

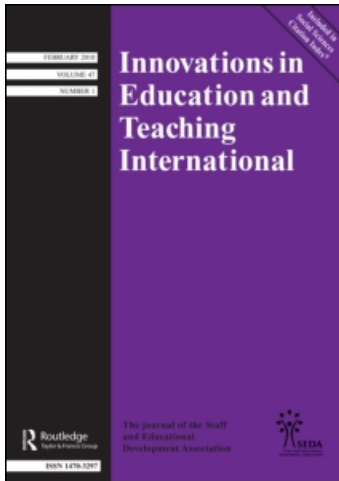
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# **The impact of teacher beliefs on flexible learning innovation: some practices and possibilities for academic developers**

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It has long been acknowledged that the beliefs of university teachers can have a significant impact on the success of flexible learning innovations in tertiary settings (Errington, 1985, 2001; McDiarmid, 1990; Pajares, 1992; Calderhead, 1996; Richardson, 1996; Hofer & Pintrich, 1997; Tatto, 1998). The infrastructure for the adoption or rejection of such innovation exists as much at the level of beliefs as it does on any physical resources plane. The consequence of this assumption is that what teachers believe is possible within their learning arenas, and what they actually manage to do/achieve, are factors subject to a range of beliefs, central to which are beliefs about teaching and learning per se. This paper discusses the impact of teachers' beliefs on flexible notions of teaching and learning; extricates the issues and challenges facing academic developers and, finally, explores practical ways by which the author and colleagues are currently attempting to address these challenges with their own staff.

## **Introduction**

As a staff developer at Massey University, I am responsible for planning, delivering and evaluating a University-wide, 'flexible learning and teaching' development programme. This aims to help teachers explore the relationships between teaching, learning and technology. When facilitating the programme, I habitually note how the adoption of particular flexible learning approaches is influenced—not so much by the availability of physical resources, though these are important, but more by the held beliefs of the participating teachers.

A review of the literature suggests that the impact of teacher beliefs on innovation in learning and teaching has been well documented (Errington, 1985, 2001; McDiarmid, 1990; Pajares, 1992; Calderhead, 1996; Richardson, 1996; Hofer & Pintrich, 1997; Tatto, 1998). In

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particular, teacher beliefs are seen to constitute: a ‘professional set of guidelines for teaching’ (Combs, 1982, p. vii); a blueprint for what is or is not possible; an open or closed door to promote, inhibit or resist change, and a collective climate that can foster or inhibit innovation (Errington, 1985, 2001). Their ‘substance’ provides teachers’ personal practical theories of teaching and knowledge from which springs professional action (Marland, 1997; Haigh, 1998).

Teacher dispositions appear to have a potentially significant impact on innovation by influencing what is possible, desirable, achievable and relevant from the teacher’s own governing perspective.

Given these observations, the aims of this paper are threefold. The first is to highlight the impact of teacher beliefs on flexible learning innovations (first section). The second is to extricate from these observations the kinds of challenges facing academic/staff developers wishing, like myself, to advance particular flexible learning approaches (second section). The final aim is to outline the kinds of strategies that we employ at Massey—ones that acknowledge and attempt to address the primacy effect of teacher beliefs on flexible learning innovations (third section). Working alongside colleagues, I draw on individual and shared working knowledge as a staff developer—academic and general—in the UK, Australia and New Zealand—in order to offer some useful strategies to meet the challenges outlined.

A beginning is made with a discussion about the impact of teacher beliefs on flexible learning innovation.

### **Teacher beliefs and ‘flexible learning’ innovation**

What teachers believe about flexible learning delivery has an impact on what can be achieved through professional development events (practical workshops, seminars, individual consultations). ‘Flexible learning delivery’ can mean different things to different people. However, the notion of ‘flexibility’ in my professional context is fundamentally about making the University’s course offerings more accessible in a broader range of educational settings (on-campus, cross-campus, off-campus, workplace, home, international), to a more diverse range of student groups studying at undergraduate, postgraduate and professional levels. The implications for teachers of moving from one or more delivery mode to others can be enormous—particularly for those who have only experienced on-campus teaching.

In order to highlight the influence of teacher beliefs on flexible learning possibilities, it is useful to view teacher beliefs as belief ‘systems’ (Rokeach, 1970; Combs, 1982; Errington, 1985, 2001). Central to a teacher’s belief system are likely to be dispositions regarding teaching and learning. These encompass held beliefs about what teachers believe they should be teaching, what learners should be learning, and the respective roles of teachers and learners in pursuing both. The criteria for educational choices is likely to extend well beyond the singular pursuit of learning objectives to envelop a much broader range of beliefs, such as, views about learners and learning, perceptions of ‘worthwhile’ knowledge, and the organization of learning. Toohey (1999) observes that these kinds of dispositions transcend individual teacher choices and enter the broader professional discourse used to define educational goals, delivery of subject content and assessment practices.

*Beliefs about teaching, learning and what is 'worthwhile'*

Teacher judgements about what is worth knowing and understanding, and what is best left alone are guided by notions of what is 'worthwhile', 'possible', 'relevant' and 'supported' in the light of other held beliefs about teaching and learning.

In determining what is considered 'worthwhile', it follows that teachers who subscribe to one set of viewpoints are likely to act in a manner different from those adopting some other perspective. Flexible learning innovations acceptable to one staff member may not necessarily be acceptable to another—according to contrasting visions of what is considered 'worthwhile' pursuing, alongside the shared views of local and/or subject-based cultures to which teachers subscribe. The latter may inhibit or support change. What is clear is that the primacy effect of teacher beliefs will be likely to induce teachers to put beliefs into practice. Whether teachers act in an implicit way to held beliefs, or from a more informed, articulate stand, they will express what constitutes worthwhile teaching and learning for them anyway.

*Beliefs about teaching, learning and what is 'possible'*

For various reasons teacher beliefs may be relatively open or closed in their views about flexible learning innovation. The degree of openness to new or different ideas will certainly influence what is seen as possible or appropriate within the light of other held beliefs about, for example, student resistance, or degree of institutional/cultural support.

There are many reasons why teachers might be afraid to move towards more flexible options—particularly in regard to using the Internet for learning delivery. We hear teachers express concern about how to make students more visible on Internet-delivered courses; how to personalize tutor and student involvement; how to engage students in more interactive learning; how to diversify and pace learning activities/tasks; and how to develop more effective strategies for learning reinforcement, review and reflection. Teachers contemplating moves into more flexible forms of learning delivery also express fears about losing ownership of their learning materials when placed on the World Wide Web, the validity and reliability of learning assessment, and the potential lack of 'real' contact with students. Academic developers can help teachers address and modify negative beliefs (fears) about innovation in a systematic, coherent manner within a supportive environment.

*Beliefs about teaching, learning and what is 'relevant'*

Beyond the 'possible' is the notion of 'relevance': how relevant is flexible learning delivery to the participating teachers? Mar and Mak (1998) point out that what teachers believe about 'flexible' learning is influenced by beliefs about teaching and learning. If the educational purposes surrounding flexible learning are viewed as peripheral to more centrally held beliefs about the purposes of teaching and learning per se, then it may be seen as irrelevant to the overall learning tasks of the teacher.

Rokeach (1970, p. 83) adds that the acceptance or rejection of people, and their ideas, depends heavily on a continuum of similarity between belief systems and we also tend to value a given belief or set of dispositions, in proportion to the degree of congruence with our own.

What is the degree of fit between the beliefs of participating teachers and the exponents of contemporary flexible learning practice? For instance, it is observable that protagonists of contemporary open, distance and flexible learning support a learning management approach to teaching (as opposed to a ‘sage on the stage’ model); greater equity in teacher–student power relationships; diversity of student populations; equity of learning access; independent learning; negotiated learning tasks; variety of learning media delivery; and opportunities for reflective learning (Marland, 1997, p. 75).

### *Beliefs about teaching, learning and notions of ‘support’*

On the face of it, teachers’ decisions to adopt more innovative practices may only appear limited by the number of available options. However, given the primacy of teacher beliefs on this adoption, it could be the actual choices for some teachers may be minimized, and for others could be non-existent.

Decisions about the kind of flexible learning initiatives in which teachers feel they can participate are influenced by the degree of perceived support available at all levels of the institution. The quality of this support for new initiatives is embedded within the institution’s own culture. This cultural climate, constituting a complex range of collective beliefs, is likely to determine the degree to which change can or will be facilitated by teachers.

Forster and Hewson (1998) note that universities need to develop from a set of collective beliefs towards a collective aspiration if they are to be supportive of desired results. Visions need to be shared and supported. There is need for a collective institutional vision with clear leadership, and sound commitment to the enhancement of flexible learning. Management needs to send the correct supportive messages via appropriate policies and strategies—ones that are clearly designed to facilitate flexible learning options rather than pay them lip service. Institutions need to be very clear about the kinds and degrees of flexible learning support they are willing and/or able to resource. Which kinds of flexible innovations will be supported and which will not?

Toohey (1999) points out that pressure generates the need for change, but it is support that facilitates such changes. This support comes from a variety of sources; in summary, it is generated by colleagues, students and management.

Academic developers can usefully facilitate a critical examination of perceived resources and constraints by teachers—helping them optimize resources and minimize constraints. Feedback from teachers to management via academic development provides a useful channel to let managers know where they need to focus their energies if they wish to convince staff that a flexible learning strategy is worthwhile—beyond the policy documents.

### **Summary of challenges facing academic developers**

How can academic developers:

- Engage teachers in a constructive dialogue about their personal and shared theories of teaching and learning that influence the perceived worth of flexible learning innovations?
- Help teachers identify what they regard as ‘worthwhile’ innovation?
- Help teachers acknowledge and address their fears about flexible learning innovation in a positive and constructive manner?

- Help teachers to explore and optimize the match between their current theories of teaching and learning and those expounded by protagonists of flexible learning?
- Raise the profile of teaching within the institution so that advances in teaching and learning (with attendant time commitment) are seen as relevant to participating teachers?
- Help teachers locate appropriate support for flexible learning initiatives?
- Assist teachers in critically examining perceived resources and constraints, and by so doing, help maximize resources and minimize constraints?
- Help teachers make constructive links between held beliefs about teaching and learning, and technical skills (e.g. technical aspects of putting subject content online) training to achieve desired ends?
- Lead teachers in a critical examination of available media options and the kinds of learning and teaching they might best support?
- Foster an overall positive cultural (beliefs) climate?
- Given the impact of beliefs about teaching and learning on all aspects of innovation, how might these challenges be met through academic development?

### **Meeting challenges through academic development**

Brown (2001) points out innovation can fail when it has no related academic development strategy. Colleagues and I have found the following strategies useful in attempting to meet the challenges described above. As academic developers we:

#### *Engage teachers in dialogue about their personal theories of learning and teaching*

We ask teachers to recount recent teaching incidents where an element of innovation was involved, for instance when trying out some ‘new’ technique (for them), such as role-play, and to consider their attitudes towards it at the time. In organizational terms, teachers are invited to share/compare experiences in small groups and then present their observed ‘principles’ about these innovations with the whole class. In some cases this is done face to face; at other times the event can be facilitated online/via email—depending upon the geographical constraints of the teachers. We have three campuses: Auckland, Palmerston North and Wellington that are physically serviced by road and air.

Importantly, the above is an invitation for teachers to explore current personal visions of teaching and learning, engaging what Haigh (1998) refers to as ‘personal practical knowledge’. The aim is to have our teachers articulate, and later critically evaluate, their personal learning theories, and to link these with a range of flexible learning alternatives. Teachers’ own beliefs about teaching and learning provide the natural starting point for investigating good practice. Only by identifying and evaluating theories in this way are teachers in a sound, informed position to envision alternative practices and possibilities. Informed beliefs provide an ideal context in which to site prospective learning innovations and envision alternative practices.

We move on to explore previous experiences (if any) of flexible learning delivery in order to locate and evaluate the most/least useful aspects they have encountered. We ask about the extent to which they are able to incorporate these aspects within current practice.

*Acknowledge and address fears by linking known with less known*

We provide opportunities for teachers to acknowledge and address their fears about innovative practices in a ‘non-threatening climate’; the kind that is predicated on mutual respect, the reduction of interpersonal tensions and (explicitly) agreed confidentiality. We provide individual (one-on-one) support, advice to project groups/departments, as well as delivering events/opportunities across the University. Experience shows that ‘solutions’ to teacher concerns are invariably embedded within the particular mode of delivery. For example, when promoting online learning, teachers can be given to understand that face-to-face teaching has its equivalent online delivery format:

- students’ handouts = electronic publishing/web pages/online journal entries;
- group discussions = electronic conferencing/bulletin boards/listservs;
- person-to-person communication = email/electronic conferencing.

*Match teacher beliefs with theoretical perspectives on flexible learning*

It is important that we encourage teachers to link acquired knowledge with earlier concepts of learning and teaching in order to apply this to re-designing course offerings. We find the more their own beliefs appear in line with the professional values underpinning particular flexible learning approaches, or are modified/changed in accord with these, the more likely they are to be put into practice. The aim is to optimize the match between developing beliefs about teaching and learning with those underpinning contemporary flexible learning practice.

*Help teachers identify appropriate support*

We help teachers identify the degree to which they enjoy colleague support. Where does the common ground lie with colleagues? What skills/experiences do they have that they can share? What interests can/do they share? Do these have implications for long/short-term (human) resources? Here is a place for academic developers to link like-minded innovators together—to help teachers create new networks, to modify existing ones and to draw them into interest groups that overarch the whole University. One strong line of support comes from the opportunities provided by the sharing of personal theories with teachers from other discipline areas. We also encourage teachers to explore perceptions of support provided by the range of current infrastructures. We provide/help create vital communication networks for all our staff.

*Help examine beliefs about resources and constraints in a ‘realistic’ way*

We provide opportunities to identify and critically appraise resources and constraints at both a physical and a dispositional level. As part of this process of development, we ask them to envision the kinds of future flexible learning options they would like to construct in the light of their beliefs about what is possible (resource) or is not (constraints) possible; the bridge between the two often lies in the consideration of different (realistic) perspectives. The aim through discussion is to broaden the possibilities (resources) and minimize (perceived) constraints. When teachers take opportunities to articulate their visions, new goals arise. These goals are invariably in line with the University’s own mission of increased flexibility.

*Link hands-on technology training with personal theories of teaching and learning*

It is not uncommon for educational technologists to adopt a technical skills-only approach to training—leaving teachers to create their own connections between teaching, learning and the technology in question (Murphy & Vermeer, 1998, p. 204). Choices about using classroom innovations are likely to be based on technological rather than pedagogical considerations. We try to avoid this pitfall by siting technical training within the context of held beliefs about teaching and learning.

Staff need to engage in hands-on training with selected forms of flexible delivery (audio, video, print, Internet), based explicitly on the kinds of learning objectives they hope to achieve. We invite teachers to investigate the best that flexible learning approaches can offer. We lead discussions into the appropriateness of media for particular purposes. We also provide case studies of Massey University practice via guest presenters who help teachers consider/explore the problems, challenges and advantages of specific approaches, for example, principles and practices of online assessment.

*Foster an overall positive belief climate*

We ask teachers about the kind of beliefs climate they work in. Is it one that is open to new ideas? A beliefs climate might arguably consist of all the beliefs held by staff working within the same sub-discipline, discipline, faculty and/or institution. Responses soon indicate that there is no one climate. Teachers appear surprised when they also realize that they are part of these belief climates. We ask how important is a positive climate, and how might they contribute towards it? A positive belief climate is seen as a baseline for pursuing innovation—particularly in teams—but also in the need to influence others in accepting change.

*Facilitate creation of realistic action plans designed to embed flexible approaches into current practice*

Knowledge gained about flexible learning alternatives needs to be embedded within the teacher's workplace—preferably on an ongoing basis. According to Robinson (1998), academic development in open and flexible learning can fail when teachers are unable to connect the training content with their own 'real-work' teaching and learning needs or 'organizational realities'. One way we find useful is to guide and encourage teachers to create realistic (achievable) action plans designed to firmly embed flexible learning principles within current work programmes. The significant factor is getting teachers to commit to clear purposes, recognizable stages, timelines, and monitoring and evaluation procedures to enhance and maintain quality from the outset of their enterprise.

## **Conclusion**

The 'infrastructure' for flexible learning innovation exists as much at the level of dispositions as it does on any physically resourced plane. Those who believe that the introduction of more flexible learning practices is simply a matter of applying economic resources to targeted areas, or having academic developers use resources 'wisely' by focusing on short-term 'technical fixes', clearly underestimate the impact of teacher beliefs on any proposed innovations.



According to Combs (1982, p. 5), teachers ‘need the strongest possible system of beliefs, accurate, comprehensive, congruent personal theories (which will) provide effective guidelines for daily action (and) provide a rational basis for justifying and supporting one’s own professional stance’. Academic developers are in a sound position to help teachers identify, articulate and critically evaluate their beliefs—in the pursuit of innovative flexible learning and teaching practices.

### Notes on contributor

Edward Errington is presently a full-time Training Consultant with responsibility for the creation and delivery of flexible teaching and learning programmes across three campuses at Massey University, New Zealand. His areas of professional interest focus on scenario-based learning, problem-based learning, simulation, role-play and action research. In recent years, he has worked as a full-time staff development consultant in the UK, Australia and New Zealand. Edward has presented keynote addresses, papers and practical workshops on aspects of learning and teaching in Austria, Israel, USA, Canada, Australia, UK, Chile, Germany, Portugal, Singapore, Spain and New Zealand. At various times he has acted as a consultant for UNESCO; the Australian Association of Environmental Education AIDAB; Department of Education, Chile; University of Haifa, Israel; and the University of Valencia, Spain. He has published five books all focusing, to some degree, on scenario-based learning. He has also published book chapters, study packages, a television programme for SBS TV Australia, plus an interdisciplinary range of articles and videos in Australia, USA, Germany, Israel and the UK. His latest book, *Developing scenario-based learning: practical insights for tertiary teachers* was published by Dunmore Press (Australasia) in May 2003.

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