with individuals but the breadth of the drivers means that it is increasingly likely that the 'tipping point' will be reached and a culture of SoTL will become more predominant.

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Innovating with Pedagogy-Space-Technology (PST) Framework: The Online Moot Court

Jenny Ng

School of Law, Charles Darwin University, Australia

jenny.ng@cdu.edu.au

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Abstract

The Pedagogy-Space-Technology (PST) Framework (Radcliffe, 2009) is a framework that has been used to guide the creation of new and modern teaching spaces. This paper highlights the journey of an *Innovation@CDU* Grant Project which uses the PST Framework to build an online moot court which is able to ensure that both internal students on campus and external students online are able to moot effectively. The project uses Blackboard Collaborate™ and the PST Framework. The technology has been implemented in Charles Darwin University (CDU) to create the new teaching spaces in CDU. The same technology in the new teaching spaces is then used to build an online moot court. The paper explains the PST Framework and discusses how the framework has been used and applied to further innovations such as an online moot court. It also explains the project's journey and the challenges and successes of the project. The research also includes the experiences and observations of the author who is the Project Leader of the *Innovation@CDU* Grant Project.

Introduction

I was introduced to the new teaching spaces in Charles Darwin University (CDU) that uses the Pedagogy-Space-Technology (PST) Framework (Radcliffe, 2009) and Blackboard Collaborate™ back in 2013. I had found using these new teaching spaces to be an enjoyable experience, and so I started to innovate by using the PST Framework to build an online moot court. A moot court simulates a hearing that is conducted in a real court room. The online moot court enables both internal students (on campus students) and external students (online students) to role-play as lawyers, which is a learning tool for law students known as 'mooting'. This project was part of the *Innovation@CDU* Grant Project, where I was the Project Leader. In this project, I intended to bring the virtual and physical worlds together so that both my internal and external students can moot effectively between themselves.

The PST Framework

Higher education institutions have an interest in creating new types of teaching spaces which support learner-centred or constructivist pedagogy. The best learning outcomes are generated through a constructivist pedagogical approach (Brown, 2005; Ehrmann, 1995; Valiant, 1996).

PST is the product of a Carrick Institute-funded Next Generation Learning Spaces (NGLS) project, which was conducted in University of Queensland by Professor Radcliffe. It guides the

design and operation of new learning spaces (Radcliffe, 2009). It was developed collaboratively and based on existing key research in this area of teaching and learning (e.g., Oblinger, 2005). The NGLS project develops the PST framework by examining the relationship between pedagogy, space and technology. It aims to enable institutions to create new teaching and learning spaces with the objectives of promoting student engagement and learning outcomes. It is an inquiry driven process that is based on Pedagogy, Space and Technology (see Table 1) and thus, can be suited to the specific needs of the institution.

The life cycle, the design stage and the evaluation stage

The PST framework provides for a more systemic manner in achieving the right balance between pedagogy, space and technology in designing and evaluating new learning spaces. This is a more balanced approach as many new facilities have begun its implementation with pedagogical intent, but the end product of the actual spaces often reflects technological, architectural, or operational considerations (Radcliffe, 2009).

The PST framework is a question-driven inquiry process. The framework was a result of synthesizing the relevant published literature and knowledge of innovative teaching and learning spaces, as well as being informed by The University of Queensland's (UQ) experiences in developing new learning facilities.

Table 1: *Life Cycle*

Focus	***Conception and Design***	***Implementation and Operation***
Overall	***What is the motivation for the initiative?***	***What does success look like?***
	• What is intended? What initiated the project? Who are the proponents and opponents? Who has to be persuaded about the idea? Why? What lessons were learned for the future?	• Is the facility considered to be a success? By whom? Why? What is the evidence? Does this relate to the original motivation or intent? • What lessons were learned for the future?
Pedagogy	***What type(s) of learning and teaching are we trying to foster? Why?***	***What type(s) of learning and teaching are observed to take place?***
	• Why is this likely to make a difference to learning? • What is the theory & evidence? • What plans will be made to modify programs or courses to take advantage of the new facilities? • What education or training for academics and other staff is built into the plan?	• What evaluation methodology or approach was used and what methods were used to gather and analyse data? • Who was included in the data gathering and analysis? Students? Faculty? Staff? Administrator? Senior Leadership? Facilities managers and technology staff?

Focus	*Conception and Design*	*Implementation and Operation*
Space	***What aspects of the design of the space and provisioning of furniture and fittings will foster these modes of learning (and teaching)? How?***	***Which aspects of the space design and equipment worked and which did not? Why?***
	• Who is involved in developing the design brief? Why? • Which existing facilities will be considered in developing concepts? Can we prototype ideas? • Who is involved in the assessment of concepts and detailed design? Why? What are their primary issues and concerns?	• What were the unexpected (unintended) uses of the space and facilities that aided learning or facilitated teaching? Do these present ideas for future projects? • How was the effectiveness of the use of space to aid learning and teaching measured? What were the different metrics used? • Were there synergies between this and other spaces that enhanced learning?
Technology	***What technology will be deployed to complement the space design in fostering the desired learning and teaching patterns?***	***What technologies were most effective in enhancing learning and teaching? Why?***
	• In establishing the brief and developing concepts and detailed designs, what is the relationship between the design of the space and the selection and integration of technology? • What pedagogical improvements are suggested by the technology?	• What were the unexpected (unintended) impacts (positive and negative) of the technology on learning and teaching? • How did technology enhance the continuum of learning and teaching across the campus and beyond?

Source: Radcliffe, Wilson, Powell, Tibbetts, (2009) Learning Spaces in Higher Education

Table 1 illustrates the basic questions in the life cycle of the implementation of new facility in the PST Framework. It can be used for any type of learning spaces. It can be applied to projects of all sizes.

The three items in the framework – pedagogy-space-technology – are intentionally arranged as such, and this sequence is important in the framework. Pedagogy, space and technology, have an inter-relationship and influence each other. The learning space's shape and arrangement

will influence the pedagogical attributes, although it does not mean that the framework values pedagogy over space or technology. This pedagogy-space-technology loop will go through an iterative process in the implementation stages and the iteration would occur several times at each stage of the life-cycle of a learning space. While Table 1 shows only two life cycle stages, the table could be adapted into more complex structures which have more than two columns.

The PST framework expresses clearly that the evaluation in ascertaining the degree to which the original goals were met are focused on the defined pedagogic goals. Whilst the PST framework does not deny that the goal of improving learning outcomes is important, it does not evaluate it directly. The goals of the space are defined in terms of fostering particular modes or patterns of teaching and learning. The primary evaluation is to ascertain whether such patterns of teaching and learning are observed and which aspects of the space and technology are able to encourage and improve these types of teaching and learning activities. The PST Framework consists of the design and evaluation stages.

Developing the PST Framework (the design stage)

The constructivist learning theory is based on the learning that students achieve by understanding the subject matter through their activities. Traditional learning spaces usually do not provide for such opportunities that will enable constructivist learning to occur. There is no single approach for the creation of teaching spaces that enables constructivist learning to occur. *The Designing Spaces for Effective Learning Report* (JISC, 2006) argues that "a learning space should be able to motivate learners and promote learning as an activity, support collaborative as well as formal practice, provide a personalised and inclusive environment, and be flexible in the face of changing needs". Oblinger (2005) takes a more student centric approach to the design of these learning spaces. Jamieson et al. (2000) adopts multi-disciplinary approaches which includes "augmenting rather than replacing in toto existing design principles"). Denison University's (Ohio) Learning Spaces Project aims to "enhance the utility, appearance and comfort of all campus spaces related to learning. Learning spaces must support many styles of learning, be versatile, comfortable and attractive, rich with information and reliable technology, maintained and accessible" (Siddall, 2006).

Johnson and Lomas (2005) create "an iterative dialogue among the design team and other stakeholders in the design process". The process includes concepts in teaching and learning principles such as Chickering and Gamson's 'Seven Principles' (1987) or the NRC report on '*How People Learn*' (Bransford et al., 2000).

Long and Ehrmann (2005) suggests the following ideas for future classrooms:

- Learning by doing matters;
- Context matters;
- Interaction matters; and
- Location of learning matters.

They list the factors that re important for building the 'classroom of the future' as:

- Designed for people, not for ephemeral technologies;
- Optimised for certain learning activities, not just stuffed with technology;
- Enabling technologies brought into the space, rather than built into the space;
- Allowing invisible technology and flexible use;
- Emphasising soft spaces;

- Useful across the 24 hour day; and
- Zoned for sound and activity.

At this stage, the PST Framework will be incorporated into the planning and design of the teaching space and the four questions in the Life Cycle (Table 1) should be addressed accordingly. The four questions are:

1. What is the motivation for the initiative?
2. What type(s) of learning and teaching are we trying to foster? Why?
3. What aspects of the design of the space and provisioning of furniture and fittings will foster these modes of learning (and teaching)? How?
4. What technology will be deployed to complement the space design in fostering the desired learning and teaching patterns?

Implementation and Operation (the evaluation stage)

There are many ways that the evaluation of the new teaching spaces could be conducted. The more popular methods are such as head counts and multiple choice user satisfaction questions. Anecdotal evidence can also be used. However, research projects or design studies which inform ongoing development usually provide more detailed research. Thus, empirical measures and questioning with focus groups are used in such projects.

While learning outcomes are important, the PST Framework does not evaluate it directly. This is because learning outcomes depend on other variables beyond the space. The aims and objectives of the space are in fostering specific modes or patterns of teaching and learning. The primary evaluation is to ascertain whether or not such patterns in teaching and learning are achieved and which aspects of the space and technology are able to promote these teaching and learning activities. The questions to be address at this stage are:

- What does success look like?
- What type(s) of learning and teaching are observed to take place?
- Which aspects of the space design and equipment worked and which did not? Why?
- What technologies were most effective in enhancing learning and teaching? Why?

Using the PST Framework: PST @ CDU and the online moot court

CDU's new teaching spaces are in the form of classrooms and lecture halls which were built by using the PST Framework. I was able to teach both internal and external students simultaneously in these new teaching spaces. The main emphasis of the new teaching spaces was on collaborative teaching as the student demographics at CDU consists of 80% external students and 20% internal students. Thus, the collaborative teaching spaces, which was one of the new types of teaching spaces in Radcliffe's PST Framework was adopted in CDU.

The collaborative teaching spaces were designed to foster collaborative approaches to teaching and learning where both internal and external students can study together. This is by enabling the internal students and the lecturer in the physical learning spaces to communicate with the external students via videoconferencing or similar technologies. In this sense, it brings the physical and virtual worlds together.

The new teaching spaces in CDU consists of technology-enhanced classroom with collaborate tools. They are equipped with LCD Monitors, Glass writing walls, Cameras, Speakers and

Collaborate cameras, Control Pads, Neck and handheld microphones, Wireless Keyboards, Interactive Pens and Document Cameras. The Collaborate Teaching Spaces blend Blackboard's Collaborate™ technology within the classrooms, reduce transactional distance, and provide the internal students with the opportunity to use devices for collaboration because of connectivity (wireless and ports).

The Online Moot Project – The Innovation@CDU Grant Project

Like most law schools, CDU has a moot court in the law school where students can practice their mooting skills. Mooting is a common law school teaching activity, whereby students argue hypothetical cases before moot court judges. It is an excellent learning tool, which enhances research, analytical, writing and advocacy skills. Mooting allows the students to develop a deeper and more thorough understanding of substantive legal principles, to argue a legal case by role playing as lawyers and to work collaboratively with team mates. However, the problem is that 80% of CDU's law students are external students. Thus, it would not be possible for them to use the moot court unless we are able to bring the moot court to them.

Thus, I thought of having an online moot court so that the external students can use the moot court over the Internet. This would enable the internal and external students to moot with each other, or amongst themselves. The idea of using the PST framework to build an online moot court came when I was observing the ability of CDU's new teaching spaces to bring the physical and virtual worlds together via Blackboard Collaborate™, as well as the inquiry driven process within the PST Framework. I thought it would be a good idea to replicate certain parts of the technology in the new teaching spaces in CDU into the moot court, as well as to adapt the new teaching spaces so that they can be turned into online moot courts. This makes it possible for students to moot in both the moot court and the new teaching spaces.

Within the grant project, I was able to ascertain the effectiveness of the online moot court and provide insights into what needs to be done to create an effective online mooting program, including in relation to technology. As part of the project, mooting was incorporated as part of the optional assessment in a second semester unit which I taught. My students were given a hypothetical problem and allocated roles as counsel for the plaintiff or counsel for the defendant, and prepared both written and oral submission for their arguments. The moot sessions (for external students) were held at the new teaching spaces as well as the moot court (once the new technologies that has been implemented in the new teaching spaces has been replicated in the moot court). It aims to replicate the modern online courts in Australia today. It also brings the physical and virtual space together so that external students and internal students are able to moot together, or amongst themselves.

The PST Framework and the online moot court: The framework and design stage

What is the motivation for the initiative?

The CDU Law School was considering integrating mooting into the curriculum. However, 80% of law students study online and there is a question of whether mooting can be effectively adapted to the online environment. Thus, I came about with the idea of having an online moot court that uses the PST Framework so that the external students can use the moot court over the Internet, and to ensure that the new teaching spaces are able to be adapted for such purposes.

What type(s) of learning and teaching are we trying to foster? Why?

Mooting is known as a useful teaching tool for law students. According to Pope and Hill, mooting 'makes you think like a lawyer, improves your public speaking skills, is the best way to learn the law, gives you confidence, will help you find a job and is fun' (Pope and Hill, 2007). Mooting also involves acquiring cognitive skills (Thomas & Cradduck, 2013). It is also a tool for deep doctrinal learning (Gerber & Castan, 2013). Snape and Watt (Snape & Watt, 2010) state that mooting helps inculcate a few skills such as:

1. the ability to explain complex legal material in a simple and clear manner;
2. dealing with interruptions and challenges;
3. teamwork;
4. the ability to 'disguise' the most detailed examination of the most technical of material in the most persuasive way;
5. skills of research and presentation which are 'absolutely interdependent'; and,
6. communication skills (Lynch, 1999).

According to Lebovits, Gewuerz and Hunker (2013):

> *Moot court enhances the three most important skills that law schools offer their students: starting an argument with a conclusion, differentiating fact from opinion, and organizing a legal argument by issue rather than by a chronological narrative of the facts.*

Gygar and Cassimatis (1997) state:

> *it appears from the university experience that many disadvantaged students who were initially withdrawn and reticent about expressing their views in class situations gain enormously in confidence as a result of moots where they are able to demonstrate they can hold their own in any company.*

Whilst most academics support the activity of mooting, it is also noted that Kozinski (1997) argues that mooting is not helpful in developing the right skills because moots are won by advocacy skills rather than the merits of the case. However, this has been counter-argued by Hernandez (1998) who replied to Kozinski's criticisms by stating that mooting develops writing and advocacy skills, character building and resume building. The benefits of mooting are also observed by Gaubatz (1981) who states:

> *too often overlooked is the academic benefit to be derived from a good moot court experience. the sort of analysis and synthesis implicit in arguing any appeal is the meat of legal education in the normal classroom. in the latter ... the pressure to 'move on' can even limit the benefit to the recite. But in the moot court the student has several weeks to dig into an analytic problem.*

Courts around the world are now using technology to increase the efficiency and quality of the litigation process. Some universities, such as the University of Melbourne, have specifically focused on ensuring that students learn how to use the new technology as part of the court process and are trained in modern court room processes.[1] Online mooting can help students

1. http://www.law.unimelb.edu.au/melbourne-law-school/experience/facilities-and-technology/moot-court

acquire technology skills (Yule, McNamara & Thomas, 2012). Thus, CDU Law School is interested in having a mooting programme that allows both external and internal students to moot online.

Furthermore, it has been stated that law schools should incorporate the use of technologies because modern lawyers need to have technological communication skills (Koo, 2009). Koo (2009) states that '[l]aw schools should leverage technology more effectively to accomplish the goal of skills transmission', and that they should '[u]tilize technology to create more effective simulations'. According to Clark (Macrae, 2001):

> *Legal educators must be prepared and able to educate tomorrow's lawyers who will work in law offices, which will operate in a dramatically different environment than that which exists in the majority of today's organisations.*

Richards (2003) notes that law students who are not familiar with the Internet would be disadvantaged when they become lawyers, especially when they have to work within the context of court room technologies. Furthermore, the moot court would assist the externals students greatly as the look and feel of the moot court would enable them to learn to read non-verbal cues, such as facial expressions and body language, of the judge or the lawyers when speaking in court which are important in an adversarial environment.

It is also useful for students to learn to moot online as the courts have already begun using virtual courtrooms. In Australia, the Federal Court of Australia, has begun using virtual courtrooms, eFiling and eCase administration processes. De Wilde argued (2006) that litigation processes in Australia is 'transformed by the increasing use of courtroom technology'. According to Lord Woolf (1999), 'sensible investment in appropriate technology is fundamental to the future of our civil justice system'. The first 'electronic trial' heard in Queensland is Covecorp Constructions Pty Ltd v Indigo Projects Pty Ltd[2] (Jackson, 2008). The development was consistent with the reforms suggested by Lord Woolf, as enunciated by Einstein J in Idoport Pty Ltd v National Australia Bank Limited ('Idoport').[3]

Covecorp Constructions Pty Ltd v Indigo Projects Pty Ltd[2] (Jackson, 2008). The development was consistent with the reforms suggested by Lord Woolf, as enunciated by Einstein J in *Idoport Pty Ltd v National Australia Bank Limited* ('Idoport').[3]

In United States, for example, the College of William & Mary and the National Centre for State Courts (NCSC) have experimented with the use of advanced technology and the Centre for Legal and Court Technology is the hub of the Courtroom 21 Project.[4] Courtroom 21 is a model courtroom of the 21st century. It is the most technologically advanced courtroom in the United States. Court 21 demonstrates how technology can enrich the legal process by assisting judges, counsel, jurors, court reporters and other court staff. Courtroom 21 uses only commercially available, and reasonably priced technology.

The first case, which admitted virtual reality evidence in the online context in Courtroom 21, is *Stephenson v Honda Motors Ltd of America*.[5] Interestingly, Courtroom 21 was referred to by the University of Melbourne when creating their online moot court.[6]

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2. [2002] QSC 322
3. [2000] NSWSC 338
4. http://law.wm.edu/academics/intellectuallife/researchcenters/clct/
5. Cal. Super. Case No. 81067
6. http://www.law.unimelb.edu.au/melbourne-law-school/experience/facilities-and-technology/moot-court

What aspects of the design of the space and provisioning of furniture and fittings will foster these modes of learning (and teaching)? How?

I have developed the design of the online moot court after having several discussions with the Manager of the Higher Education and Training Development Department in CDU, who assisted in the *Innovation@CDU* Grant Project. The online moot court will continue to use the existing new teaching spaces, which use theater and semi-theater layouts, as well as the moot court at the law school. Some of the new teaching spaces in CDU are generally equipped with additional chairs and tables which make it easy to move around and convert the classroom into a make-shift moot court. The moot court in CDU Law School has a dual purpose – it has been used as a teaching space as well as a moot court.

What technology will be deployed to complement the space design in fostering the desired learning and teaching patterns?

The collaborative teaching spaces were designed to foster collaborative approaches to teaching and learning where both internal and external students can study together. This is by enabling the internal students and the lecturer in the physical learning spaces to communicate with the external students via videoconferencing or similar technologies, such as Blackboard Collaborate™. In this sense, it brings the physical and virtual worlds together. The microphones installed at CDU are those from Rutledge Engineering, which provided for many different options. Both omni-directional microphones and uni-directional microphones have been used. An omni-directional microphone is able to capture about 6 people sitting around the microphone who are talking, whilst a uni-directional microphone is only able to capture the voice of the person talking in front of the microphone. The Faculty Online Resources Developer assisted with installing the new microphones at the moot court.

Implementation and Operation of the Online Moot Project (the evaluation stage)

What does success look like?

Success is generally in the form of both the pedagogical and technological aspects of the online mooting system working to the satisfaction of the students. I had measured the effectiveness of the online moot court based on some findings which were anecdotal evidence, student interviews, as well as some technical feedbacks which have been obtained as part of the process of fine-tuning the new technological systems that have been installed in the moot court. Interestingly, my students who were residing and studying online from overseas commented that they felt as if they were part of the moot and were sitting in the moot court in Australia. Several of my students also commented that they have found mooting to be fun and that the online mooting experience made learning more engaging and reduces the isolation that most external students feel.

The useful lesson that I had learnt in the project is that while the focus on technology is important, it is also important to ensure that the technology works for the students in a way which makes learning more effective. As such, the technological aspects of the project have been intertwined with the pedagogical aspects of the project, as well as the teaching space involved.

What type(s) of learning and teaching are observed to take place?

It is interesting to note that my students have experienced a constructivist approach to learning as they come to discover and understand the gray areas in the law and moot points that they can argue. My students have learnt to analyse a legal problem, conduct research of the relevant law and present an oral argument. My students have learnt to engage with legal issues, and this has improved their skills of legal research, analysis and persuasive argument. Furthermore, as Lynch (1996) observes, the three characteristics of constructivism in Resnick's (1989) 'current cognitive theory' are present in moots. According to Resnick's 'current cognitive theory',

> *First, there is a process of knowledge construction, not of knowledge recording or absorption. Second, learning is knowledge-dependent; people use current knowledge to construct new knowledge. Third, learning is highly tuned to the situation in which it takes place.*

Resnick's constructivist theory is present in moots as students learn the law and learn how to apply the law to the particular facts of the case that they are mooting.

It is also interesting that my students recognized the fact that this is how their future will be as lawyers, and welcome the new technology as something that they are very keen to learn so as to be better equipped as modern lawyers.

Which aspects of the space design and equipment worked and which did not? Why?

I have also sought for feedback from my students on whether they were satisfied with the space design and equipment. My students were very happy with the use of video in the mooting. Generally, feedback from the students was good. It is also noted that some of my students do not have a webcam for mooting purposes, and thus, there may be a need for these students to purchase new equipment to incorporate such mooting activities. Alternatively, CDU has an IT Kiosk, which loans such equipment to students.

Other best practices that are learnt in this project include ensuring that the microphone is turned off when not in use so as to reduce echoes in the audio. As for the moot court (and new teaching spaces), it would mean that the speakers should be situated far enough from the microphones.

Furthermore, the students need to learn to use the technology even as spectators as some of the students' feedbacks showed that some students were not able to use the full functionalities of Blackboard Collaborate™, such as enlarging the size of the video on their screens. These functions can only be done by the end users themselves, and as such, students need to improve their technical skills in using Blackboard Collaborate™ so as to have a good mooting experience, be it as online mooters or online spectators. Furthermore, some of my external students have suggested that they would prefer to be able to have a 360 degree view of the moot court. An internal student mooting in the moot court has suggested being given the option to use an ear piece which may make it easier to hear in the moot court as it would effectively eliminate any noise (if any). Of course, there is always room for more advanced technologies to be used if funding is available for it.

As the moot court in CDU Law School has been used as a teaching space as well as a moot court, many aspects of the CDU online moot court will continue to have features, which make it easy to convert the moot court to a teaching space. For example, the portable white board (with projector) is a useful feature as it allows for the teaching space to be converted into a

moot court and vice versa easily by rolling it to different parts of the room – i.e., the white board is in front of the room when it is a teaching space, whilst it is situated at the back of the room when it is an online moot court. As an online moot court, the white board is useful for projecting large images of the external students who role play as lawyer, so that the moot court judge is able to see the external students as well as hear them when they are mooting.

Both the online moot court and the new teaching spaces (which are converted into make shift moot courts) are equipped with large screen TV screens which also assist in projecting images of external students role-playing as lawyers. Having mooting facilities in both the new teaching spaces as well as the online moot court at the law school itself is useful as it gives students more opportunity to moot online as there are more venues available for mooting. As Hernandez (1998) states, "we need more moot court not less".

What technologies were most effective in enhancing learning and teaching? Why?

The project has been able to ensure that the video and audio technology used in the moot court and the new teaching spaces can be used effectively for mooting. It was clear that the technology used had an impact on teaching and learning as without it, the external students simply would not be able to moot online. While there were initially problems for some students regarding lag in the audio (audio delays), which made following the moot sessions quite difficult, the students' feedback was helpful in solving these issues. This feedback revealed that students on 3G wifi (slower internet connection) were generally able to hear clearly but students on faster internet connections had issues of lag. A second moot session was conducted but only after asking the students to slow down their internet connection settings within Blackboard Collaborate™ to the speed of 3G wifi if the students were using faster Internet connections such as the NBN Broadband. Thereafter, students have reported that the quality of the audio was good, with no lag at all. Those on NBN Broadband were able to hear better when they turned the speed down in Blackboard Collaborate™, although still with some minor (but tolerable) audio delays.

The omni-directional microphones were used in the moot court as the moot court is also a teaching space for lectures and tutorials. Thus, the omni-directional microphones would be useful when conducting tutorials where a few students in a small group are making discussions in class. It is also more economical (and fitted into the grant project's budget) as only 4 microphones are required in a tutorial class of 24 students. If a uni-directional microphone was used, more microphones would have to be purchased as it has a shorter capture range as compared to the omni-directional microphones.

Online mooting helps online students form their own learning communities

McInnerney and Roberts (2004) state that online students feel isolated when studying as they feel that they are studying alone, instead of engaging in group study. Therefore, they suggested that there should be social interaction to create a sense of community. This is akin to creating a learning community amongst the online students. The result of the Online Moot Project is encouraging as my online students seem to feel less isolated when they engage in online mooting. Indeed, mooting is a group activity, where the students will moot in a team. Hence, online mooting enabled the online students to interact with each other (as well as with internal students on campus) and form their own learning communities.

Conclusion

One of the key advantages of the PST Framework is the fact that it takes three aspects into account: Pedagogy, Space and Technology. This is a more well balanced approach as otherwise, the practical scenario is one where the technical staff will be looking at the teaching spaces from a technological perspective, which then leaves less emphasis on other aspects, such as the pedagogical aspects. It also takes the students' (or end users') feedback into account. As technology is increasingly important in teaching and learning, the PST Framework has proven itself to be useful in the Online Moot Project. It would also be extremely useful in blended learning where the pedagogical, space and technological aspects of the PST Framework are all equally important.

The students in the Online Moot Project have worked in teams and this is valuable in online learning as most of the time, the online students study in isolation. This allows the students to form their own learning communities as they conduct research together, discuss the moot questions or plan their legal arguments with each other. Moot competitions are also very popular and allow for further engagement between the mooters at either domestic or international moot competitions, and this helps the students to grow their learning communities as they meet other mooters in these moot competitions.

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Becoming Stories[1]: Creating narrative spaces in initial teacher education

Al Strangeways

Charles Darwin University, Australia

al.strangeways@cdu.edu.au

Keywords: teacher education, teacher identity, narrative, professional learning

Abstract

Initial Teacher Education (ITE) occurs in a predominantly analytic space, in common with most higher education provision. Creating and legitimising narrative learning community spaces would result in the foregrounding of professional identity formation across the ITE curriculum. The resulting systematic attention to the impact of teacher identity on professional practice will develop teachers who are more resilient and better able to negotiate the theory-to-practice shifts required of classroom-ready teachers (Johnson, Down, Le Cornu, Peters, Sullivan, Pearce & Hunter, 2010; Hooley, 2007). I present this case for narrative pedagogies by offering two stories from my own journey of increasing commitment to narrative pedagogies. Each story is paired with a preservice teacher narrative from a significant stage in their identity development. And each pair is followed by an analytic interlude that frames the accounts in the literature on narrative ways of knowing and professional identity development. I contend that three things need to occur to establish effective and sustainable narrative learning community spaces. First, teacher educators need to embrace the use of narrative ways of knowing in our pedagogical practice. Second, we need to recognise the embodied complexity of the teaching context, and how narrative can be used to develop preservice teachers' capacity to navigate these 'swampy lowlands' of practice (Schon, 1983, p. 42). Third, we need to teach the skills of narrative writing and interpretation across the ITE curriculum to equip preservice teachers to negotiate their teacher identity and become resilient and creative practitioners. In presenting this series of vignettes about storying in teacher learning, I intend to offer new insights and raise new questions about how narrative can respond to the current needs of initial teacher education (Teacher Education Ministerial Advisory Group, 2014; Sellars, 2014).

Introduction

Teacher narratives are clearly visible in educational research (Goodson, 1990; Clandinin & Connelly, 2004). Narratives do also operate in teacher education, and have been more frequently used in recent decades: other peoples' stories, in the form of case studies, critical incidents or role-playing, and autobiographical writing have figured in both initial and continuing

1. I use 'becoming' stories to suggest three aspects of the relationship between storying and identity formation: becoming stories are the stories we tell about becoming, charting the ongoing and unfinished process of identity; they are also the stories that we use to construct our becoming or the identities to which we lay claim or aspire (Goodson & Gill 2014); and they are also the stories we make becoming or attractive by creating a structure (not always to be accepted unconditionally) that helps us manage the untidiness of existence.

teacher education (McEwan & Egan, 1995; MacLeod & Cowieson, 2001; Goodson & Gill, 2014). Narrative pedagogies have, however, stayed on the periphery of the ITE curriculum, in much the same place that teacher identity is located. The current emphasis on identity in teacher development and aligned research interest in how teachers' beliefs prompt their actions, has not led to any systematic approach to teacher identity development in ITE (Beauchamp & Thomas, 2009; Murray, Nuttall & Mitchell, 2008). This may be partly due to the lack of an agreed definition of teacher identity in the literature, which is a product of the post-modern recognition of the complex nature of identity: that it consists of multiple identities, that it changes over time and that it is socially as well as individually constructed (Akkerman & Meijer, 2011). As Neal Hooley ruminates:

> *I'm not sure whether teachers feel identified by their 'teacherness' in the same way as others may see themselves as Indigenous . . . or Buddhist . . . (or) as swimmer . . . it may be that teacher identity is still an obscure property, still being constructed in relation to external pressures as the defining feature of the education field.* (2007, p. 52)

Hooley's concern about the implications of neglecting teacher identity is echoed in others' perceptions that contemporary reforms in schooling and approaches to teacher 'quality' are undermining the significance of professional identity and leading to the 'erosion of teacher professionalism as it was previously understood,' (Sellars, 2014, p. 25; Darling-Hammond, 1999; Groundwater-Smith & Mockler, 2009).

In addition to such profession-wide concerns, Hooley also highlights the issue of the classroom-readiness of graduate teachers. He asks whether more methodical narrative enquiry in teacher education programs would resolve this issue, which he noted as prominent in the 2005 Victorian Parliamentary Inquiry, and which remains equally central to the more recent TEMAG report (2014). He suggests that:

> *Systematic and moral narrative inquiry that is undertaken in a cycle of investigation over long time frames and which develops in reference to the knowledge of others may enable the professional identity of teachers to strengthen in ways that current arrangements do not.* (2007, p. 59)

He challenges us to investigate the capacity of narrative approaches to strengthen the relationship between professional identity and practice through the construction of personal knowledge.

In this paper I use stories and analysis to develop Hooley's case for systematically creating and legitimising narrative pedagogies in ITE in order to foreground professional identity formation across the curriculum. I offer insights into the ways narrative epistemologies are central to education pedagogies; I explore how narrative can help teachers navigate the complexity of the classroom and bridge the theory-practice divide; and I suggest we look further at how teaching narrative writing and interpretation skills can equip graduates with the reflexivity and self-efficacy to be confident and resilient classroom-ready teachers.

Method

My research draws on the traditions of narrative enquiry and critical ethnography and reflects the principles of exploratory practice by emphasising the ethical and epistemological rather than the technical dimensions of practitioner research: 'understanding rather than problem solving'

(Allwright, 2013, p. 343). Narrative enquiry sits within arts-based research in education (ABER), and is in tune with exploratory practice's post-modern focus on extending understanding by challenging tacit knowledge rather than searching for universal truths (Barone & Eisner, 1997). ABER blurs the boundaries between the arts and sciences to generate different kinds of insights and to broaden accessibility to people beyond the research academy (Cahnmann-Taylor, 2008). This fits with my aims to speak to an audience that includes teacher education practitioners and participants, and to foreground the embodied and positioned elements of thought that are neglected in most traditional research processes.

Judith Gill, in her overview of educational research in Australia, emphasises the value of small-scale studies that illuminate 'the close-grained locally embedded work' by grounding our broader understandings in specific educational practices (2004, p. 13). This paper intends to use such local material to fulfil Barone and Eisner's criteria for effective ABER: to illuminate previously unnoticed phenomena, to promote questions, to tightly focus on educationally significant issues, and to be relevant to things beyond itself (1997). The stories are from Alice Springs-based preservice teachers with whom I worked, and were recorded between 2012 and 2015 as part of a longitudinal study of the nature of teacher identity formation and the impact of storying on this development. I have paired their narratives with stories of my own experiences in narrative learning in order to acknowledge the positionedness of my analysis and, by creating resonances between the stories, offer the kinds of open-endedness and depth that best represent the 'embodied complexity' of teaching and learning in preservice teacher education and elsewhere (Davis & Renert, 2013, p. 3). The analytical interludes which follow each pair frame the accounts by linking them to 'ongoing conversations in the research literature' on narrative ways of knowing and professional identity development (Goodall, 2008, p. 36).

Orientation: narrative ways of knowing and professional identity development

The English teacher: stories for learning

I loved teaching English and for fifteen years didn't see myself teaching anything else: I couldn't imagine my life without stories and wanted to open the doors to this world for my high school students. So much of what they learnt in my classes, and how they developed as individuals, seemed to come from their reading and writing of stories. I saw the way their emotions were engaged; the way they could reach towards big ideas from looking closely at the concrete details of the stories we shared; the way a story allowed everyone to have a say in our discussions. Stories have always been at the centre of who I am and who I am becoming; they are how I engage with and make sense of the worlds in which I live. I've been a reader from my earliest memories: short-sighted from reading after bedtime by the light of the orange corridor bulb; in trouble in Maths for having a storybook on my lap under the desk, and avidly exploring the worlds and events of that story instead of plodding my way through the textbook problems towards some elusive right answer. Maths just didn't seem relevant or even engaging: it was too tidy, and didn't respond to the messy, human aspect that was what the world looked like to me.

I've been working in initial teacher education for six years now and am beginning to embrace this different teacher identity. It's one that includes the teaching of Maths, something I really didn't envisage. Three years ago, when I first embarked on the anxious summer of preparation to teach a primary Maths pedagogy unit, I was unprepared for the 'road to Damascus' experience that teaching the unit became. The problem-based pedagogies I discovered and the emphasis on student-generated strategies opened up a world of Maths that was creative and used narrative to probe and develop student-thinking. I realised that many of the diagramming

techniques I'd used in my English lessons were numerate thinking strategies, and that the boundaries between the arts and sciences are so much more fluid than they appear. And yet still, in this post-Enlightenment world, the primacy of scientific thinking and logical reasoning has meant stories are too often neglected as a significant way of meaning making.

Jessica's hammock: storying and re-storying for identity development

Jessica had come to Alice Springs from country NSW and a career in adventure tourism. She was in the second year of her undergraduate Primary teaching degree when she told me the story of deciding to become a teacher. She had earlier mentioned her long-term involvement with a family from a remote Indigenous community in Central Australia, and the moment she first experienced 'being a teacher.' I asked her to tell me in more detail about that moment.

> *We were out at the community and it was really cold and wet. Normally when we're out there we go up to the waterhole - there are beautiful waterholes at the top – or we go to the resort and use the pool. But it was a really wet weekend and they had all these old books out there. The school out there had shut down and then it re-opened. But during the time that it was shut they sent all the books out for School of the Air. And then when the school opened up again they were just going to throw all the books out. And Bert said, 'No, no, no.' So we managed to keep the books; they're in his shed now. And it was lucky they were there because that weekend it was really wet and the kids - there's Lesley and her little cousin who lives in town that was visiting, Daniel - they just got book after book after book. And I just sat there reading for hours. And then, Lesley, she was five at the time, she started to pick up - like I was just following with my finger - and she started to pick up the words. And it was just blowing me away. I was like, 'Wow, good, good. Good on you'. And it was just this thirst for these books, you know, it was better than TV for these kids. It was so nice to see and to spend that time. I had them both on my lap and yeah, it was just really nice to be able to see that. And then I'd go out every weekend or so and we'd put up a hammock and we'd read books in the hammock and then she'd start telling me, talking to me in language and teaching me . . . the kids out there . . . they're so full of life, you know, and they're so wanting to learn. I really enjoy that part of it where you just see that lightbulb switch on, that they get it, and that's so rewarding. As all teachers would see I'm sure.*

She went on to say that she had told that story and replayed it in her head many times in the three years since:

> *I have a photo of us in the hammock together sitting above my desk. That's my driving force when I'm studying is that. Being in a beautiful place, like I could just imagine her, how one day if she wanted to be running the tours out there or being a doctor out there . . . it just gives me so much hope for her and her cousins and their cousins.*

She told me how the story had changed in recent times:

> *Especially after doing the last unit which was English literacies. You know I thought that was what teaching was, sharing a book with a child, and now I look back on it after knowing more about how to teach children reading and it's not reading to them. They've got to look at the pictures and find their own way through the book,*

> *especially with all the technology. I mean it was a beautiful moment. But it wasn't, maybe it wasn't teaching as I know it now, so yeah, it's changed into a different story. It hasn't taken away from it at all. It's just that's what I thought, picturing myself as, 'Ah yeah, I could be a teacher, this is wonderful.' And then thinking, 'Well, no, actually.' Now I know that that's not what teaching is about, just sitting around all day reading books. And I think it hasn't taken away from it because they've still got that thirst for knowledge. It's just that books were a novelty to them, and that it's about opening up their minds to things. And so I think that I'm seeing it more broadly, teaching more broadly now.'*

Interlude: narrative ways of knowing and professional identity development

We teach who we are. The educational priorities we select, the teaching strategies we apply, the knowledge we mobilize are all governed by the complex web of values, beliefs, dispositions, experiences and aspirations that make us who we are (Palmer, 1997; Korthagen, 2001). And we use stories not just to express but also to construct our teacher identity (Beauchamp & Thomas 2009). Psychologist Jerome Bruner locates 'story' as a fundamental structure of human meaning making: both the events of our lives and our identity development can be understood in terms of narrative structure and process (1986). Carol Witherell puts it well when she says, 'Our sense of our lives is embedded in what we make and remake of what happens to us' (1991, p. 89).

It follows then, that being deliberate in our use of stories will better help us understand what we do as teachers because of the interweaving of our – always developing – teacher identity with our practice. Jessica's story, for example, is a significant one for seeing the impact of a 'big story' from one of Measor's 'critical phases' in identity development, the moment of deciding to be a teacher (1985, p. 62). In the embodied specifics of Jessica's interactions with the people, place and events of the story are embedded a complex web of her feelings, values and understandings about teaching, social justice, and the aspirations (for herself and the children) that 'drive' her. These meanings could not be captured in list of abstracted points about her teaching philosophy. Also significant is the way she has remade or 'restoried' the event over the course of her development as a teacher (Clandinin & Connelly, 1991, p. 259). Her original story of reading in the hammock lost certain meanings (this is teaching) and gained others (perhaps to do with student engagement, or relationships). I'm looking forward to seeing how her story changes again, and how this cycle of restorying the original 'big narrative' will reshape her sense of herself as a teacher and her professional relations.

While narrative ways of knowing have gradually become more accepted in the academy, as teacher educators we need to more fully understand and embrace the centrality of narrative epistemologies to our pedagogical practice. Bruner identifies our post-Enlightenment imbalance:

> *We devote an enormous amount of pedagogical effort to teaching the methods of science and rational thought . . . Yet we live most of our lives in a world constructed according to the rules and devices of narrative. Surely education could provide richer opportunities than it does for creating the metacognitive sensitivity needed for coping with the world of narrative reality and its competing claims.* (1996, p. 149)

In describing the 'competing claims' of the world of 'narrative reality', Bruner identifies the lack of universal truths or simple certainties as narrative reality's key feature. This is because, he asserts, narrative thinking better deals with 'people and their plights', as distinct from the 'physical things' that we use logico-scientific thinking to explore (Bruner, 1996, p. 39). Clandinin

and Connelly similarly describe the problem of studying this uncertain world of experience as one of 'laying claim to the integrity of the experience itself, fending off its formalist denial through abstraction and the hegemonies of social organisation and structure or reduction into skills, techniques and tactics' (1991, p. 260). Because narrative foregrounds the concrete and human particulars of experience, it is well placed, they suggest, to help us navigate these problems of studying experience. Further, as Ursula Le Guin proposes, because narrative is 'an active encounter with the environment by means of posing options and alternatives and an enlargement of present reality by connecting it to the unverifiable past and the unpredictable future,' it creates a space in which imagination can take us places where reason cannot, getting us 'out of the bind of the eternal present, inventing or hypothesising or pretending or discovering a way that reason can follow into the infinity of options' (1992, p. 44-45).

Complication: the theory-practice gap in the 'ill-structured domain' of teaching

'B's Story': narratives and complexity

2011. I shouldn't have been surprised by the response that 'B's Story' (Rorrison, 2008) generated in my group of 80 external-online final year teaching students. I'd taken over the educational partnerships unit at short notice and had been rushing through the set readings to get a bit of a handle on its scope and focus before the semester started. The other readings were all pretty good – effective analyses of the nature of collaborative practice or useful strategies that teachers might use. But reading 'B's Story', the tale of a preservice teacher who struggled to work collaboratively on his placement, made me slow down. Something about the human level of the story, the lack of clear answers, or even a clear dilemma, not only made me slow my own reading of it, but ensured that different elements of the story came to mind at random points over the following days. Characters, dialogue, settings: the concrete business of the story kept popping back into my head and each time sent me off in new directions towards themes or theories or other stories or experiences.

Reading the posts on the online forum, I saw the story working in a similar way for my students. They were writing more and seemed less driven to determine the 'correct' answer to my discussion starters of 'What do you think B did wrong?' and 'What other issues are raised?' They were for the first time using the forum in the way I'd designed it, as a sounding board, a way to socially construct their learning and to draw out for interrogation their own prior understandings and experiences.

As I read the posts I smiled at the way they connected to the humanness and complexity of the situation, and at the way their insights both stemmed from and challenged their previous experiences and knowledge. I would nod, 'Yes,' when I read, 'I'm looking at things in a different way now,' or 'I really felt for B's students/or B/or B's mentor,' or even, 'The more I reflect about it the more complicated it seems.' The story got them thinking in different ways, and brought out the personal perspectives, beliefs and assumptions they brought to teaching. I really felt I was getting to know them. The story also left them wondering: they had responded to it as if it was a lived experience and they saw there were no simple answers to be found: I wondered at the future times they would recall the unfinished complexities of 'B's Story', and the impact their response to it would have on their development. The experience reminded me of so many of the things I love about narratives: the sneaky way they bypass the 'policeman' of our tacit knowledge to make us consider the previously unthinkable. The way they stick in our minds. And the glorious messiness and open-endedness of the situations they allow us to enter and experience. As messy as life, but at one remove, offering us time and safety in which to explore its complexities.

I wondered what the effect would be if we used such rich stories or cases more centrally in every unit of our teaching degrees. Would they offer similar kinds of 'experiential' learning to those so valued by preservice teachers in their placements, but from a setting outside of the school placement and the traditional mentoring dynamic? In my work with preservice teachers and mentors, I've always felt how much we all expect from the placement experience. It's where theory gets put into practice. While placement is the lynch pin of any teacher education degree, often the pressure of expectation has seemed to be excessive and overly dependent on the mentoring skills of individual mentor teachers and the mentoring culture of the school. Can interpreting and writing rich 'stories of experience' take some of this pressure off placement by creating a new space within the university where practice is the foundation to which theory is then applied?

Jane's first day: negotiating the 'ill-structured' domain of teaching

Born in Alice Springs and educated at the local Catholic high school, Jane had chosen to stay in Central Australia to undertake her teaching degree in secondary English and History. At the time of this interview, she had completed two years of content units and one year of education units, including two of her four required school placements. She described how her first placement confirmed her choice of high school teaching as a profession.

> *Walking into the school was first off a really big eye opener because it was totally different to Our Lady of the Sacred Heart. My personal beliefs are of doing really well and learning everything that you can, and you've got kids who were like,'I don't want to be here'. I was just, 'What the hell? You should want to learn!' I think that actually contributed to it – that slap in the face. I felt comfortable there, even though I felt uncomfortable because I was aware of how I was different to the students. But I felt comfortable there, just as a general vibe. It just felt normal. And that feeling just kind of stayed with me.*
>
> *And then when I taught my first class it went really well and I was thinking, 'Yes, this is it.' Taught the same lesson to another class and it went terribly and I still felt that it was right. And I think I felt that way because I could see the difference between the two classes, thinking I shouldn't have done this or that. But I didn't beat myself up about it. It was just, 'OK, let's pick ourselves up, move on and what do we do next?' And I didn't actually mind that they were cheeky kids. Because they made jokes about what we were learning about and you can just fold that in. And I actually wonder sometimes if I'd feel that way if I walked into a primary school. I don't think I would have. I think I would have gone, 'Oh gosh, I think I've just made a terrible mistake; the last two years have been a total waste.' Interesting that high school, middle school, did it for me. I just felt I slipped right in. It could have been their cynicism, but it could also have been just the unexpected. I like things in order, and then you just walk into a classroom and it doesn't happen and I think I need that and I really like it. In a perverse way.*
>
> *That's made me think of this one lesson I taught on my second placement where things changed: I was structured and had organised this lesson and had everything set out and when I got in there my lesson totally changed. I just did things backwards and I did this instead of that and we did a group discussion instead of private reading and that disorder came through. I think I can be disordered because I have order and I think if I was disorganised in my planning, being disorganised in my*

> *lesson just wouldn't have been ok. It would have just gone totally all over the place but because I knew my lesson, I knew what I wanted to achieve, I could just pretty much throw it out the window and go, 'We're going to do something else. Because you guys want to talk, we're going to talk'. And probably, I didn't get to experience that so much on my first placement but I think it was there in the back of my mind, or in the classroom, but I hadn't picked up on it. Having one class that went really well according to the plan and another class where I had to change things and because I didn't change things it didn't go well. So like a Yin and Yang almost.*

Towards the end of the interview she linked this to her own experiences of learning:

> *I wrote a philosophy at the start of the year and I went, you know, 'Without looking at it I'm going to try and write another one and just see how different or how much they're the same. I'll do it before the interview'. Didn't happen because I couldn't quite set it in stone, what I wanted to write. I sometimes feel like my philosophy should be a drawing. Like this is how it happens. That might even be a better idea. Draw it and then kind of have a brief description underneath saying this is what it is. This is where it all goes, and how it all moves. Not linear. That's something that's really struck me this last year. Prior to that my learning was just all linear. This is what you do, you write an essay. But this last year it's been, nothing works in a straight line. There shouldn't even be straight lines. They're for driving. They're for the sides of the roads, just so you can't park here. That's not what this is. Your learning shouldn't be linear, your teaching shouldn't be linear and your experience shouldn't be linear. Because it all interconnects. But it also shouldn't be circular. Because it doesn't necessarily all flow in that one direction. Sometimes it flows backwards. I've certainly focused on it a lot in my reflective writing. I've really pulled up this word linear all the time, probably to the point that it's starting to get over used. But I feel like it's very, very important. I kind of look at everything as if it should be everywhere, connected in some way, but everywhere. And there's no chronological order to it or no set way.*

Interlude: the theory-practice gap and the bridge of narrative

Classrooms are complex places. We need to recognise the complexity of the 'ill-structured domain' of the teaching context and the ways narrative can be used to help preservice teachers cope with that complexity (Spiro, Coulson, Feltovich, & Anderson, 1989, p. 498). Cognitive psychologists Spiro et al. define the 'ill-structuredness' of a domain as when 'many concepts, interacting contextually, are pertinent in the typical case of knowledge application and . . . (when) their patterns of combination are inconsistent across case applications of the same type' (p. 498). They point out that effective methods for introductory level learning, such as 'compartmentalizing knowledge, presenting clear instances (and not many pertinent exceptions)' (p. 498), often interfere with the kinds of advanced knowledge acquisition that are needed to respond well in the messy uncertainties of a real context. This issue has also been conceptualised as one of a gap between 'theory and practice', where the clear certainties of the theoretical world are challenged by the uncertainties and conflicts of the practical world and result in professional practice remaining unchanged by new knowledge (Dewey, 1929; Argyris & Schon, 1974).

This theory-practice disjunction is mirrored in the dualism of linguistic propositional knowledge ('knowing that') and experiential knowledge ('knowing how' and 'knowing what') (Dohn, 2007).

Propositional knowledge offers the kinds of linear thinking and clear certainties that Jane saw as insufficient to address the complex and often paradoxical nature of the teaching setting and teachers' work. It's telling, Jane's use of 'and' rather than 'but' in her comment: 'I like things in order, and then you just walk into a classroom and it doesn't happen.' The conjunction choice suggests a lack of opposition between these two apparent polarities of order and disorder, between the 'high hard ground of theory' and the 'swampy lowlands of practice' Schon so vividly evokes (1983, p. 42). Just as the teaching philosophy that Jessica's story presents cannot be as effectively represented in a list, so Jane sees her post-placement philosophy as unable to be articulated in linear form. And while narratives may seem linear at first glance (we usually read them from start to finish), the meaning they build in our minds is spatial and rhizomatic in contrast to the linear structures of logico-scientific thinking (Bruner, 1986).

'Teaching isn't telling,' always seemed to me to need the caveat, ' . . . unless it's telling stories', which itself is a very different kind of 'telling' to that which imparts propositional knowledge. And of course outside of educational institutions, stories are recognised as a key medium of the transmission of cultural norms, beliefs and knowledges (Bruner, 1986). 'B's Story' got me thinking about the opportunities we miss in teacher education to establish a meaningful 'back and forth' between the theory and the practice: between asking our students to think like learners at the university and asking them to think like teachers in the classroom; and between asking them to think like 'rule-based beginners' who rely on 'analytic rationality', and asking them to think like experts, using the type of 'context-dependent knowledge and experience [that] are at the very heart of expert activity' (Flyvjberg, 2004, p. 421).

Interpreting and writing narratives of professional experience offers a space and a community of learners in which preservice teachers can approach teaching experiences both as professionals, whose voice and personal experience is valued, and also as beginners, using the community to safely encounter and learn to negotiate the uncertainties of educational contexts and issues. Because narratives produce 'likelihood' not certainty, they direct our attention to the unique concrete details and discontinuities of a 'real' situation, and so move us from purely conceptual ways of understanding to emphasising the perceptual dimension of our knowing (Polkinghorne, 1988, p. 75). And because narrative emphasises these perceptual ways of knowing, when we interpret and discuss stories - whether external 'cases' or autobiographical writing - we develop the conditional and reflexive thinking that are key skills required in expert professional practice (Levin, 1995).

Preservice and neophyte teachers are often overwhelmed by the complex reality of the classroom: they back away from its uncertainties by grasping at the straws of magic bullets and one-size-fits-all solutions; and they see it as a failure of theory when the theory doesn't provide them with the certainty they desire. This disposition is a natural tendency of the technical rationality of beginners and a result of the methods of introductory learning and as educators we need to address ourselves to modifying it during ITE. We need to find ways to use narrative pedagogies to create a learning space that is beyond the rule-based understandings of beginners and before the contextual-knowledge based fluency of experts if we are to respond to the need to develop 'classroom ready' teachers who are ready to deal with classroom complexities. Offering narrative as a systematic mode of learning across the curriculum would ensure that the complexities of practice are addressed even in the beginning stages of learning. The ubiquity of this mode would also, then, make it meaningful to explicitly teach the skills of narrative writing and interpretation. By fostering the development of 'narrative reasoning skills', Sara Worth suggests, we build imaginative and moral dimensions of knowledge is 'more than just propositional' (Worth, 2005, p. 19). These creative, relational and ethical dimensions are at the heart of teacher professional practice.

Resolution: Implications

If we integrated a suite of narrative pedagogies - such as critical incident analysis case-discussion, narrative-reflection, and co-constructed stories - throughout the ITE curriculum, we would foreground teacher identity development and illuminate the complexity of the professional setting (Bolton, 2014; Levin, 1995; Clandinin & Connelly, 1991; Measor, 1985). By doing this, we would address the 'tension of dissent' that exists between practice and theory in every ITE curriculum (Hooley, 2007, p. 55). To integrate narrative successfully, however, we need to be mindful of two related issues: the difficulty of systematically analysing narrative thinking, and the need to ensure that personalised narratives are not 'uncoupled from the wider picture' of the socio-political 'structures and systems' in which teachers' work takes place (Goodson, 1997, p. 111).

Bruner proposes that a key reason narrative epistemologies have not taken any systematic hold in the academy is because narrative construals of reality are

> *surprisingly difficult to dissect … (being) too ubiquitous, their construction too habitual or automatic to be accessible to easy inspection. We live in a sea of stories, and like the fish who (according to the proverb) will be the last to discover water, we have our own difficulties grasping what it is like to swim in stories.* (1996, p. 147)

Approaching narratives metacognitively, he suggests, is one way to arouse us from 'this peculiar kind of unconsciousness of the automatic (and) ubiquitous.' This would mean that discussions about 'who we are' and 'what we know' are transposed to discussions about 'how we know' in order to 'provide a reasoned base for the interpersonal negotiation of meanings' (1996, p. 147). Such metacognitive practices could be achieved through developing the narrative writing and interpretation skills of preservice teachers, by allowing them to recognise the 'craftedness' of their and others' narrative constructions of identity and reality.

By taking a critical and metacognitive approach to narrative practices, we would also address the concern that for personal narratives to produce credible knowledge, that knowledge must 'develop in relation to the knowledge of others' (Hooley, 2007, p. 56). In order to build relationships to knowledge beyond the personal, narratives need to be created and interpreted with the explicit application of theory, with attention to 'politically situated perspectives', and in a collaborative and facilitated community of learners (Griffiths, 1994, p. 76; MacLeod & Cowieson, 2001). As David Thomas suggests, 'If there are no innocent texts, there are no privileged interpretations; although as readers we can benefit by the guidance of a thoughtful leader to take us through the narrative maze (Thomas, 1993, p. 244). We need to position the writing and interpretation of narratives in their socio-political and theoretical context if we want narrative epistemologies to engage critically with the 'vernacular of power - the ways of talking and knowing which then become the prerogative of managers and administrators and academics' and so challenge the discourses or 'coercive narratives' that seek to narrow and technicise our profession (Goodson, 1997, p. 117; McEwan, 1997, p. 85).

Coda: a continuing story

2015. I've just finished my first series of 'caselearning'[2] workshops in Alice Springs and a colleague and I are beginning to analyse the data from this pilot project, putting together a

2. My colleague, Lisa, and I use the term 'caselearning' to cover the pedagogies of both case-writing and case-interpretation for learning. The first is a form of contextualised autobiographical writing (Bolton, 2014; Goodson & Gill, 2014), the latter a modification of case-method learning (Levin, 1995).

conference presentation, and a project report for the funders of our seed grant (Papatraianou & Strangeways, 2015). The main series of workshops was with my Alice-based preservice teachers but I also spent a day working with a group of Department of Education teachers who are writing cases about their school-based action research cycles. I'm amazed by how far we've all come in one semester. We have templates for case-writing and case-interpretation, an interactive website to house the cases and their interpretations, and many people have written thought-provoking narratives and are looking forward to writing more. Narrative writing was an intimidating challenge for some. 'I haven't done this since high school', said one of the Graduate Diploma students; 'I just know that anything I write will be terrible,' said a senior teacher from primary school. I surprised myself by how long it took me to put a stop to our discussions about cases and writing, and actually get people putting pen to paper. I had done this every day as an English teacher, with all sorts of recalcitrant students! Why on earth was it now so hard? Once we'd started, however, the results of their writing and analysing seemed at times close to transformative. 'I love how it forces you to step outside yourself,' said one, 'And each time I go back to read what I've written, I see it from a different angle, or different bits stand out'; 'It's great to do reflection properly and do it with a structure,' said another; 'I never thought I'd be one to write a case, and enjoy it,' said another. I'm looking forward to where we go next, to developing the caselearning resource and framework in order to explicitly teach narrative ways of thinking. If it works, we'll be one step closer to re-positioning storying and professional identity development at the centre of teacher professional learning.

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Reflective narration: Impact of Observing Young children's use of iPad on Lecturers' Teaching Approaches in Higher education

Gretchen Geng	Leigh Disney
School of Education, Charles Darwin University, Australia	School of Education, Charles Darwin University, Australia
gretchen.geng@cdu.edu.au	leigh.disney@cdu.edu.au

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Abstract

People engage in learning to produce knowledge, and learning can be undertaken outside learning institutions, involving interaction between different people among social communities. Learning can happen both publically and privately through reflection time. Likewise, education cannot always be conducted within certain hours or certain places. It can happen anytime, with anyone within any culture. This paper highlights the perceptions and experience of two higher education lecturers in teacher education, following observations of pedagogical practices and philosophies of two young children playing with an iPad. Acknowledging the importance of reflective practice in teaching, we use reflective narration to illustrate the influence of our observations of young children's playing with this technology (an iPad) upon our own teaching approaches in higher education settings. Following this we outline several future research interests into use of gestural interface technology in teaching strategies. Lecturers in higher education, particularly educators in information technologies and early childhood education, may find this paper interesting as a stimulus to their own reflection that might improve their own teaching outcomes.

Gretchen's reflection

10.35am (November 18, 2013):

> *"Come on mom, I would like to show you the new games. They are awesome!"*

Brooke eagerly brought her iPad in front of me and started to show the new game "Bugs and Buttons 2". The game started with a group of ants in a line marching across the screen as Brooke swept away foreign objects for the ants so that they could keep on their path. Brooke laughed and hummed along with the game's exceedingly catchy music.

This is one typical example of my days with my daughter Brooke, who is 5 years old. Looking at her engagement with the iPad I decided that I should purchase her a greater range of appropriate iPad games as one of her Christmas presents. As a mother of two girls and a lecturer in education, I value education in my children's life. My children are what Tomita (2009) considers to be learners born into a world of technology. With the popularity of ICTs, students start to use different technologies to learn, research and communicate with each other. For example, in many school contexts, mobile phones, MP3 players and other similar digital devices have become acceptable technology for students to use. In particular, there are more than 6.8 billion mobile phones in the world in 2013 (International Telecommunication Union, 2013), and one major group of users are school students.

As a traditionally trained teacher, I have learned that technology can be used in classroom teaching. I chose educational computing as one of my majors and during the last ten to twenty years, I have experienced technologies used in my daily life as well as in my teaching career. I explored many different kinds of technologies and their use within classroom settings for pre-service teachers and was always fascinated by the use of technologies in educational settings. I chose to research online learning as my PhD project, which I completed in 2007, and I presented some major findings from my research:

> *It was found that (a) teachers could assist students by using instructional resources such as graphics, sounds, and animations; (b) effective student-teacher relationship was a critical success factors in students' online learning; (c) teachers needed to provide feedback or assistance to help the students improve their learning-to-learn skills, and independent learning skills; and (d) students also reported that these factors assisted in developing problem-solving skills, reaching deeper understandings, and achievement in successful online learning.* (Geng, Au & Yates, 2007)

After I completed my PhD, my passion towards the use of technology in classroom teaching has been developed. I have started teaching Information and Communication Technology (ICT) in pre-service teacher education programs. As required by Australian Professional Standards for Teachers in Australian Institute for Teaching and School Leadership (AITSL, 2014), graduate teachers shall possess the requisite knowledge and skills to plan for and manage learning programs for their students, from early childhood to high schooling. Therefore, a graduate teacher should know the content and how to teach it (AITSL, 2014), and more specifically standard 2.6 requires a graduate teacher to implement teaching strategies for using ICT to expand curriculum learning opportunities for students.

In teaching ICT in education, my teaching and researching focus has also shifted from using computer technologies to mobile learning. I started to research mobile learning since 2007. Different from computer technologies, mobile learning allows users to try more hand-held small and portable devices, such as mobile phones, computer laptop and tablets.

As my teaching target group of students is mainly pre-service teachers, who are mostly over 18 years old, I have never directly taught in educational settings with children younger than 5 years before. This puts me into a dilemma as to how I am going to test and decide upon the appropriateness of the use of mobile technologies with young children, in particular my own children!

Leigh's Reflection

Before my life as a lecturer in the field of early childhood, I was an undergraduate student studying early childhood at the University of South Australia during the early to mid-2000's. My studies would not have been attainable without the use of technology and educational media and much of my entertainment also revolved around the use of emergent technologies. Yet in my professional work as a qualified child care worker during that period I actively distanced myself from the use of technology with the children to the point that I would suggest that the use of technology made me feel uncomfortable and that I considered educational media (e.g. T.V's, computers) as "lazy" teaching compared to more appropriate early childhood experiences. This feeling that somehow technology and early childhood learning are at opposite ends of a spectrum of experience is not new and I truly was not alone in that feeling. Early childhood educators feel a certain way about the appropriate pedagogies and tools to use with young children and I can assure you there is a strong undercurrent that anything with a microchip and processor does not fit "developmentally appropriate practice"! In my experience the developing preschool child has great difficulty in dealing with traditional mouse and keyboards computer and one-way communication devices such as television and DVDs did not seem like engaging or beneficial learning tools. Child care centres in the early 2000's had limited technology in them and there was not a strong undercurrent to fund any new educational media devices.

So when did my comprehension of the value of technology change and how did I grow to become a researcher and lecturer who has 'particular interests' in the use of educational media with preschool children? It started when I met my wife and current research partner Gretchen. The first time she visited me in my child care setting she asked:

> *Gretchen: Why there is no computer in your classroom?*
> *Leigh: I had one before, but it was broken and I had to get rid of it.*
>
> *Gretchen: Why?*
> *Leigh: Because the technology is not developmentally appropriate for little fingers. Computers, keyboard and mouse are not designed for young children to use easily.*

Gretchen: Mmmm… This is interesting. Why do you not use an Interactive Whiteboard then?
Leigh: It's too expensive for our centre and we have more appropriate early childhood resources to buy with the funding.

Gretchen (encouraging): How about mobile learning technologies?
Leigh: Mobile what?

Gretchen's area of expertise was the use of technology and mobile learning within higher education settings. Whilst I had been an undergraduate student I had somewhat taken for granted the technology around me that allowed me to gather information and effectively demonstrate my knowledge. After meeting Gretchen and reading her work I was able to view my own education from a different perspective. Around the same time as meeting Gretchen I moved from a child care setting to working in a primary school.

Having a new found appreciation for the value of technology and educational media I actively made efforts to incorporate the use of technology with young children. In addition to my own willingness to embrace technology I was now in an educational setting that encouraged the use of technology and with children who developmentally were capable of using such technologies. For the first time in my professional life I felt not a responsibility but a willingness to use technology as an appropriate learning tool for young children. In particular I found the use of interactive whiteboards to be revolutionary and it opened up a myriad of opportunities to engage learners with a range of learning dispositions and styles. However one term into my teaching experience my wife fell pregnant and changes were coming!

In 2008 our first child, Brooke was born and my understanding of children would be changed forever! When one is charged with the daily care and education of your own child, a child that you are responsible for twenty-four hours a day, seven days a week you gain an appreciation of the diversity in care and education you need to deliver for that child in order for them to reach their potential. When working with other people's children in child care settings I often looked at my role to provide them with experiences that I felt met their learning style and potentially expose them to experiences they may not be getting at home. However, with my own child (for whom I was a stay at home father for), my wife and I were her primary and only source of education. Hence we felt a responsibility to expose Brooke to a wide variety of experiences and learning tools. Much of my experience as a qualified child care worker came through and I provided Brooke with a wide variety of sensory and developmentally appropriate play. This was also a wonderful learning experience for my wife who had very little understanding of young children and their education. She was able to gain an appreciation of the nuances of early childhood and the ways in which young children learn and develop. Similarly I incorporated Gretchen's deep knowledge of mobile learning and technology to provide Brooke with appropriate technological experiences. However we were still finding that much of the technology for children was still too difficult for her to use and was often still one directional, hence limited true engagement and learning. This all changed in December of 2009, Gretchen gets her iPad!

The iPad was the first mobile gestural interface that we had purchased and exposed Brooke to and it was evident from day one that she could not only navigate appropriate software using the iPad, but do it easily with a high level of engagement and interactivity, especially when compared to the one way interaction of a television screen and the fine motor and cognitive developmental inappropriateness of mouse and keyboard devices. For the first time she could use her fingers as the sole interactive tool, this allowed her to control the device and after a few days Leigh and I were faced with the real issue that we may have to put limits on Brooke's use of the new "toy" as she did not want to stop!

Gretchen's Reflection

2.45pm (December 29, 2009):

"Mom, What is that?"

Brooke saw me using an iPad and she immediately started to use her fingers to tap and see the consequence that would happen on the screen.

This is the first moment that I actually used mobile learning technologies with a 2 year old. I was very interested in watching her using her fine motor skills by clicking on the buttons and trying different apps. The iPad was the first mobile gestural interface that we had purchased and exposed Brooke to and it was evident from day one that she could not only navigate appropriate software using the iPad, but do it easily with a high level of engagement and interactivity, especially when compared to the one way interaction of a television screen and the fine motor and cognitive developmental inappropriateness of mouse and keyboard devices. For the first time she could use her fingers as the sole interactive tool, this allowed her to control the device and after a few days Leigh and I were faced with the real issue that we may have to put limits on Brooke's use of the new "toy" as she did not want to stop! However, for the first time in my own career as an early childhood professional I felt that there was a media device that was appropriate and could be used as a wonderful adjunct to a child's learning.

Leigh's Reflection

For the first time in my own career as an early childhood professional I felt that there was a media device that was appropriate and could be used as a wonderful adjunct to a child's learning. In 2010 I was due to begin my PhD study; hence I was on the look-out for a topic.

As stated before, the use of technology and educational media with young children had been an underwhelming process and had not filled me with confidence for its use with children prior to school settings. All of this changed when my wife purchased her first iPad. Brooke was 30 months old at the time, to this point she had used many technological products designed by such toy companies as Fisher Price and Vetch, she had also watched her fair share of educational media via television stations designed for the education of young children, such as Cebeebies, appropriate DVDS and shared experiences with her Grandfather on his desktop computer. All of which we felt certainly helped her learning yet still I did not feel it was more beneficial nor grabbed her attention than the early childhood experiences I was setting up for her based on my child care background. Then along came Gretchen's iPad! Immediately Brooke gravitated to Mummies new toy and very soon we found that there was software (Apps) designed specifically for children under 5. More than the software, it was the hardware design

of the iPad that immediately stood out to me as an appropriate tool for young children. With my new found appreciation of technology and educational media, stemming from both Gretchen's teaching and Brooke's experiences I knew that I wanted to base my PhD on preschool aged children's use of technology and educational media. After a few weeks of discussion with my supervisors it was clear that an investigation of tablet computers was an appropriate way to move forward. In addition I wanted to survey stakeholders in the field of early childhood to see if how I felt towards technology before meeting Gretchen and viewing Brooke's experiences was how others in the field felt, that being negative and an unwillingness to embrace emergent technologies. Hence through the process of my PhD and recent appointment as a lecturer in early childhood at the Charles Darwin University I have been able to observe and comprehend the manner in which society is moving forward and the role that technological products have within children's future education.

In 2012 our second child was born and by the time she was a 1 year old she had begun her own journey with the iPad and as educators, Gretchen and I had moved along a journey of reflective practice with technology that would stem into our work environment within higher education.

Impact on Teaching Approaches in Higher Education

In higher education, the importance of reflection lies in the need for educators such as lecturers to know how they taught the courses, and collect feedback for their teaching in order to improve their teaching outcomes (Hays & Gay, 2011). Raj (2013) further stated that "maintaining and improving practice is achieved through reflection and adjustment" (p.10).

Reflective practice has always been an important component in education (Tummons, 2011), including higher education. Based upon the transformative learning theory (Mezirow, 1991), the reasons of its importance include:

a. the content reflection involves perceiving, thinking, and feeling instructional processes (Raj, 2013);
b. process reflection focuses on how teaching was performed and how well it was done (Kember et al, 1999; Raj, 2013);
c. critical reflection does not neglect psychological and sociolinguistic perspectives (Meriam & Ntseane, 2008); and,
d. (critical reflection is essential to motive collective action for change in institutional practices (Raj, 2013).

Moreover, in "Reflective Practitioner", Schon (1983) made an innovative and remarkable contribution of how professionals think in action. Our reflections align with his work that learning takes place both publically and privately through reflection time. Likewise, education cannot always be conducted within certain hours or certain places. It can happen anytime, with anyone and within any culture. With increasing proportion of different time allocation and rapidity of change in higher education, the "learning society" (Schon, 1983) has been developed to satisfy the needs of the nature of learning systems and the significance of learning in changing societies.

Therefore, as educators in higher education, who have an interest and expertise in Information and Communication Technologies (ICT) in education and early childhood education, we are experiencing and always using the reflective practice to collect the information about our teaching, integrating our ideas into practice as well as improving our teaching outcomes. The graduate teachers' standard also requires lecturers in education in higher education sector, who teach pre-service teachers, to not only emphasise the importance of use of technology in classrooms, but also the grasp the pedagogical knowledge and skills.

We, as higher education lecturers, found the method of reflective practice is very useful in developing our teaching pedagogies (Raj, 2013; Tummons, 2011). Although we are teaching adult students (e.g. pre-service teachers in early childhood education) in higher education, we shall still have contact with the in-direct target students (e.g., young children in early childhood) so that we can understand the final target students and can teach our own students with more developed and improved teaching pedagogies. The dynamic reflection has an important place in supporting our own identities and developing our own teaching approaches.

As higher education lecturers we now see our role not as an advocate for the use of emergent technologies and educational media, rather as someone whom through the process of shared experiences with each other and our children, detailed reading and above all a willingness to adapt long held values was able to embrace a potential learning tool that may have benefits for the field of early childhood. As higher education teachers it is our responsibility to share this knowledge, regardless of the form of this knowledge, so that our students can make up their own minds as to the appropriateness of the pedagogies we show them, which in turn will shape a new generation of learners. We must be adept at learning, to not only transform our intuitions, but also develop the "learning system" (Schon, 1983) for continuing transformation.

Conclusion

Higher education has undergone a dramatic transformation in recent years. This is evident in both the beliefs about how students learn and the type of technologies that are evolving and are available to support and enhance student learning. Higher education has undergone many modifications with the foundations of the universities shaken by new and emerging mobile technologies and by increased numbers and diversity in the student population who are demanding new learning approaches that will provide them with flexible and personalised learning. There is a need to rethink and restructure the learning experiences and explore the transformational potential of a new learning approach.

To end this paper, we would like to express our gratitude towards the opportunity to write and reflect on our knowledge in teaching approaches in higher education based upon our own personal and private learning experience. We had multiple eureka moments during our observation and reflection, which involves lots of laughter as well as tears. Throughout the journey, we do however know we are "growing" via learning, reflection and making changes. We hope via this paper that we could start to attract more researchers and early childhood educators or teachers to speak up and explore this further.

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Including children's perceptions from meditation in a discussion about reflective practices in education

Sue Erica Smith

Charles Darwin University, Australia

sue.smith@cdu.edu.au

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Abstract

This paper is a co-constructed narrative comprising of inputs from children and their teachers and contextualisation from the embedded position of the chief investigator in this study to gain insights into how a group of class of Year 5-6 primary school students experienced meditation. The study is situated in a Buddhist Religious Instruction class, where learning was conducted inside a designated weekly half hour session. In accordance with the cultivation of individual responsibility and executive function that is the ethos of Buddhist pedagogy participating students and their volunteer teacher were invited into the research as research inquirers. Again the tradition exhorts the role of an experienced teacher to guide what can become an intrapersonal learning journey through meditation. At a time where mindfulness exercises and permutations have captured the public imaginary, and where educators are showing increasing interest, the discussion is timely. While the study is directed towards secular and plural educational applications, reference to the tradition that has borne mindfulness alerts the field to some considerations as to how the uptake of mindfulness in schools might be applied with further rigour and integrity. Further, the utilisation of children's drawings of happiness scales and their added narratives offers a way in which research into the interior experiences of children might be conducted. Their insights from experience in meditation supports findings from clinical studies with children, and poses a viable addition to current reflective, wellbeing and resilience strategies in education.

Introduction

> *A shaken bottle of muddy water begins the session. Sitting, backs straight, observing breath, the water settles. Thoughts settle. Water becomes clear… learning the nature of mind.* (CI's classroom observation)

Mindfulness exercises and meditations pose a new addition to the reflective practices that have become orthodox in contemporary teaching, learning and research (Dewey, 1933; Schön, 1983; Marchel, 2004; Moon, 2005; Sherwood *et al*.) Reflection in education currently includes reflective writing in journals, blogs and wikis, video and audio recording, critical incident discussions to consider helpful or unhelpful behaviours, drawing, concept maps, role plays, drama, storytelling, music and, with increasing interest, yoga, mindfulness and meditation. All of these employ metacognitive strategies where past experiences are reviewed and decisions

and future actions are determined (Donovan *et al*., 1999). The cognitive capacity to analyse and attempt to understand problems, often through active exploration of experiences can be used to gain new or greater understanding. Reflection is awareness and understanding of thought. Crucially though, present awareness is more than often subsumed in these metacognitive and reflective practices, yet seldom is specifically taught. Meditation, mindfulness and yoga exercises address this gap. The weekly half hour Religious Instruction (R.I.) classes drawn upon here provided an opportunity to explore some perceived effects of present-awareness exercises from children's perceptions of their meditation experiences.

Background

Meditation has garnered a steady stream of interest for use in classrooms for some time (Crook, 1988; Erriker, & Erricker, 2001; Fontana & Slack, 2002; Rozman, 2002; Hawkes, 2003) and is now being incorporated into Social and Emotional Learning strategies (Lantieri, 2008). Targeted research into mindfulness practices with youth is also producing compelling results where they have been included into therapies to treat children with attention-deficit hyperactivity disorders (Harrison *et al*., 2004; Jensen & Kenny, 2004; Zylowska *et al*., 2007), stress (Wall, 2005), and anxiety (Semple *et al*,2005), aggression (Singh *et al*., 2007) and improved attention (Peck *et al*., 2005; Rani & Rao, 2000). Neurobiological research has also shown that stress inhibits learning (Introini-Collision *et al*., 1991; Christianson, 1992) and, in the first instance as seen below, the calmness induced through meditation stands to be a proactive measure to address these learning inhibitions.

Brain research with proficient long-term Buddhist meditators has also alerted the field to some of what these practices can achieve. Brain structure can be changed to sustain kindly and happy dispositions through compassion meditations (Lutz *et al*., 2004; Ricard, 2006), while some compassion meditation promoted some, but lesser changes, and wellbeing (Urry, *et al*., 2004). Another study (Carter *et al*., 2005) revealed how long-term Buddhist meditators could concentrate and change focus with exceptional proficiency. Concentration, calm, kindness, emotional regulation and wellbeing outcomes from meditation are deserving of close attention by educators.

Mindfulness has become common-speak for meditation, but attention to the roots and etymology of the practices provides the field with rigour, nuance and scope that might otherwise be precluded. A discourse on mindfulness was first taught by the Buddha, as documented in the Sattipattana Sutta: Frames of Reference (2010). It is an essentially Buddhist meditation (Rahula, 1978, p. 69), and indeed Buddhist practice in all of its authentic representations is about the cultivation of mindfulness. The R.I. program drew on this tradition: mindfulness of breathing *(annapanasati:* Pali), that develops concentration for calm abiding (*samatha:* Pali), insight that leads to emotional regulation and ethics (*vipassana:* Pali) and kindness, love and compassion to selves and others (*metta:* Pali). Etymologically 'meditation' the same Latin route as 'medicine' (from Sanskrit: *madh*) meaning to be wise, heal, cure. Children were taught these types of meditations with age-appropriate adaptations. For example, calm abiding by watching the muddy water settle, and kindness was extended to pets, friends and family and then towards others. In the Buddhist tradition developing loving-kindness is integral. Firstly because mind is conceived as both cognitive and affective, and secondly, that a loving mind loses space for anger, hatred and harm. It is essential for resilience: kindness to oneself, ethical conduct, respect and kindness to others.

Context

These R.I. classes were offered through the Buddhist Council of Victoria. Immigrant families from many Asian countries had requested that a Buddhist program be offered, and a curriculum was devised that included meditation and Buddhist stories (Smith & Seah, 2008). It aimed to be non-sectarian, include all children and support current education practices. Across all the schools in the program, half of the participating children were from non-Buddhist families. Of the 22 Year 5-6 students in this study only two were from Buddhist families. Apart from another two students, they had all been in Buddhist classes before, half of whom had attended for the past three years. They had practiced aiming for the formal sitting posture and meditating. In their evaluations from previous years they reported that they had fun with the ethical stories, discussions and creative activities that were devised to bridge introspective reflection and purposeful activity in their lives. Helen, their volunteer teacher, was an experienced meditator and a professional teacher. My experience was similar, and I joined the program as its coordinator and as a researcher.

Methods

In a scant half hour per week my research methods needed to abide by the ethos of the program, and not divert student learning and volunteer teacher time, to my research agenda.

After ethics clearance and permission from the school, teachers and students were recruited into the study as research inquirers. I emulated Patti Lather's stance that "involves the researched in a democratized process of inquiry characterised by negotiation, reciprocity, empowerment - research as praxis" (Lather, 1986, p. 257). This approach equally honoured Buddhist intentions. I sought that the students' participation in both the research as well as the program would enrich their learning experiences, and that they too could shape the development of the program. However, I did not aim for participants in the study to move to politically empowered positions, as is generally perceived in the emancipatory research that Lather would suggest, although 'awakening mind' in Buddhism is synonymous with liberation. Liberation in this instance is focused on freedom and dexterity of thought.

The Happiness Scale

Inspired by research with children using drawings (Di Leo,1973; Kosslyn *et al*.,1977; Gardner, 1980; Anning & Ring, 2004) I devised a happiness scale, as both a research and a heuristic tool, to provide records of each student's subjective experiences. I was skeptical that interview and questionnaire data alone would give as accurate a picture, for I could foresee that in interview students may say what they thought I would like to hear and a questionnaire would rely upon language with which I could not assume the children were familiar. I was impressed by Cummins and Lau (2004) who had produced a Personal Well-being Index for School Children (PWI-SC). They had grappled with semantic distinctions and eventually interchanged 'happiness' for 'wellbeing' because children would use 'happiness' as an equivalent descriptor of their general wellbeing (Cummins & Lau, 2004, p. 5). It was a suitably understood term from which children could assess their experiences as research inquirers.

Although I was not seeking a psychometric test, that Cummins and Lau's use of happiness to generate wellbeing data from child populations and their Likert scale approach paralleled my agenda. Helen and I did not want children to be pressured to achieve a perceived optimal standard, but rather learn to observe their minds, and so a prescriptive, ordinal scale would have been inappropriate. Students would draw their own scales with three points: a sad, neutral and happy face. We wanted the children to engage in their own assessments and maintain their agency.

Students in the study drew a Happiness Scale before each meditation session and placed themselves both before (B) and after (A) the session, and had the option to write comments. This tool brought a creative, visual element to the metacognitive task of reflecting about their dispositions. Initially, drawing the scale and checking wellbeing would facilitate the meditative skill of observing the mind. It was a tool to help children observe thoughts and feelings, and the changeable nature of thoughts and feelings that remained consistent with Buddhist practice. The implementation of a scale removed dependence upon language ability to articulate their perceptions, and was thereby accessible to all of the children. It was also a springboard for children to identify and name thoughts and feelings if they wanted to and have their privacy respected. Students became researchers of their own happiness.

In addition to being an aid to student learning, the scale was also used as a self-report research instrument to collect data. It also served as means for discreet communications between the teacher and students. Guidance from a teacher is also part of the pedagogy of the tradition and it would have been inappropriate to have excluded teacher involvement in this context.

Over a 22 week period these students drew a scale in their books in whichever way they chose and recorded their personal pre- and post-meditation assessments. Meditations lasted from four to seven minutes. Even though this group of ten to twelve year-olds had some experience, the cultivation of some discipline in the exercises did not over-rule the teacher being pragmatic and shortening the sessions some days. Sometimes the teacher would have a brief discussion after the meditation, but not always.

Use of the Happiness Scale became routine for the class over the period and it appeared that the exercise made meditation sessions more purposeful for the students. The agency afforded by students drawing their scales allowed them to rate their base-line happiness where they chose. Some students would place feeling good midway on the scale, some lower, others at consistently high levels.

Narratives from the Happiness Scale entries

From the twenty-two sessions that were delivered that year I aggregated each child's shifts on their Happiness Scales to look for patterns and emergent themes. In this class of twenty-two, seven students recorded positive change in every entry and another five recorded happier change after 90% of sessions. Half the class charted over the year recorded that they felt consistently happier and more positive for having meditated. Sometimes children would not place themselves higher on the scale after meditation, but would comment that they felt more calm, clear or relaxed. These I took to be positive outcomes from the meditation, and for this reason I bracketed zero movement on the scale with positive responses.

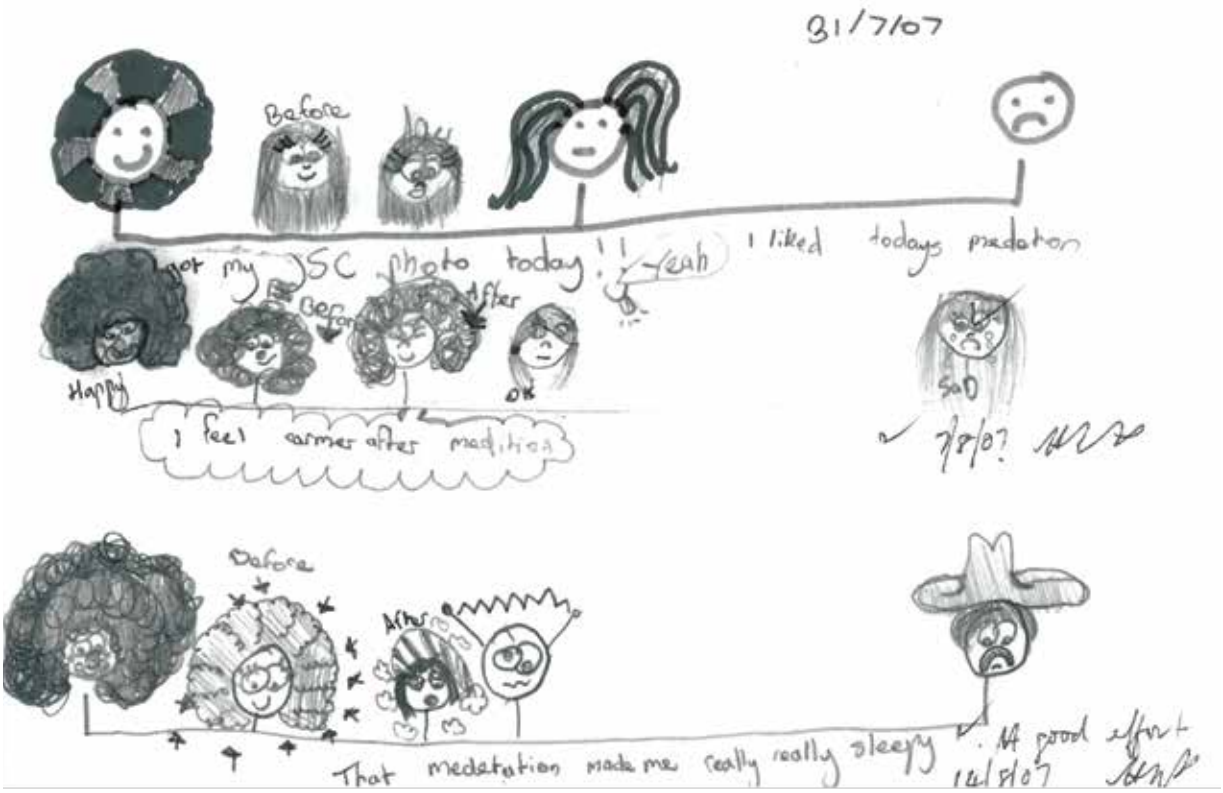
However, quantified changes alone could not capture the nuances of experiences. For example, Jenna rated her change on the scale as happier 50% of the time, yet the quantification belied her engagement with the exercises. She had chosen to attend the Buddhist classes for several years and had remained an interested and participatory student. Her mother, whom I interviewed, believed that Jenna enjoyed and valued the classes, and had been meditating to calm herself before sports events and as a technique to calm and focus herself in other situations when she was getting keyed up. Jenna found usefulness in her meditation practice. (Remember too, that 'happiness' was introduced for children to check their thoughts and feelings. It was not presented as an expected outcome.)

Tee, whose aggregate was 67% over the year, was another bright, engaged student who had also been with the classes since their inception. Her workbook comments shown later in

Figure 2 and discussed below indicated that she valued the classes, "THANKS." Other times she might have been trying too hard to benchmark achievements and even became hyper-aware, noticing every external noise and itch. In these instances the records were invaluable vehicle for the teacher to offer gentle guidance.

The book entry below is indicative of the personalised entries typical of any of the sessions and the spectrum of comments recorded. We see the child's excitement about a photo, noticing feeling calmer, "carmer" (sic), and even sleepy. The teacher's comments to the side show the steady presence she maintained with her students. This way, over the course of the year students produced narratives of their experiences.

Figure 1: *Feelings about the day and meditation*



Focus/ concentration

Children worked to focus their attention and with experience, they linked feeling calm with the ability to concentrate. Wayne approached the sessions with earnestness. Marking consistently happier shifts on his scales he wrote, "I wasn't focused at the start but then I got focused," and before, "I feel pretty good," and after, "I felt really good through meditation because I was focused." The teacher wrote, "Well done." She knew that it takes effort - and some days just too much effort. Wayne wrote with excited anticipation, "I'm happy because it's my friend's Birthday" and then, "I wasn't that focused in med[itation]. But I'm still happy." The effort over the weeks however seemed worthwhile. Before, "I feel the best," and after, "I feel happy and calm because I was focused in meditation."

Even non-compliance created awareness. One occasion Harry wrote, "I was very happy and feeling good but during meditation I don't think I concentrated hard enough to improve."

Calm insights

Even though through initially practising mindfulness of breath as a concentration exercise, children noticing that they were more calm after meditation was the most consistent theme. Tess wrote before, "I feel OK" and afterwards, "More calm. See stuff in a different light." Rosie showed some subtle analysis that she sustained throughout the year. One day before meditation she wrote, "I felt relaxed but not tired, which is good. Assembly was pretty good and that's not a bad start to the day," and afterwards, "I felt more alert. I'm not sure if that's good or not." The teacher assured, "very good." Another day, before she wrote, "I felt happy and peaceful," and after, "I felt slightly more tired but definitely very calm." Engagement with subtleties continued, "I slept fairly well, so I am not very tired, which helps," while afterwards, "I didn't feel very different but a bit better." Another day she wrote, "I felt bright and cheerful and wasn't tired," and then, "I was more calm and peaceful but still bright."

Teaching techniques for relaxation provide balance to achievement orientated education and arguably have a valid place in a curriculum. The students in this study appreciated the opportunity to relax in the weekly sessions. Similar data indicating consistent positive shifts in student perceptions of their happiness may well be generated from relaxation exercises alone, I do not know. In terms of this program relaxation was valuable, although a side benefit alongside the more rigorous task of cultivating awareness. We were more interested in exploring whether the children were learning skills that would bring them closer to self-knowledge and ways to enhance their wellbeing and more considered decision making.

When body and mind are integrated to feel calm and peaceful, and given validation through the teacher's guidance, it can be seen from the children's comments that they became aware of many sensations and cognitions that they described under the rubric of Happiness.

Shyla took her role as a research inquirer into her homelife and communicated (to her teacher) in her after comment, "Now I'm relaxed. On the weekend I did some meditation and I found it really effective just to concentrate on my breath and not tell myself to do anything."

Emotional regulation

Differences between relaxation and meditation become more apparent when we see evidence of students' emotional regulation that is facilitated through the space provided in present awareness. Without conscious awareness of what the mind is thinking and feeling, in Buddhist reasoning, it is more difficult to develop control over cognitive and affective functions, foresee alternatives and consequences, and act in ways that are respectful and beneficial to selves and others. Although it required effort, the students in this study appreciated letting their turbulence settle and glimpse a clearer quality in their minds. One morning Rita wrote beforehand, "HYPER feel like talking," and afterwards, "no better but not hyper." Having arrived with low expectations one morning Ronny wrote, "not good grumpy, tired and I don't like Tuesday," and then afterwards with a hint of amazement, "but I feel much better, I feel enlightened by meditation."

Wellbeing and resilience

This meditative approach to reflection is a mind and body exercise. Neither is negated or prioritised. The yoga traditions such as Buddhism emphasise attention to physical posture to provide a stable platform from which to develop the art of calm and balanced attention. Attention to the body, stretching and doing frog, dog and tree yoga-like exercises in preparation to sitting was routine in these classes. From spaces of calm and balanced attention some

children were able to shift the focus of their attention where, on occasions, allowed them to feel better when coping with pain and sickness. Some comments included, "I'm pretty cold and this morning, I felt a bit sick" and moved to "I feel calmer and my heart feels warm." Another student wrote, "I feel annoyed because my hip has been sore for a week," although afterwards, "I feel a bit better but my hip is still sore." Another child wrote weakly, "I feel OK but I have a cold," yet afterwards, "I don't feel bad anymore."

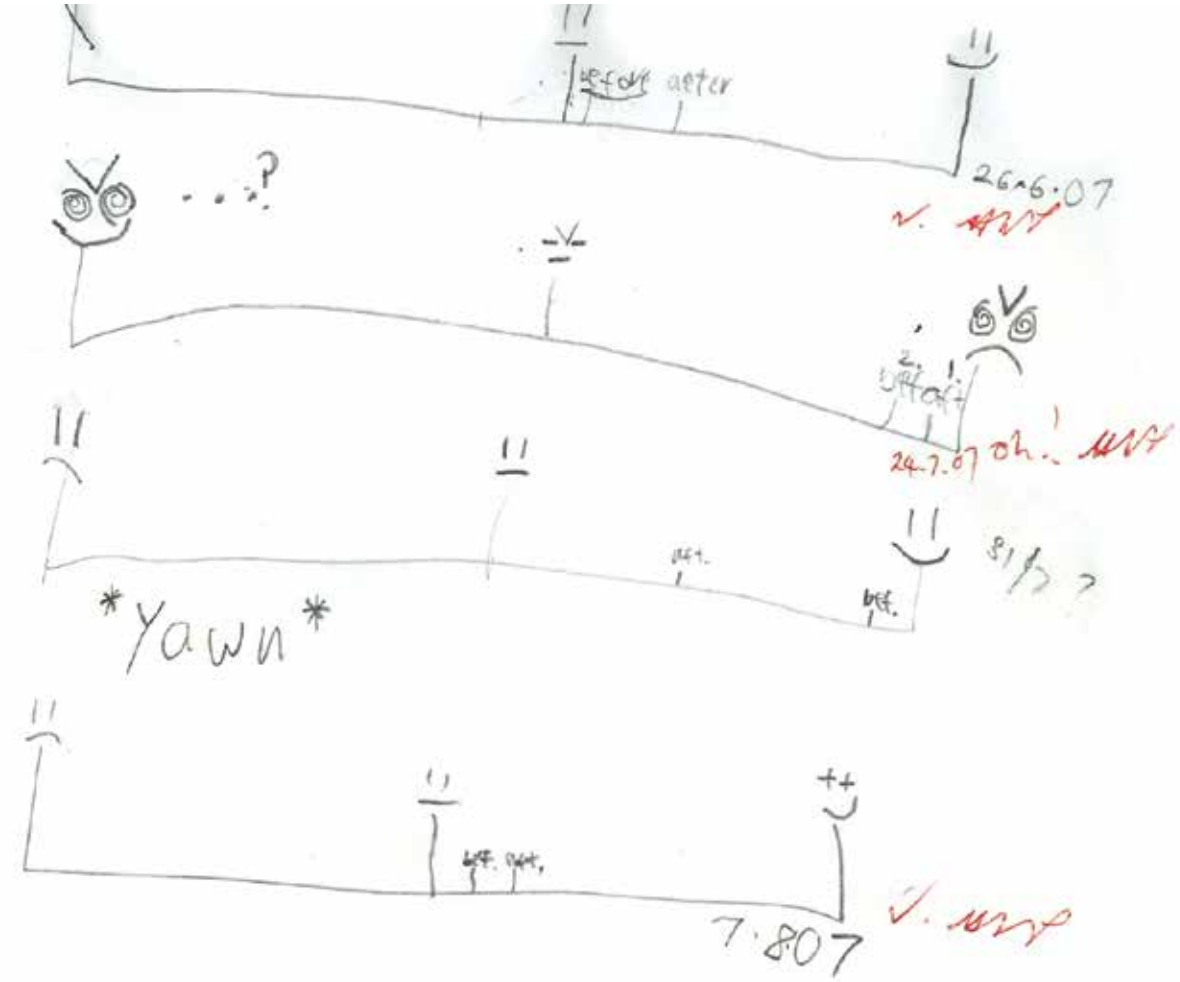
Children also revealed how the meditations provided new ways to reflect on their anxieties and adopt more resilient attitudes. Tee was sad because her mother was in Singapore but discovered that she was able to feel better. Her graphics below in Figure 2 are punctuated with delight and gratitude. Before meditation Rosie wrote, "I'm kind of nervous about Maths Olympiad," and then afterwards, "I felt less tense and more relaxed." After a session Jenna wrote, "I feel better about not having food for lit[erature] group because I know it is not the end of the world."

Figure 2: *Tee finds meditation helpful when feeling sad*

Some children however were very unhappy and with difficulties at the forefront of their minds, movement to stillness was resisted. For these students engagement by the teacher had further importance. May wrote candidly, "that's me. I haven't felt happy for a while," and after, "still." Helen wrote, "It will take patience, kindness, for you, for yourself." In another entry May began, "I feel full of regret! Again I don't know why," yet afterwards, "I am happy because I have accomplished something, I don't know what though." Helen replied, "(feeling happy) Very cool. Well done. You did that!" She also alerted the classroom teacher to these entries.

May had already been referred to the pupil welfare coordinator. However, May persevered throughout the term and her scale entries went up and down. Towards the end of the year she wrote, "I am happy but something is weighing me down," and after, "I feel RELAXED I think meditation helps calm my mind a whole lot." "Yes."

Figure 3: *honest attention*



The entry above Figure 3 is from a rowdy boy. The observing teacher confided that he had significant issues at home and had trouble concentrating in all of his classes. In the second entry in Figure 3 he appeared not to have much inclination for happiness, given the grim looking scale, and, having started from a low base felt worse. From the ambiguity of the next entry he may not have felt much better, whereas on other occasions his appraisal was better. As cited earlier in this paper, individual mindfulness sessions incorporated into other clinical therapies might be more effective than was apparent in the class activity. Increasingly teachers have children with these types of behaviours in their classrooms and the rowdy and troubled students can test a teacher's resolve to persevere with mindfulness sessions. Classroom misbehaviour and potential distress from children trying too hard, or being confronted by overwhelming thoughts and feelings can be mitigated by a teacher who is familiar with the vagaries and sometimes confrontational propensities that can arise when the mind is directed to look at itself. Silence alone can be confronting. However when sessions were kept short and responsive to the children's various dispositions, we found here that these children developed their capacity to develop mindful awareness even when session times were 2 or 3 minutes duration on occasion. Happiness is not the end-point but rather the point is the practise.

This illustration above provides some reason for the meditation tradition to recommend an experienced meditation practitioner be the teacher, and that's/he be supported by [professional] colleagues. This type of professionalism holds true for all aspects of teaching i.e. that the teacher holds content knowledge and draw upon pedagogical skills that are supported by professionals in the field. Mindfulness or meditation in schools needs not languor with lesser standards. Students can benefit.

As the observing classroom teacher wrote, "The reflections on the happiness scale are powerful, and treated seriously." She also noticed perceptual shifts and some implications from these:

> *They are becoming far better at tuning out distractions; greater self-discipline. Students always approach these sessions with such a positive mind-set. Self-reflection is a large element, and has huge implications across all aspects of life. The free flowing of ideas is totally engaging!!*

Conclusion

The narrative constructed here from students' journal entries using happiness scales, engagement with education colleagues, mindfulness literature and secular engagement with the Buddhist meditative tradition provides good pause to expand the framing and applications of reflection in current pedagogy. While mindfulness practices have now become familiar to many persons in western societies, and are increasingly drawing interest from educators, the discussion here provides a timely reminder to the field that lessons learnt from over 2,500 years (and many millions of practitioners) can inform secular education of the potentialities and scope that mindfulness and meditation can provide. Importantly this narrative relies upon the participating children's records of their individual perceptions of themselves both before and after twenty-two weekly meditation sessions. Their responses show how their learning to cultivate present awareness has played a dynamic role in their thinking processes they noticed that they could become calm. Their minds possessed clear-water clarity when thoughts settled. With familiarity reflecting in this way they also realised that they could direct their attention elsewhere. Anxieties could be less fixated, physical ailments less dominant. They could cope better and feel better. The participating students became active research inquirers into the nature of their minds and learnt strategies to further become their own agents of change. This study illustrates some of the tremendous potential for meditation and mindfulness to be integrated into existing learning, and wellbeing and resilience strategies in particular.

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