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From 'Good Teaching' to 'Better Teaching': One Academic's Journey to Online Teaching

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ABSTRACT

For many educators, the adoption of learning technologies as part of a 'technology-enhanced' approach to learning and teaching implies change. Technology takes on a disruptive role. Therefore, it is important to understand the pedagogical commitments associated with current practices in order to better understand any change implied by the use of particular technology 'enhancements'. This article reports on a case study of the change experienced by one tertiary educator in the shift from successful on campus to flexible online teaching in an undergraduate Numeracy course. The study addresses the question: How do teaching academics translate a robust, proven on-campus course into a successful, flexibly delivered technology-enhanced course? The case employs an autoethnographic approach to recording and analysing the educator's experiences to highlight comparisons between on-campus (face-to-face) and online teaching practices. The findings support the conclusion that 'good teaching is good teaching', based on sound pedagogical principles, regardless of the mode of delivery, but that the enactment of those principles in face-to-face and online learning environments differs in significant ways.

Keywords: Higher education, online learning, online course design

Introduction

The application of networked computing and communications technology to create a technology-enhanced version of educational programs is now commonplace in higher education (de Laat, Lally, Lipponen, & Simons, 2007; Larreamendy-Jones & Leinhardt, 2006; Laurillard, Oliver, Wasson, & Hoppe, 2009). An increasing number of teaching academics have been required due to technological innovation and university initiatives to teach in an online space. As they have been required to adopt technology to enhance their courses, they have been confronted with several difficult unknowns: (a) the unknown affordances of available technologies, (b) the unknown of unfamiliar technology-mediated practice contexts and (c) the unknown of implied changes from current practices to something 'technology enhanced'. Of interest is the view that technology can be a disruptive force (Laurillard et al., 2009) insofar as it calls into question status quo teaching practices and provides opportunities to reimagine teaching and learning practices (see Kehrwald & McCallum, 2015). Investigation into the implications of these possible disruptions upon the professional practice of a 'technology enhanced' approach (de Laat et al., 2007) provide some further insight into the changing nature of online teaching and learning. Furthermore, exploration to identify the effects of these disruptions on (a) teacher intentions and beliefs and (b) teaching practice, particularly with the use of technology (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012) may provide better understanding to support the transition from face-to-face to blended or online teaching and learning. Critical in gaining further insight into this transitional stage, is the examination of the personal reflections of educators as they design educational material to transition from face-to-face to online instruction. The use of self-studies has been highlighted as providing valuable insights into the growth and formation of teachers (Kennedy, 2015; Richardson, 1996). Furthermore, Kennedy (2015) in particular, purports the benefits to informing critically reflective teaching practices by identifying and reflecting when technological pedagogical content knowledge are evidenced.

This article interrogates an academic's experiences moving from teaching successfully in a face-to-face setting, to flexible, online learning (OL). Specifically, the process of self-assessment focuses on the question, "is good teaching, good teaching?" (Ragan, 1998) irrespective of the mode of delivery. Examination of the pedagogical commitments and guiding principles which underpin excellent face-to-face teaching is undertaken determining if these commitments and principles can be applied to OL, to achieve any perceived benefits. This article explores the pedagogical commitments of the previous versions of the successful face-to-face and focuses on the similarities and differences between the on campus and online version of the course, particularly the academic's experiences of change between the previous (on campus) and 'new' (online) course.

Background

The described experiences in this article were set within a broad curriculum development project in the School of Education at the University of South Australia (UniSA) to produce a high quality, flexibly delivered pre-service teacher education program. The study centred on the transition of the first year Numeracy course from a wholly on campus course, delivered face-to-face, to a flexibly

delivered course with both blended and online versions. The Numeracy course was a compulsory unit of first year study. The course had 645 students enrolled in the course of which 78 students chose to undertake online study. Within the overall program development project, each individual course was planned, designed and developed for flexible delivery in two modes: a blended 'on campus' experience and a wholly online 'off campus' version. All students shared a single online learning environment for each course, regardless of the mode in which they were enrolled. Whilst previous feedback from students for the Numeracy course was taken into account, students were not involved in co-creating any online learning experiences. The experiences described herein are part of the design, development and teaching of the online offering.

Course context

The first author undertook two major roles during the study. These roles were (a) *online coordination*, involving the teaching of the online student cohort, the central liaison between the OL development team (including the second author) and the specialist Mathematics content team, and (b) *developer* of online content. The Numeracy course was the first of three mathematics education courses in the program. Historically, the course had been taught in several forms within the different pre-service teacher education programs. The previous version of the Numeracy course had been successful as indexed by the high level of student satisfaction as indicated by the Course Evaluation Instrument and Student Evaluation of Teaching data.

The course had previously employed a social constructivist pedagogical approach, with an emphasis on learning as an active participatory process in which learners construct new meaning as a result of reflection upon experience. The course content was synthesised from a range of mathematical problems drawn from the real world and presented in a variety of forms including rich media presentations, oral discourse, printed materials and physical objects. The selection and sequencing of content was guided by the major curriculum documents within the local and national contexts such as the Australian Curriculum (2012), the Early Years Learning Framework (2009) and the Teaching for Effective Learning Framework (2013).

Activity within the course had been consistent with suggestions by Trigwell, Prosser, and Waterhouse (1999) where learning was undertaken in a deeper and more rigorous manner and where teaching was "oriented towards students and to changing the students conceptions" (p. 57). The notion of engaging students in a richly created learning experience was linked to the development of tasks that took into account a student's past experience and the making of connections between these past experiences with their new learning experience. Learning experiences were sequenced along a developmental continuum and individual learning tasks were designed to activate learners' prior knowledge and support their efforts to build upon it as the course progressed. These past approaches were used to model the development of the new Numeracy course and to provide pre-service teachers with teaching models of best practice in mathematics teaching.

Posing the problem

Within the development of the revised Numeracy project, the design brief included a directive to retain the successful elements of the previously successful Numeracy course whilst introducing flexibility and improving access for off-campus students through the application of technology to support blended and online learning.

Key provocations concerning the planning, design, development and teaching of this numeracy course were considered. Key framing questions included: *How do teaching academics translate a robust, proven on-campus course into a successful, flexibly delivered online course? What technological and pedagogical skills are required? How do they experience this change in the shift from on campus to online teaching?*

Key principles

The first author worked through a systematic process to distil the essential positive aspects of the extant course and identify the existing pedagogical principles. These principles were; (a) student engagement, inviting maximum participation in both between workshop activity tasks (in preparation for weekly workshops), as well as the face-to-face workshop learning tasks (for on-campus students); (b) constructivist pedagogy, the modelling of teaching practices expected to be used by the students in their future teaching career and (c) reflective practices, reflecting on their own learning and recorded through the use of frequent journal entries.

These guiding principles were used to create the course materials sympathetic to technology-mediated learning environments. The authors used an instructional design process with five phases, Analysis, Design, Development, Implementation and Evaluation (commonly referred to as ADDIE) with the explicit analysis and design of the course as a learning process (Dick, Carey, & Carey, 2001; Gagne, Briggs, & Wager, 1992). Particular attention was given to the design of learning tasks which structured learner activity (Steeples, Jones, & Goodyear, 2002) and the development of an integrated set of course materials which included course content and learning tasks which were 'bound' together by a strong teaching narrative.

As part of that process, the first author was confronted by a number of questions and challenges to his understandings of course writing, development and teaching. Working through each of these challenges provided experiences that exemplify the changes experienced in teachers' shifts from face-to-face to flexible online teaching.

Approach and method

As the study sought to produce understanding rather than verification or evidentiary proof, a qualitative research model was deemed most appropriate. Reflection on the first author's prior experience was a central consideration. The use of a narrative approach was identified as appropriate for this study. The narrative inquiry invited the expression of a rich and detailed story and the chance to place the first author's experiences within a broader setting of embedding the experience in a three dimensional context by acknowledging the first authors past practices in the area of education along with the first author's limited online teaching and learning experiences. The use of auto-ethnographical methods supported the researcher's efforts to become immersed within the study (Ellis & Bochner, 2000). The methods adopted for this study drew on the work of Clandinin and Connelly (2000) in which narrative inquiry is found in "the midst of a three dimensional narrative inquiry space, always located somewhere along the dimensions of time, place, the personal, and the social" (p. 144). Owing to the complexity and nuance of the personal reflection required for this study, self-reflection in the form of a reflective journal was chosen as the technique for collecting data.

Techniques

The techniques adopted to collect data in this study used field notes as a primary source of data recording. These notes were collected in the form of a reflective journal during both the course development and in-process teaching. The reflective journal recorded the original questions which had confronted the first author at the start of the process, as well as any ongoing questions as they arose. The journal was handwritten (which provided the first author with an opportunity to record data at any time without the need of a computer using a pad and pen), with entry dates and times highlighting when the diary entry occurred. The entries were made regularly, usually once a week as recounts of the events of the week. The key question that guided each entry was 'What insights did I gain this week?' This added a regular structure to the researcher's responses and a pattern to the weekly reflective thinking. The composition of field notes, as highlighted by (Clandinin & Connelly, 2000), is the "way of talking about what passes for data in narrative inquiry and because data tend to carry with them the idea if objective representation of research experience" (p. 93). This method of data collection using personal observations and reflections is consistent with approaches used in other auto ethnographic research (De Freitas, 2008; Stinson, Bidwell, Jett, Powell, & Thurman, 2007).

Analysis

Analysis of the recorded data was conducted at the end of the first iteration of teaching the online course. The analysis included two analytical techniques. The first was critical incident analysis (see Francis, 1997) in which the subject was led to reflect on experiences or incidents which were confronting and led to a sense of disturbance, disquiet or disequilibrium as part of attempts to reconcile the experience of curriculum development for online learning with prior experiences with face-to-face teaching . The second was thematic analysis, which is the search for and identification of common threads that extend throughout a set of data. In this study, a theme is a unit of meaning which emerges regularly in the analysis of information (van Mannen, 1997). The act of finding meaning involved a variety of techniques, including noting patterns, splitting and combining themes, noting relations and building a logical chain of evidence (Keeves & Sowden, 1997). Beyond the analysis of the recorded data, the analysis of results involved both individual and collaborative reflection by the authors as a form of sense making around both the recorded data and their experiences within the course development and teaching processes. In particular, collaborative reflection was seen as an important technique for the authors to enrich the accounts of their learning from the experience of the course development process (see Kelly, Clarà, Kehrwald, & Danaher, 2016).

Findings: Key themes

An analysis of the reflective journal led to the identification of five key themes in the experiences of the first author: (a) 'uncertainty' related to professional practice in online course development and teaching; (b) recognising and adapting the role of 'teacher talk' in the teaching of the online course; (c) a proactive, anticipatory approach to learner support in which learners needs were anticipated and addressed in the development of course materials and processes; (d) changed notions of 'time' and the exploration of asyncronicity in the learning process and, ultimately, (e) a revised understanding of the teacher-student relationship in OL and the implied roles for the teacher in that relationship.

While the experience of course design, development and implementation was ongoing over a 12-month period, the key themes were often associated with particular points in the development process in response to critical incidents such as confronting questions, confusing situations and a variety of practical challenges. These themes became more explicit and followed one another in terms of a developmental progression as the course development and implementation increased in both conceptual complexity and the focus on situated teaching practices. The themes are presented here as a sequence which is indicative of the development of the first author's thinking as a result of his experiences.

Uncertainty: A motive for critical reflection

Several practical questions emerged in conversations between the authors before the autoethnographic process began. The diary recorded the author's reflections and resulted in both the clarification of thinking and the problem returning to the same question again and again as an impediment to progress in the development. Part of the journal's power is highlighted by the following excerpt:

Once I wrote the question down, I didn't have to waste any more of my cognitive resources remembering what these questions were. Once the questions were written down I could temporarily forget about them, and refer back to them at my leisure, reflecting and seeking an answer over time.

The initial theme that emerged from the data was 'uncertainty'. Many of the early journal entries focus on uncertainty, doubt, anxiety and confusion. These uncertainties became apparent as a consequence of the questions that surfaced as he was confronted with his status as a TEL novice. There was a distinct sense of not only 'Where do I begin?' but also 'How do I begin?' This was compounded by the lack of clarity about the relationship between his previous teaching experience and the requirements of the 'new', flexible teaching. The result was overwhelming doubt and confusion. This was highlighted in an early journal excerpt:

a day of getting no-where, spent morning thinking where to start...kept starting to write topics but not sure how they will look like – have written the beginning of three topics but need to see how they are to be sequenced on-line....need to actually see a half decent ... site so I can at least see how it will be presented.

The theme of uncertainty is an expected consequence of the 'disruptive' nature of adopting technology-enhanced approaches and changes implied in the transition from face-to-face to online learning. Despite being an experienced educator, the first author found the process of shifting from more traditional classroom teaching practices to a flexible technology-enhanced form of teaching was challenging and sometimes ambiguous. In some ways, the uncertainty experienced by the first author was necessary to the process of re-thinking his pedagogical practice in the new, unfamiliar environment.

The ongoing use of the reflective journal provided the freedom of time and greater opportunity for the questions to be addressed. During the course development process the questions derived from the reflective journal provided the framework for structuring his understanding of differences between 'good teaching' in face-to-face and online contexts. Through this process, the first author was able to take a more analytical approach to the challenges he was experiencing and prioritise them in order to identify questions that needed to be answered immediately.

The uncertainty illustrated in the reflective journal highlighted a number of instances when this occurred. Much of this 'new' knowledge about online teaching the first author sought was identified in the literature of online teaching, including understanding the affordances of the available technologies and how to use them (Jonassen, Peck, & Wilson, 1999); understanding what the students see and experience in the online learning environment (Carswell, Thomas, Petre, Price, & Richards, 2000; Kear, 2004; Thorpe & Godwin, 2006); and understanding the mechanisms for communication between teachers and students (Burgoon, 2000; Burgoon & La Poire, 1999; Benjamin A Kehrwald, 2010; Mersham, 2009; Swan, 2002).

Importantly, inherent in this search was not the necessity of replicating a face-to-face activity in an online setting but thinking about the final learning that was required, the final educational outcome, and working backwards. The adoption of a backward planning approach proved both a vital and invaluable tool. It enabled the first author to ascertain the existing pedagogical knowledge and practices, and what new practices was required. Furthermore it was a tool that bridged the gap between these two knowledge points to create a new online learning activity.

Teacher talk: The role of narrative

The second theme became apparent once the first author had become better oriented to the online learning environment. The textual narrative within the course materials and the analogous relationship between the narrative text and 'teacher talk' in face-to-face teaching situations were identified as significant. The first author recognised the narrative was a significant part of the communication and interaction between teachers and learners that supports the development of relationships between the online teacher and the online students. As detailed in the journal excerpt:

I am only going to have limited chances to let them know who I am, what am I like, it's a bit like a job interview first impressions mean a lot. This is my chance to show them my personality...every word is therefore important, my real voice is the narrative.

While the first author initially took the view that there was no apparent difference in writing a face-to-face activity with the first step identifying the learning tasks aims and objectives, it became clear to him that there was a need for extreme clarity, possibly greater than in a face-to-face context with exactly what the desired outcomes were to be. As the process unfolded the first author realised a significant difference between face-to-face and TEL – the need for a clear and explicit narrative to reduce ambiguity in the online course materials. As the journal excerpt states:

there is no second chance with this online learning. Once it's up it's up. Once the learning task is published that's it so I better get it right! I better get everything thought through before I press that button for it to go live!!

As the course development process shifted from writing to teaching, there were further realisations of the difference between online and face-to-face communication. In particular, the reflective journal highlighted the point that all communication between the teacher and students, including the contents of the study notes, the forum responses, the introductory videos and the assessment feedback, amongst others, became part of building the teacher-student relationship.

The journal entries highlighted the first author's unfamiliarity with aspects of online communication but also that he was increasingly aware of these issues and began to address them in his teaching: an absence of non-verbal cues (Gunawardena & Zittle, 1996; Swan & Shih, 2005), the shift from synchronous to asynchronous communication, and the need to overcome the 'leanness' of the textual medium to cultivate interpersonal relationships (Biocca, Harms, & Burgoon, 2003; Kehrwald, 2010). The result was a host of pragmatic teaching questions about the nature of teacher-student communication, the facilitation of dialogue and involvement, how 'teacher talk' manifests in online teaching and how to respond to emergent student needs.

Anticipating student needs

The explication of the narrative required the first author to anticipate the needs of the students before they knew what their needs were. The theme of anticipation became a key component in the design and development of the course throughout the process. This was a critical feature of the shift in the first author's thinking about teaching in face-to-face contexts compared to teaching in online contexts. The physical separation of the teacher and learner highlighted the need for attention to issues of learner support that are often taken for granted in face-to-face teaching contexts (Thorpe, 2002). The writing and development process author highlighted the need to anticipate problems before they became a reality. Once part of a narrative was written, the first author would scrutinise it for possible flaws and issues. Then, the educational course designer and academic developer would carry out a similar process. This formed an iterative cycle of revisiting written scripts and refining several times. As the journal excerpt states:

How many times am I going to write this same recurring sentence...have I answered the questions before they were asked by the students?'

This rigour in the design process of revisiting the question 'have I answered the questions before they were asked by the students?' became a core part of the development process. Although this process should occur in any educational design setting, the necessity to anticipate student needs, is more critical in online learning owing to the physical separation of the teacher and student and the potential temporal separation that accompanies asynchronous learning and teaching. Anticipation was an important part of shifting teaching activity from (a) 'reactive' in response to emergent questions or issues in face-to-face teaching toward, (b) 'interactive' teaching in which a combination of 'proactive' teaching activity in the development of learning materials which eliminated distraction and helped learners focus on the target learning activity and responsive learner support within the carefully structured learning process. Beneficial outcomes of this anticipation effect in online teaching include the minimisation of student questions or emergent issues related to procedure and operational detail and the maximisation of time spent on content-related teaching and positive teacher-student interaction.

Time: Synchronicity, asychronicity and changing notions of time

The experience of online teaching saw the fourth theme of 'time' emerge. This theme became evident as students began to engage in their learning tasks. A key observation of student activity was learner engagement at all hours of the day or night. This contradicted the first author's experience and expectations with the timing of teaching and learning activity with a realisation that online courses operate in a 24/7 environment. This type of learning activity was driven by students' learning needs and availability and required a deeper reflection by the first author on the level of pedagogical knowledge that would match this required flexibility. Furthermore, this meant that teaching activity in the form of forum responses was disconnected from the traditional teaching model of instructing and obtaining an immediate response from the learner, challenging the requirements and demanding the search for new pedagogical skills. Once the learning task was posted, the teaching was interactive, driven by student engagement, often flexibly, with teaching and learning activity happening at different times.

One point that had to be reconciled in the teacher's experiences was that while the teaching activity may be reactive, emergent and based on asynchronous interaction, the learning activity was demand driven, requiring responsive support. This was particularly challenging given that the learning for the students happened at any time. What technology provided was the possibility for the communication that was a critical feature of the learning process to be flexible and occur at any time. Thus, there was a clear need to shift teachers' thinking with respect to 'time' in the transition from face-to-face to flexible online teaching and the acknowledgment of the necessity to seek additional pedagogical knowledge and skills. In particular, this relates to the sharing of *control* whilst maintaining the provision of *support* for productive learning activity including dialogue and involvement (Coomey & Stephenson, 2001).

The teacher-student relationship

This fifth theme emerged late in the process as a result of the first author's experiences with teaching the course. It highlighted an important feature of the first author's teaching – the teacher-student relationship. In some ways, it represented a synthesis of the

previous four themes as the establishment and cultivation of productive relationships was at the core of the first author's beliefs about teaching and his enactment of the intended pedagogical approach.

With increasing amounts of teacher-student communication and interaction, the first author noted a shift in his perception of the teacher-student relationship from an online computer-mediated learning experience, with human-computer interaction in the foreground, to an experience that involved real people, both a real teacher and real students, with computer-mediation in the background. It brought a genuine human experience to the entire online learning process. The reflective journal highlights this shift. Initially, it is described in a teacher-centric way, with his views, actions and experiences in the foreground. Common questions focused on the teacher's activity, for example 'How do I (communicate ideas to students, provide feedback, address misconceptions, deal with assessments)?' This viewpoint was seemingly a translation of his activities in the classroom: at the front of the room, presenting material, answering questions, directing students as part of in-session learning activity. In contrast, as the development process moved forward and in conjunction with the identification of 'anticipation' as a key feature of course design and his growing experience with the online learning environment, the view of the teacher-student relationship portrayed in the reflective journal shifted from a focus on the teacher's activity to an empathetic view which was oriented to the learners and their viewpoints.

As a result of this shift in thinking the first author also noted a shift in his activity and his assumption of a more facilitative role in which he redirected student activity to focus on student-student interaction and supported students' efforts to engage both individually and collaboratively in the learning tasks, content and narrative contained in the course materials.

Discussion and implications

The key themes highlighted in the findings are consistent with the literature of online teaching which identifies key considerations in the shift from face-to-face to online teaching. In particular, they are aligned with the work of Coomey and Stephenson (2001) whose literature review of online teaching practices foreshadowed the experiences of the first author with respect to the categories of (a) *dialogue* which includes teacher-student and student-student communication leading to an ongoing *dialogue* or *conversation* which is part of interactive learning such as the social constructivist approach used in this case; (b) *involvement* which describes active engagement, particularly of students in productive learning activity; (c) *support* or 'learner support', which involves anticipating and responding to learners needs as part of facilitating productive learning activity (Thorpe, 2002) and (d) *control* or, more specifically, learner control, with respect to pacing, timing and management of the learning process. As detailed by Coomey and Stephenson (2001), each of these dimensions helps define the roles of online teachers and the way they enact their pedagogical commitments in online teaching.

The first author's experiences indicate a number of significant challenges in the course design, development and teaching process. These included identifying personal values related to teaching, translating established face-to-face teaching practices to online learning environments and coming to grips with new learning technologies, to name a few. Indeed, these challenges produced a shift in the thinking of the first author with respect to his relationship with students, the role he played in his online teaching and a transformation of his situated teaching practices. Specifically, the shift from a teacher-centric to a more learner-centric view of the teacher-student relationship and the students' experiences of the online learning environment precipitated a change in the first author's approach to teacher-student interaction more in keeping with a facilitative 'guide on the side' role (King, 1993). The result was the emergence of a number of new teaching practices which constituted 'good teaching' in his online teaching work.

The increased flexibility provided through web-based delivery and dynamic, asynchronous computer-mediated communication supported students' learning outside the constraints of campus class timetables. This facilitated interaction between the teacher and students and between students themselves in keeping with the social constructivist intentions of the course. Furthermore, learner centeredness was supported by the development of a clear and explicit teaching narrative throughout the learning materials which helped establish the teacher's voice and teaching presence as part of the learner's experience, while also maintaining an explicit focus on learner activity and experience. This was complimented by the teacher's efforts to maintain a visible teaching presence in the online course through visible contributions to course activity and interaction with students. The result of those interactions was the emergence of trust and productive teacher-student relationships.

Central to these changes was the use of a backward design approach (Kang & Jeon, 2016; Wiggins & McTighe, 2001). This provided a clear process to identify the required learning outcome, the existing pedagogical knowledge of the online course writer, and what new pedagogical knowledge or skills were required.

Taken together, these changed teaching practices helped the teacher realise a level of quality (measured by the student satisfaction with their course experience) in the online version of the course, which met or exceeded the levels of quality that had existed in the previous on campus version of the course.

Conclusions

Ragan (1998) has argued that "good teaching is good teaching" when comparing the guiding principles online and education more generally. This study has explored this notion in the context of shifting from successful on campus teaching to an online version of an undergraduate numeracy course. In particular, these findings address the key questions identified above, namely: How do teaching academics translate a robust, proven on-campus course into a successful, flexibly delivered online course? How do they translate (or

adapt) their teaching practices to the online environment? How do they experience this change in the shift from on campus to online teaching?

Although the conclusions are based on a single individual and are therefore not highly generalisable, they lend support to several important ideas in the consideration of a shift from face-to-face to online teaching. First, that high level pedagogical commitments and principles of good practice are applicable across modes of delivery, with the caveat that situated teaching practices may not be transferrable and indeed, are likely to change, perhaps even radically in a shift to online learning. If the experiences of the first author are typical, then it would seem that the current body of research in online teaching and learning highlights a number of important shifts in teaching practice. Many of these relate to the teacher's role (Coomey & Stephenson, 2001), the teacher-student relationship and communication and interaction in the online learning environment (Burgoon & La Poire, 1999; Kehrwald, 2010; Mersham, 2009) and reflective practice.

The experiences of the first author support three main conclusions in this case study. The first is support for the notion that 'good teaching is good teaching' when such a statement refers to the high level pedagogical commitments and principles that inform the design, development and teaching of a course. The design of learning tasks that focussed on engaging the learner in situations that were of a real world nature, where the learner could draw on their everyday life experiences, reflected the strong teaching narrative found in all learning tasks. Situating the learning tasks in contexts such as the learner reflecting about the numeracy issues associated with their mobile (cell) phone plan, along with a clear sequence of learning procedures, provided each task with a consistency and familiarity that gave further support to online learning.

In this case, a successful on campus course which was premised on a constructivist view of learning and employed a social constructivist approach to planning and teaching was successfully redeveloped as an online course with a nearly identical conceptual foundation. Working within a systematic course design and development process which included a number of general principles of good practice in educational design and pairing it with an autoethnographic research process allowed the first author to overcome challenges encountered in the shift from face-to-face to online teaching.

However, the enactment of the teaching differed greatly between the two versions of the course. The second conclusion then is that the shift from face-to-face teaching to online teaching implies a changed set of teaching practices. In this case, the degree of change was transformational, resulting from radically changed thinking on the part of the teacher which accompanied his deepening understanding of online learning and the experience and activity of online learners. As expressed by de Laat et al. (2007), "Teaching styles developed during face-to-face teaching cannot simply be transferred to an online learning environment and it is important to develop an insight into the complex online teaching processes and strategies to build the necessary skills and competencies to teach online" (p. 260). de Laat et al. (2007) continues and suggests that although, "the way these tasks are embodied and executed in a networked learning environment bids for a re-orientation" (p. 260).

The "re-orientation" described by de Laat et al. (2007) was evident in this case study as the first author revised his thinking about the nature and operation of the teacher-student relationships in his online teaching, allowing for increasing learner agency and control whilst maintaining a role as active, supportive facilitator. This re-orientation however was aiding significantly by the backward planning approach and guided the direction necessary for the first author to pursue to the appropriate pedagogical knowledge required to successfully design the new online course.

Students identified a high level of satisfaction for the online course. This satisfaction was in part, related to the flexibility of engaging with online learning at their own pace and when they wanted. This positive experience was complemented with what they considered to be highly thought through and presented online learning tasks, equal to what they would have experienced in a face-to-face situation. So, the third conclusion reached in this study is that starting with a successful on campus course, the shift to successful online learning presents opportunities to improve the course in particular ways. That is, good teaching on campus can lead to better teaching online. The conjecture in this case is that the overall improvement in the course was supported by two aspects of the process (a) while maintaining high level pedagogical commitments of a successful prior course, the first author worked through a systematic design, development and implementation process and (b) the first author intentionally worked through the differences between on campus and online teaching through a combination of his teaching experience, a structured development process and reflective practices as part of the autoethnographic research.

While further work is needed to study other measures of course quality, the preliminary indication is that the online course suggests 'good teaching' is 'good teaching'. The need for further study to identify factors which support this successful transformation and improvement in the shift to online learning, this result foreshadows ongoing success for courses which are specifically designed and developed for online delivery and taught by teachers with a commitment to their own professional learning and development.

Biographies

Brendan Bentley specializes in teaching Science and Mathematics Education at the University of South Australia. He has been a school leader and educator in excess of 30-years. His general interests are in cognition, cognitive load theory and learning. He has published in the area of civics and values education, and is an active researcher in the curriculum disciplines of science and mathematics education in particular proportional reasoning.

Benjamin Kehrwald is a specialist in online learning with more than twenty years' experience with education technology. His work centres on technology-mediated social processes as part of social learning in networked environments. He teaches, researches, designs and develops online and blended courses in Australia.

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