

ENDURING CHANGE: TECHNOLOGICAL MANAGEMENT IN EDUCATION

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Abstract

The Changing Technology Management Project, at Sheffield Hallam University in the UK, has been investigating the issues surrounding the integration of technology into teaching and learning. This is a preliminary report that identifies the limitations of prescriptive methodologies, such as the North American Teaching, Learning and Technology Roundtables, in three diverse institutions in England. The authors posit that cultural sensitivity to the organisation is the vital base upon which to build meaningful and enduring technological change.

Keywords

culture, change, technological change, collaborative change, roundtables, higher education, further education, methodology

Introduction

There is a general consensus that change is an ever-present dynamic and, according to some, this has been particularly resonant in higher education (*cf.* Halsey, 1995). The shift from elite to mass higher education (HE) has forced English institutions to re-evaluate their provision. This has been distilled into a single policy question: How can institutions deliver a high quality product, to a greater population, with diminishing resources? Since the mid-1990s critiques began to appear which heralded the potential of information and communication technologies (ICT) as a solution to these concerns (*cf.* Ehrmann, 1996). As we are becoming conversant with the integration of ICT into teaching and learning, we have found that both the underlying trends of change in HE and in ICT have combined to shape the way we manage technology. These can be summarised in the following key areas:

- macropolitico-economic change and, specifically, the transition towards a knowledge economy. The Council of the European Union (2001) described a vision whereby Europe becomes “the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion” (p. 2);
- the changing face of accountability, where institutions are increasingly tightly controlled by governmental agencies (such as the Quality Assurance Agency in England) and the increasing demands of students as consumers heightened by the recent introduction of the undergraduate tuition fees;
- the nature of technological developments mean that change is uncertain and unquantifiable and, because one cannot predict the form of the challenges that lie ahead, in a real sense, it is difficult to manage strategically; and,
- as funding has generally fallen in the sector more has been spent by institutions on technology in the hope of reducing long term costs (reducing tutor-student contact hours) and also generating income through the commercial possibilities of e-learning.

The Changing Technological Management Project

The Changing Technological Management Project was established to investigate how technological management in education can be made more effective. This study was an eighteen-month project that began in September 2000 funded by the Joint Information Systems Committee (JISC). The original focus was to trial the North American Teaching Learning and Technology Roundtable (TLTR) methodology. However we quickly learnt that there were wider issues to be considered, particularly those relating to institutional culture, which will be detailed during the course of this paper.

For many in higher and further education, the experience of integrating technological innovation with teaching and learning has been haphazard and uncoordinated. Even where specific groups or individuals have been established to manage this process, there have been charges that they have focused narrowly on either 'technology' or 'teaching' and 'learning'. As a result, TLTRs were developed by the TLT Group (an affiliate of the American Association for Higher Education) as a methodology for integrating teaching and learning with technology. Roundtables have been defined as "a diverse group representing those who can and should work together to improve teaching and learning with information and communication technologies" (TLT Group, 2000).

Specifically, within the context of English higher education, the project was charged with three main aims:

- to discover how roundtables are used;
- to investigate their effectiveness and value, and
- to identify strategies for the successful management of technological change.

Overview of the Research Methodology

The investigation was primarily qualitative in nature and the specific features of the research methodology were as follows:

- case studies in three principal sites: an 'old' research led university (Institution A), a former polytechnic (Institution B) and a community FE college (Institution C). The key methods employed were structured observation and interviews;
- informal visits to other UK institutions;
- semi-structured surveys of UK experiences (followed up by a series of telephone interviews); and
- face-to-face and telephone interviews with North American institutions who have experience of TLTRs.

It should be stressed that the investigation is still continuing but very illuminating data has already been elicited. The remainder of this paper reports these findings.

Experiences in the Institutions

As one would expect, a very different culture and management system was in place at each institution. This can be explained by their vastly different traditions. Institution A could be characterised as a conservative, collegial university with a high research income and somewhat traditional values. Institution B has more modest income from research and is heavily reliant on student tuition fees as a source of income. It is assumed to be more managerial than its older counterpart and perceives itself to be more dynamic. Institution C, on the other hand, is operating within much tighter financial constraints than its university counterparts. It is highly managerial as evidenced by, for example, the existence of a "Chief Executive Officer" rather than a Principal. All three institutions enjoy close ties owing to their geographical proximity to each other. While a second common denominator for all the institutions was that each was interested in the

development of some form of e-learning.

The first task of the project was the identification and recruitment of dedicated champions who would be charged with the responsibility of promoting and implementing the TLTR methodology in their respective institutions. The TLTR methodology encompasses a series of prescribed activities in sub-groups (Gilbert, 2000) that seek to establish:

- clear objectives and agreed goals *vis-à-vis* technological management;
- develop a climate of openness;
- develop appropriate leadership; and
- reviewing team processes.

At this stage there were three immediate issues, namely: the influence that the champions could bring to bear on the institution; the appropriateness of the methodology itself and time needed to establish the roundtables. First, if the champions were to have any chance of establishing the groups they needed to fulfil a number of criteria, which are to be found in other lessons from change management (Goulding, Mistry, Kinnell, Proctor, & Usherwood, 1999). As the *de facto* leaders of the group they needed to have enough seniority to be able to inspire commitment from senior management whilst also being a 'respected insider' to gain the confidence of teaching staff. Additionally we found that they needed to be imbued with enough political acumen to know how to use their influence to keep the roundtable vibrant. Our experiences are in keeping with Baldrige, Julius & Pfeffer's (2000) depiction of the "strategic ambassador" approach to leadership, which places the leader at the centre of concentric social circles rather than the peak of the organisational pyramid.

As far as the appropriateness of the methodology was concerned, more fundamental problems arose when the prescribed tasks were first introduced to the roundtables. At two of the three institutions the membership treated the tasks as being entirely inappropriate. Only Institution A considered the use of the workbook but even here it was at a much lower level (i.e. in a sub-group with minimal influence on institutional strategy) than had originally been envisaged. We have found that all the institutions' receptivity to the methodology was inhibited by two key factors: the prescriptive thrust of the workbook was alien to the organisational cultures of the institutions investigated; and the workbook was not sufficiently sophisticated for roundtable members to feel they would benefit (deriving from their assertions that similar thinking had already been completed). Survey data and informal visits corroborated this assumption by the researchers to other institutions. In conclusion, the prescriptive thrust and lack of sophistication conspired to condemn the methodology to be viewed as just another 'bolt on' programme that would be peripheral to the institutional culture and soon forgotten.

It was noted that all the roundtables needed considerable time to establish themselves and be subsequently incorporated into the institutional decision-making process. There was a correlation between institutional type and the speed of establishment. Institution C, the most managerial institution, established their roundtables within weeks: Institution A, the 'old' research-led university, established theirs after many months' negotiation. In general, our experiences substantiate the conclusions reached by a US study which verified that the lead up time in American institutions was between twelve and eighteen months (Nardick, 2000).

Interestingly respondents at all the institutions distinguished between 'roundtables as an approach' as opposed to 'the roundtable methodology'. While the latter has connotations of directiveness, the former was recognised by many as an opportunity to articulate aspirations of collegiality. The drive of managerialism in England (Deem, 1998) has all but eradicated any meaningful collegial systems (Ramsden, 1999). The 'roundtable approach' which has elements of dispersed leadership, representatives from the campus community and ownership over decision-making, appears to map well onto the sense of community that is embodied in highly valued concepts of collegiality. It may well be a reaction against the endless tide of managerialism, which makes this allusion to legitimacy all the more persuasive and seductive. At Institution C we found that while the

development of policy was more time consuming, as one may expect from such a democratic model, the consideration of multiple viewpoints has led to a perception that policy making is more robust than it had been previously. Whether this is a correct interpretation, or replicated in the universities, will be uncovered by future research.

Conclusion: Points for Discussion

We present a set of discussion points rather than concrete conclusions. This is based on our stated depiction of the project as one in progress. Three pertinent questions, which we feel may be applicable to the management of technology in any organisation, emerge from our experiences:

- can methodologies developed for one education system ever be transferred to another?
- can prescriptive methods secure palatable and enduring change? and, having identified these two questions,
- where does one start the process of change?

It is evident that a constant theme in our investigation is one of 'ideology' and the ideological underpinnings of the culture of the institution and of the methodology. While technology creates a stimulus for accelerating change we need to be ever more sensitive to the cultures of the organisation.

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