Motivating change from lecture-tutorial modes to less traditional forms of teaching

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Teaching academics are under pressure to move away from traditional lecture-tutorial teaching modes to less traditional forms. Such pressures are in addition to changes to funding arrangements and other developments that increasingly oblige universities to operate as businesses. The flow-on effects for teachers are increased student:staff ratios, changes in student diversity and less face-to-face time, while also being required to meet expectations for increased research output. While it has become the norm to shift away from traditional teaching methods, individuals are not always equipped with educational theory nor the time, technology and motivations to change significantly what they do. We draw upon a workplace audit that explored the use of four non-traditional teaching and learning modes. These modes were chosen because of professional development workshops available centrally at our university and because they offered promise in terms of time-saving for teachers and educational effectiveness for students. The majority of respondents reported using one or more of these non-traditional teaching and learning modes. However, contradictory information in qualitative descriptions suggested that this majority had limited knowledge about the technicalities and the application of these modes; instead they attempted to fit descriptions of their traditional teaching into the non-traditional descriptors provided. While we seek to understand these responses, which may well be a form of resistance, we consider how diffusion of innovation theory may provide insight into why change has not been forthcoming.

Keywords: university teaching, traditional teaching methods, lectures, tutorials

Introduction

When academics are asked to change their teaching from traditional lecture-tutorial modes to less traditional forms, they might ask, ‘What’s in it for us?’ But there may not be easy answers unless these individuals can observe potential benefits of something new and be supported to test it for themselves. The problem is that teaching academics are under increasing pressures to teach more and research more. Developing new materials to enable change of teaching mode is an added burden and, in itself, pressure to change can become a source of resistance.

In this paper we commence by sharing our two very different journeys toward the use of non-traditional teaching and learning modes, which will resonate with others. We offer that a supported change process is the better of our two alternatives, but also contemplate contexts in which teaching academics may feel pressured to change at the same time compelled to remain steadfast in old ways. Diffusion of innovation theory helps us to explore barriers to mainstream majority change in
teaching at our own work location, as well as potential strategies that may support colleagues in our faculty to transition to less traditional teaching. As described by Rogers (2003) diffusion of innovation theory offers insight into how something new is communicated among individuals in a given social system over time. We consider that diffusion of innovation theory offers insight for targeting support strategies for knowledge acquisition and subsequent uptake of new teaching modes, as well as advocating up for resources, time and space for our colleagues.

Our journeys

Shortly after commencing as a teaching academic at Flinders University I became a member of a school teaching and learning committee, then later appointed as faculty chair. With no formal schooling in educational theory, little experience as a teaching academic and no research interests in university education I questioned, ‘Why me?’ In my view, I was green: flying by the seat of my pants; just keeping my head above water; and, staying one step ahead of my students. I was not doing anything particularly innovative or outstanding. I was simply trying to stimulate student enthusiasm for learning, efficiently so to balance teaching with my research, and within the confines of my knowledge, resources and space available to me. Is this not what all of us are doing?

I was perceived as innovative in my teaching design and engagement with students, which I adapted from the teaching and learning styles I enjoyed as an undergraduate. I had large student numbers and threadbare teaching space, so I created knowledge acquisition, interactive and assessment opportunities in virtual space which left face-to-face time available to rotate smaller student groups through my interactive workshops. I was simply managing large numbers of students in whatever way I could, for my own survival, while also trying to make learning enjoyable and relevant. I used curriculum matrices for engaging students in co-creation of their own learning pathways. As well, I drew from the pre-knowledge my students brought to the classroom and this helped with sharing of expertise with peers. The blend of face-to-face learning and interactive online work moved students to taking responsibility for their own learning and the directions they took. While driven by anxiety, this haphazard approach allowed me to shift greater responsibility to my students and to manage my workload. What I applied was by trial and error, lengthy and at great costs to my research time and work-life balance. I did not know of the educational theories to inform what I was doing, such as ‘popular education’ (Freire, 1974), ‘assumptions of adult learners’ (Knowles, 1972), ‘participatory learning’ (Kucukaydin & Cranton, 2012) and ‘flipped classrooms’ (Bergmann & Sams, 2008). Had I had more knowledge, support and understanding of educational theory and methods from the onset, my journey would have been much less arduous.

On the other hand my colleague and co-author applied a model for teaching and learning that was grounded in educational theory and method. His implementation was informed, which ensured a smooth change process that impacted little on his research time. With the introduction of flipped teaching and team-based learning he observed positive changes in student attendance, participation in workshops and good feedback from student satisfaction surveys. Students were engaging in content material specific to their discipline while also developing professional etiquette and other skills relevant to their future employment (Kenny, 2011; Kenny, 2012). For my colleague the benefit of flipping meant that student knowledge acquisition traditionally done in lectures took place outside of the classroom, small stake assessment upon arrival at workshops negated ‘free-riders’ and teamwork helped strengthen depth of understanding and application of knowledge; the products of teamwork were also assessed. The obvious benefits were increased student engagement in pre-learning, peer and teacher support for students when developing their thinking in workshops, and reduction in marking time outside of face-to-face sessions. All this made the teaching more enjoyable because teaching was managed and not impacting on other commitments. The relatively small up-front investment of preparatory time translated into large returns in subsequent years. While we both experienced significant benefits from the use of non-traditional teaching, in contrast my up-front investment was large.

Whether or not our approaches could be named, we shared teaching and learning models that offered promise in terms of student engagement, educational success and...
our own time efficiency; we believe more so than most traditional lecture-tutorial configurations (Bergmann & Sams, 2008; Kenny, 2011; Kenny, 2012; Michaelsen & Sweet, 2008; Picciano, 2011; Ramsden, 2003). My teaching approaches were driven by my anxiety and fears about workload, which is not a healthy way for anyone to function. On the other hand, my colleague experienced an informed and supported transition to non-traditional teaching. We conferred and agreed his was the easier journey. But we also acknowledge changing university contexts, external and internal, that have created anxious environments for teaching academics. For many, this makes change difficult. While we seek to understand the contexts that have created imperatives for change, our ultimate endeavour is to consider how we might advocate for greater support for our colleagues to transition to non-traditional teaching in an ever evolving higher education environment. This is in preference to having demands foisted upon them, which could result in increased levels of resistance.

Changing contexts

The Review of Australian Higher Education (Bradley et al., 2008) required implementation of quality assurance frameworks for the higher education sector and there have been a range of responses by Australian universities. With some relevance to this paper are the introduction of centralised professional development programmes to support improvements in teaching and learning (Keirle & Morgan, 2011) and audits to ensure that quality assurance frameworks are met (Department of Education Employment and Workplace Relations, 2009). All this imposes additional pressures on teaching academics, particularly when amidst constantly changing socio-political and economic climates informing academia. For example, student:staff ratios continually rise and workload allocations are always changing – not often in favour of individuals. But changing dynamics of the higher education landscape does not stop there. Pressure to secure outside funding and competition has grown into an ‘enterprise’ culture in which teaching academics are asked to meet key performance indicators in research at the same time as managing exponential changes in teaching.

The removal of university enrolment caps (Bradley et al., 2008; Keirle & Morgan, 2011), the abolition of further enrolment controls in 2012 (Norton, 2013) and steep rises in domestic student enrolments across socio-economic groups have had an impact on Australian university teaching. While more domestic students are accessing university education (Bentley et al., 2014), government cost-cutting has influenced Australian universities to seek full fee-paying students mostly from overseas (Forbes-Mewett & Nyland, 2013; Robertson, 2014). International students represent over a quarter of Australian university enrolments and they contribute approximately 40 per cent of student revenue, but spending per capita in the classroom is argued to have not likewise increased (Bentley et al., 2014). The reality of more students and relatively fewer resources has no doubt affected the nature of the classroom (Sawir, 2013), and evolutions in student diversity has added even more pressures on university teachers.

It is often noted that Australian university students are more diverse in terms of cultural makeup than in any previous decades. For example, there has been growth in middle- to older-age students (Cooper, 2007; Roeder, 2006), more students of low socio-economic status (Klinger & Murray, 2012) and refugee backgrounds (Wache & Zufferey, 2013) are accessing university, and global mobility of students to Australia has increased (Sawir, 2013). Immigration pathways via tertiary education have attracted more students whose choice of study is not necessarily the same as the degree into which they are admitted, which presents as variable in motivation for study (Khoo, Hugo & McDonald, 2008; Robertson, 2014). All this means that university students are multifarious in terms of educational background, learning-style preferences, work experience, motivation and their approaches to study (Cooper, 2007; Gursansky & Le Sueur, 2005). Researchers have highlighted that contemporary students are also balancing work, life and study; many demand less on-campus time and/or real-time commitments and they want less lecturing and more interaction when they do attend (Campos-Sánchez et al., 2013; Erol et al., 2012). Others have noted that students want more use of information technology (Johnson & Luo, 2012; Mirk et al., 2010; Steenkamp & Rudman, 2013) and flexibility in completing their degrees (Lawrence et al., 2013; Taylor & Newton, 2013). Ensuring quality education in an environment of ‘doing more with less’ while also maintaining personal and institutional reputation has put immense pressure on teaching academics to respond by changing their teaching approaches. It appears from our audit of four non-traditional teaching and learning modes that in our faculty there is awareness of non-traditional teaching modes, at least by name. Despite this, there remain a number of challenges with achieving individual and mainstream change.
Local response

My colleague undertook a workplace audit of teaching and learning modes in use at our faculty. He asked teaching academics (n=102) whether they used one or more of the following four non-traditional teaching modes. If they were in use, the audit asked for detail on how they were applied:

1. Active learning: An umbrella term that refers to several models of instruction that ‘involves students in doing things and thinking about the things they are doing’ (Bonwell & Eison, 1991), thereby shifting the responsibility of learning to learners.

2. Blended learning: ‘Courses that integrate online with traditional face-to-face class activities in a planned, pedagogically valuable manner; and where a portion (institutionally defined) of face-to-face time is replaced by online activity’ (Picciano, 2011, p. 4).

3. Flipped teaching: Material traditionally presented in lectures are pre-recorded and students watch these before attending class, while learning traditionally done as homework is completed in class where teacher assistance is available (Bergmann & Sams, 2008).

4. Team-based learning: Practices involving independent out-of-class preparation for in-class interactive learning in small groups that is aimed to improve the application of learned material. The majority of face-to-face time used for group work and group assignments, which aim to develop self-managed learning teams (Michaelsen & Sweet, 2008).

Forty-five faculty staff members, representing a response rate of approximately 44 per cent, responded to the audit by providing information about the teaching and learning modes they used across 107 subjects. Thirty-seven respondents (82 per cent) stated that they used at least one of the four non-traditional modes in at least one of their subjects; 78 per cent (n=83) of subjects applied active learning; 69 per cent (n=64) blended learning; 33 per cent (n=35) flipped teaching; and, 33 per cent (n=35) team based learning. This represented 217 stated applications of non-traditional teaching modes in 91 subjects. Respondents provided that 16 subjects used only traditional teaching modes, 20 subjects used a single non-traditional mode and 71 subjects used a combination of more than one mode. Two respondents advised that, while they used non-traditional modes, they each had one subject where only traditional teaching modes were in use. Eight respondents (18 per cent), responsible for 14 subjects, applied only traditional lecture-tutorial modes.

The audit asked respondents to indicate ‘yes’ against the non-traditional modes if used, then describe how it was applied to their teaching and learning. In relation to each stated application (n=217), nearly 90 per cent (n=195) of descriptions did not support the use of the specified modes. For example, in describing the application of active learning the majority of respondents stated that they gave students questions and case studies to work on during tutorials, which required knowledge from the prescribed readings and lectures. This approach appeared more traditional in application because it did not necessarily shift responsibility for learning to learners. Likewise, the majority of respondents who said they applied blended learning provided little information to support they had deviated far from traditional lecture-tutorial modes. For example, many described that they engaged blended learning by providing students with recording of their lectures on the university’s online learning site, as required by the university. The use of the online sites for information did not achieve integration of online with face-to-face learning in a ‘planned, pedagogically valuable manner’ (Picciano, 2011, p. 4). The majority who said they used blended learning, therefore, were not. While it appeared that a few respondents had partially flipped their classrooms, a large majority of student work that was traditionally required to be done out-of-class remained out-of-class. On the basis of descriptions provided, only one respondent implemented team-based learning. Others who facilitated small student group discussions offered descriptions that had no apparent difference to non-assessed group discussion activities in traditional tutorials.

Respondents who indicated they did not use one or more of the four non-traditional teaching and learning modes in one or more of their subjects were given the opportunity to explain. Eleven indicated their intention to change, seven stated they did not have necessary equipment to ‘blend’ or ‘flip’, four preferred traditional lecture-tutorial teaching or provided various other reasons. Qualitative responses confirmed our prior anecdotal observations that the use of non-traditional teaching was limited; no more than 10 per cent of teaching academics in our faculty appeared to be applying one or more of the non-traditional teaching and learning modes. This was despite mandatory professional development activities in teaching for all new teaching academics employed at our university, and all four non-traditional modes being promoted as exemplars in central and localised professional development activities available to teaching staff.
Our observations is of low attendance rates by academic staff at our university’s centralised professional development programmes. Local programmes in our faculty are often less well attended. On the other hand, we have seen that staff participate more in research support programmes. The Grattan Institute’s *Mapping Australian Higher Education* helps to explain this: they reported that research carries greater prestige among academics than teaching and cited an international survey of academics from 18 countries in which Australia ranked fourth lowest in their preference for teaching when compared to research (Coates et al., 2009, in Norton, 2013). This presents some obvious challenges for increasing uptake of non-traditional teaching, particularly when teaching in Australia is already on the back foot. Change might be inevitable, but it is organic and slow. In consideration, we explore diffusion of innovation theory and consider the insights it offers into affecting the rate of teaching mode change.

**Diffusion process and adopter types**

Diffusion of innovation is a process involving the communication of something new among individuals in a social system over time (Rogers, 2003). It relies predominantly on human capital and can be articulated as a series of five consequential stages; knowledge of an innovation, persuasion to consider or try it, decision to adopt, implementation of the innovation and evidence that sustained use is worthwhile. An ideal diffusion of innovation process would pass progressively through each of these stages. Once an innovation is in use by the mainstream majority, 84 per cent of individuals (see Figure 1), diffusion is considered successful. But diffusion can also be iterative or become stagnant. For example, adopters may reject or ‘put on hold’ the use of something new until there is more evidence that adoption will be worthwhile, or until there is time and resources to support adoption and capacity to evaluate viability for longer term use. As well, new innovations may render existing ones obsolete before existing ones have had a chance to successfully diffuse. Finally, diffusion is affected by the characteristics of communicators and adopters, workplace culture, institutional regimes (Lyytinen & Damsgaard, 2001) and complexity of the innovation (McLaren et al., 2008). Rogers (2003) suggested that if barriers, facilitators, communicators and adopter types can be identified that it may be possible to develop strategies in support of the spread of something new and according to the complexity of the innovation, stage of diffusion and the characteristics of individuals involved.

Rogers (2003) categorised individuals in a given social system on the basis of time it took for them to adopt an innovation (refer to category descriptors in Figure 1). Innovators and early adopters are more likely predisposed to innovative behaviour, which require different strategies to stimulate innovation as opposed to diffusing innovations among the mainstream majority. Moore (2006) extended on the work of Rogers (2003) and proposed the existence of a ‘deep dividing chasm that separates the early minority of innovators and early adopters from the remaining groups’. Moore (2006) suggested that an innovation must be in use by approximately 16 per cent of the social system (innovators and early adopters) before diffusion strategies aimed at the mainstream majority will have chance of success. The issue in our faculty is that with
no more than 10 per cent of teachers using one or more of the non-traditional teaching and learning modes, there is insufficient human capital to communicate benefits that may result from changing teaching mode. Hence strategies to stimulate innovativeness should be priority then, once sufficient innovation and early adoption is achieved, strategies aimed at mainstream use are more likely to achieve success.

Innovators and early adopters are more often horizontally networked than the mainstream majority (Taylor & Newton, 2013). This means they will generally be motivated to go beyond their immediate workplace or university in search for new teaching ideas. They are ‘venturesome’ (Rogers, 2003) educators when compared to conservative others (mainstream majority and laggards). On the other hand, the mainstream majority are more likely to be vertically networked. This means that they are unlikely to venture outside their immediate social system (Taylor & Newton, 2013) to learn new ways, but pick up ideas locally from others around them. This is why it is critical for diffusion to have sufficient innovators and early adopters in a given social system; that is, so others can pick up ideas and observe proven benefits such as saved teaching time. It becomes decisive to target diffusion strategies according to whether individuals are innovators and early adopters, or majority others. For example, greater incentives to innovate and share, then localised strategies to diffuse among others. However, the pressure for teaching academics ‘to do’ rather than to diffuse their teaching means that the minority of innovators and early adopters may not perform the role of sharing, especially if there is no obvious reward or benefit to themselves (McLaren et al., 2008).

While centralised programmes may be of interest to horizontal networkers, others may not have the same regard. Wilson and Stacey (2004) articulated the benefits of ‘a localised, faculty based approach to the provision of staff development’ that targets vertical networkers ‘with staff appointed to work alongside of and provide peer support to others engaged in adopting new technologies in teaching and learning, building on good practices that already exist’ (p. 40). At our faculty, there are one-on-one strategies in place to support communication of teaching innovations between colleagues. These include a peer review of teaching strategy and a colleague assisted subject improvement programme. The problem is that innovators and early adopters are not strategically paired with mainstream others. This means that there is more chance of communicating traditional teaching or misunderstandings of non-traditional modes, than ‘adopting new technologies in teaching and learning’ (Wilson & Stacey, 2004 p. 40). Jacobsen (2000) argued that early adopters often make the use of innovations look relatively easy, thereby they mask the knowledge and skills that the mainstream majority need in order to adopt it. Mainstream majorities are not necessarily adverse to evolutionary change, but if staff are not strategically paired they may not acquire adequate knowledge of an innovation or have the opportunity to work alongside appropriate others to learn. Without opportunity, perceived complexity may prevent adoption.

The need for change

In response to changing contexts, Australian universities have variably applied cost-saving strategies that include employment freezes, streamlining of programmes and increased student:staff ratios (Bentley et al., 2014; McDonald, 2013). Alongside neoliberal trends and global economic capitalism, this has made way for universities to increasingly operate as global businesses (Brown & Lauder, 2012; Daymon & Durkin, 2013). The competitiveness of Australian universities has grown to ensure a slice of domestic student markets, online education, the expanding international higher education market and research related grants (Von der Heidt, 2013). This has an inevitable impact on the experiences of teaching academics who are expected to manage titanic shifts in teaching and learning (Keirle & Morgan, 2011). As well, the tendency toward reducing face-to-face contact time with students (Symonds, 2014) pressures academics to either be ‘leaner and meaner’ or to develop the pedagogical expertise (Keirle & Morgan, 2011) needed to maintain quality education. The need to understand how to diffuse knowledge and methods among individual teaching academics, to enable teaching ‘smarter’ is necessary for individual wellbeing, student outcomes and university reputation.

Reducing face-to-face time in our faculty often results in maintaining the length of traditional lectures and shortening tutorials. Tutorials are the place that traditionally interaction and engagement in deep learning is more likely. Hence reducing face-to-face time with students is done at the expense of interactive learning. Keeping traditional teaching as dominant, with reduced time for discussing learning materials, problem-solving and thinking, puts the quality education at risk (Prideaux et al., 2013; Wolf & Archer, 2013). In addition, changing one’s way of teaching may be limited by other local challenges that include workload priorities in favour of
research, lack of incentives offered for staff to change and limited knowledge of the time-benefits of non-traditional teaching. Traditional teaching space and timetabling can also make implementing non-traditional teaching modes difficult for those individuals without the pedagogical expertise to do so.

Our audit of non-traditional teaching indicated that the majority of respondents were engaged in traditional teaching. According to Figure 1, they are the mainstream majority and laggards. Communicating and subsequent diffusion of the four non-traditional teaching modes to these groups will be difficult if there is insufficient mass of innovators and early adopters to cross the diffusion chasm. As well, the majority who incorrectly said they used one or more of the non-traditional modes may not wish to engage in teaching and learning knowledge acquisition if they believe they are already using them. Some respondents fitted their traditional teaching descriptions into the non-traditional audit descriptors and may have done so to prevent scrutiny or as a form of resistance.

In our faculty, it appears that we have less than 10 per cent of teaching academics who are innovators and early adopters of non-traditional teaching and learning modes. Hence the human capital with the knowledge of educational theory and method necessary to communicate these modes to the mainstream majority is currently insufficient. Diffusion of innovation theory conveys that motivation to try something new and subsequent uptake is more likely once the diffusion of innovation chasm has been crossed, hence crossing the chasm is priority. That means growing a culture of innovation with the use of adequate incentives and rewards in the first instance. Once the early minority reach a critical mass of 16 per cent, they are the ones that need to be encouraged and supported to communicate their teaching modes to mainstream others. But when it is known that research carries greater prestige than teaching among academics at Australian universities, time spent sharing teaching and learning innovations rather than doing, to the expense of research, is a barrier. Stimulating innovation, early adoption and communication to others needs to carry sufficient benefits to be perceived as worthwhile.

Conclusion

While the political and socio-economic environments currently informing Australian universities highlight that prestige and higher rewards are to be found in research, we acknowledge that the current system may give rise to perceptions that traditional teaching is easier. It cannot be expected that every teaching academic will balance their regard for teaching equally with research, nor make effort to change even when benefits are obvious. Attending professional development or communicating with peers about their teaching may be met with the same disregard - simply, attitudes do exist that putting more effort into teaching it is not supported, time-consuming, not well regarded and not worthwhile. However, we suggest that if more effort is put into rewarding innovation and dissemination of teaching innovations that more academic teachers might see the value of being innovators themselves. With sufficient innovators and early adopters, increased levels of communication needed to cross the chasm is more likely. Investing resources according to horizontal and vertical networker (adopter type and stage of diffusion) may translate into cost-saving and benefits for individuals and their institutions in the longer term.

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References


