

A research-based model for managing strategic educational change and innovation projects

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***Abstract:** Innovation and radical strategic change are closely related. They both introduce a high degree of uncertainty to an organisation. Recent research has identified that there are particular processes that are more effective at facilitating the management of such activities by enabling the uncertainties to be reduced. There are parallels in other sectors concerning the way innovation and change projects need to be set up and managed. This paper explores the particular characteristics of educational innovation projects and proposes a management model which accounts for the nature of growth and change for professional educators.*

***Key words:** strategic change; innovation; educational change; project management; learning organisation; action research; action learning; accountability.*

Introduction

Strategic planning is a process of setting directions and priorities to meet perceived needs or challenges for an organisation. The implementation of a strategy often results in the identification of change and innovative projects. A key to the success of strategic planning is the establishment of what Senge (1990) described as a 'shared vision' across the organisation. However, Lines (2000) warned of the dangers of the corporate planning process in the university sector and how the attempt to get a 'unity of purpose' can become a means of control:

The creation of a unity of purpose relies on a cascade of plans to codify the university's strategy and translate it into objectives with targets and dates...the strategy document is required to act as both a communication medium and a control device (Lines, 2000).

Paraphrasing Mintzberg (1989), Lines (2000) argued that "the extensive use of predetermined goals and objectives" has led "to organisations that are over managed and underled". The term "cascade of plans" implies a one-way process from the top down.

De Wit and Meyer (1999) linked strategic change in an organisation to uncertainty. Kenny (2001) identified the degree of uncertainty and the scope of strategic projects as key elements of the impact they have on an organisation. Rogers (1995) claimed that innovation brings with it uncertainty. Projects resulting from the implementation of a radical strategic direction in an organisation may well involve change and innovation, but certainly will involve high levels of

uncertainty. This paper considers what processes an organisation can put in place to effectively engage its individual practitioners in innovative educational change.

Managing strategic change in educational organisations

De Wit and Meyer (1999) identify two types of strategic change, 'evolutionary' and 'revolutionary'. They point out that "when well managed major organisations make significant changes in strategy" the processes used are "typically fragmented, evolutionary and largely intuitive" (pp. 120-121). In their view, the strategy evolves and the formal planning process is just "one building block in a continuous stream of events". They maintain the normal process for the development of strategy is a process which they call "logical incrementalism" by which the executives of an organisation will broadly outline the strategic directions, but delay committing to detail until as late as possible, recognising the complexity of reality.

Rogers (1995, p. 20) defined the term 'innovation' in terms of how it is perceived by individuals or workgroups in an organisation. "An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption.... If the idea seems new to the individual, it is an innovation" (p. 11). From this definition it is clear that the decision to 'adopt an innovation' is made not only at the top management levels. Clearly strategic change will only happen if a 'shared vision' is agreed through a combination of top down and bottom up processes. Rogers (1995), described the process of adopting an innovation as one of "social construction":

When a new idea is first implemented in an organisation, it has little meaning to the organisation's members... Through a process of the people in an organisation talking about the innovation they gradually gain a common understanding of it. Thus the meaning of the innovation is constructed over time through a social process of human interaction (Rogers, 1995, p. 399).

This process to establish shared meaning is a far cry from the 'cascade of plans' described by Lines (2000). It relates well with the 'learning conversations' proposed by Laurillard (1997). Effective change therefore requires 'buy-in' of the individuals in an organisation.

Rogers (1995) identified a five-stage process individuals go through as they adopt an innovation: gaining knowledge, persuasion, making a decision, implementation and confirmation. This process allows individuals to 'reduce uncertainty' about the innovation. Staff need time to understand and adjust to an innovation. He also pointed out that if the decision to adopt an innovation was made by the organisation, rather than the individual, the adoption process was more complicated. He viewed the "organisation as a system in which the innovation decision occurs" (p. 371), and warned that if the implementation of an innovation is too rapid, it often leads to "disastrous results":

The more radical an innovation, indexed by the amount of knowledge that organisational members must acquire in order to adopt, the more uncertainty it creates and the more difficult its implementation (Rogers, 1995, p. 397).

Rogers (1995) also noted that adopting an innovation changes the organisation itself. He maintained that the process of implementation should aim for "dynamic equilibrium" (p. 424). This refers to change at a rate that allows the system to adjust also. Implementing strategic change in an organisation is therefore a fluid process that has to take account of the

uncertainties due to change. Verwey and Comninou (2002) recommended a similar approach. They were concerned with how to effectively manage 'fuzzy' business projects. They used the term fuzzy to describe the intangible characteristics of many projects such as business process improvements, customer service improvements, organisational restructuring, etc. These are characterised by a need to address "changes in people's actions, organisational culture and stakeholder perceptions".

De Wit and Meyer (1999) claimed that a logical loop must exist linking strategy to the activities in an organisation and constant feedback to inform strategic planning. The projects set up therefore have to be considered in the context of the achievement of the strategic goals of the organisation, not just a narrow project focus.

According to Rogers (1995, p. 392), the innovation process in an organisation has five stages. These stages can be divided into two sub-processes: an initiation sub-process which includes agenda setting and matching; and an implementation sub-process which includes redefining/re-structuring; clarifying; and routinising.

Initiation

This sub-process amounts to the setting of strategic directions and priorities. It is the responsibility of a senior management group. It consists of two phases:

- *Agenda setting* is a continuous process of reading the landscape and setting strategic directions and priorities. The priorities may take several years to arise from perceived needs for the organisation, gaps in performance, etc.
- *Matching* is the process by which the organisation attempts to identify solutions to match the needs and to test their feasibility. It involves a reality testing of the proposed ideas. There needs to have been some investigation into and evaluation of potential solutions, with a view to a decision to reject or adopt them.

Implementation

Once the implementation stage has been reached senior management has decided to implement a strategic change within the organisation. The process of its implementation across the organisation has begun. Rogers (1995) noted the importance of a champion for the innovation from within the higher levels of an organisation. Other writers have also noted this as a key success factor: Alexander (1998), Sheasley (1999), Lester (1998).

- ***Redefining/restructuring.*** During this phase of the adoption process, Rogers (1995) identified that the innovation and the organisation adjust to accommodate each other and that there is only a small window of opportunity for this to happen. A particular innovative solution can rapidly become set once the decision to adopt it has been made by an organisation.
- ***Clarifying.*** As the innovation is put into more widespread use, its meaning becomes clearer to the members of the organisation. Rogers (1995, p. 18) indicates that the attitude of the individuals to an innovation is very influenced by their peers: "most people depend mainly on a subjective evaluation of an innovation... from other individuals like themselves... So diffusion is a very social process". Surry (1997) agreed with this observation.
- ***Routinising.*** This occurs when the innovation becomes a part of the normal operational activities of the organisation.

Educational innovations

Rogers' (1995) work suggests innovation decision making as a generalised process. It stemmed from studies of a range of cases and situations. Much of the work refers to the implementation of technological innovations. When considering educational innovations, the process needs to be more carefully crafted to the specifics of the situation. In particular, since educational change will impact upon teaching staff and academics, the nature of how these individuals adopt an innovation becomes critical.

Bates (2000), and Phelps, Ledgerwood, and Bartlett (2000) identified specific cultural issues associated with managing educational projects. Bates (2000) noted that academic and teaching staff have traditionally operated as independent professionals in relation to their teaching. Four key points emerge which need to be addressed in managing radical educational change:

1. The issue of how professional educators and academics interact with their peers, adapt to change and grow professionally is central to the success of strategic educational change and innovation projects.
2. The independent nature work of the professional educators and academics implies that they will have a great influence on the ultimate outcomes of an educational innovation.
3. The implementation phase must allow time for staff to interpret, understand, contextualise and adopt the change. In terms of an innovation with significant implications for changing teaching practice, this is likely to involve considerable time and support.
4. The broad educational agenda or strategy might be set in the initiation sub-process, but the real meaning of an educational innovation, can only emerge during the implementation sub-process, as the practitioners interpret the change or innovation.

Professional growth

The development of professional expertise has been explored by many writers. The importance of professional growth that involves reflection on practice is a common thread. Schon (1987, pp. 6-7) referred to the "indeterminate zones of practice" which require of the professional practitioner more than the simple "application of theories and techniques." He considered the "artistry" associated with the way particularly competent professionals perform their work. Senge (1990, p. 168) observed similar 'intuitive' behaviour in expert managers and Benner (1984) in her study of nursing offered a similar view of the acquisition of expertise.

An educational innovation is likely to require that new understandings and skills be incorporated into teaching practice. Carr and Kemmis (1986, p. 40) suggest that teacher change comes about when the teachers themselves consciously examine their own activities and critically reflect upon their own practice, the situational constraints in which they work, the consequences of their actions. They claim that in these circumstances, teachers adopted a "project perspective" and approach their work more strategically; seeing it work as a "research project". Taylor (2000) pointed to the developmental nature of adopting new technologies in teaching. Kenny and McNaught (2000) discuss how the implementation of an innovation presented an opportunity to re-examine teaching practice.

Zuber-Skerritt (2000) suggest that the processes of action learning and action research are very suitable for addressing complex workplace issues. Both processes involve drawing on practice as the source of learning. Any underlying theoretical models are articulated during

the process and examined in the light of experience. Both processes involve groups working to understand particular problems through critical reflection and to apply their learning to future action. A practitioner may have to adjust his/her own mental models in the light of evidence. The distinction between action learning and action research are that the former is more suited to individuals working for their own professional growth, while the latter involves more formal accountability processes and the requirement to collect data and publish the findings.

According to Elliott (1991) action research is integral to a view of teaching as a professional activity and not simply a 'craft' (i.e., a series of techniques applied to learning situations). For him, reflection is necessary for teachers to develop expertise. He reports however, that the time needed for reflection is often considered optional. "It appears that... the vision of teaching as a unified reflective practice awaits changes in the organisational prioritising of teacher time before it can be realised on a large scale..." (Elliott, 1991, p. 66). These observations suggest that action research and action learning processes provide opportunities for the social construction necessary to adopt an innovation, while at the same time addressing the requirements for changing educational practice. For this reason, they should be at the heart of any process to implement educational change or innovation.

Accountability and innovation

Clearly organisational management processes have to recognise the value of reflective activity to bring about real change. McGill and Beaty (2001) report that action learning is applicable to projects which are linked to organisational needs. The importance of the involvement of management in supporting such action learning projects is again emphasised:

For organisational support, there is a need for a champion in the organisation to make action learning happen. This is particularly important where resources of time, finance and project initiatives are required (McGill & Beaty, 2001, p. 82).

The link here to the organisation management processes is clearly made. Action learning groups need to be resourced and cannot effectively occur outside of the organisational planning processes. Kenny (2002) agreed that the projects need to be incorporated as part of the organisational planning processes and that accountability measures need to be set-up in a form that does not stifle the learning process.

Kenny (2002) proposed that the full extent of an educational innovation cannot be specified up front because it will emerge from the implementation process itself. The initiating idea, concept or tool produces a compounding effect in that it becomes the trigger for change and learning on the part of the professional educators involved. McGill and Beaty (2001) identify reflection as the key, but reflection on experience does not happen naturally. Experience does not necessarily translate into learning or increased expertise.

Shenhar and Dvir (1996), Sheasley (1999) and Lester (1998) described similar processes for innovation projects in industrial settings. Key success factors identified in such projects included: senior management support, creation of self managed teams, open communication processes, iterative development cycles, and sharing of ideas to reduce uncertainties. Lester (1998) also recommended that members of the project team need to be involved for at least 50 percent of their time on project activities.

Sheasley (1999) and Lester (1998) both identified potential conflict in organisations around the accountability processes. The mechanisms used to account for the resources allocated to a project may clash with the degree of freedom needed by teams involved in innovative projects. To address this tension, Sheasley (1999) advocated a process called 'cycle-time management' whereby the project teams reported at the end of each development cycle. In addition, Kenny (2002) suggested broadening the expected outcomes of innovative projects to include such things as: the growth in staff capabilities, the generation of new ideas or directions and the achievement of unexpected benefits.

Rogers (1995) also noted that the more an innovation requires individuals to change the more complex is its nature and therefore its implementation. These innovations require highly flexible processes:

Some innovations are so radical and create such a high degree of uncertainty, that they must be adopted through an innovation process that is relatively unstructured and almost completely non-routine (Rogers, 1995, p. 397)

Project management is the accepted means of managing projects and ensuring accountability. The question is then, what are the most appropriate project management processes for projects with high levels of uncertainty? Bates (2000) saw project management not as a micro-planning tool, but more as a means of ensuring the required resources are identified and provided. This is the link into the organisational planning processes mechanisms. Kenny (2002) claimed that what is valued in an organisation is reflected in its processes, particularly those concerned with resource allocation, promotion and reward and the accountability processes.

A model for managing innovative educational change

The foregoing discussion can lead us to the identification of the key characteristics of a project model to support the effective adoption of innovative educational change. While this paper has concentrated on innovations initiated within the context of an organisational strategic planning process (top-down), the same principles would be applicable for those initiated locally (bottom-up). The experience at RMIT indicates that for strategic innovations, a central curriculum group can play a valuable role in supporting innovation projects by the provision of specialist support.

Kenny (2002) reported on key success factors for radical educational change projects, these are summarised and adapted here:

- Clear support of senior management (sponsorship);
- Provision of adequate resources, including adequate time and staff with specialist skills as a part of the project team;
- Establishment of self-managed project teams with open communication processes;
- Accountability processes emphasising: documentation of learning, iterative development, periodic reporting after each cycle and dissemination to the organisation.

At the organisational level, a governing body is set-up to manage a portfolio of projects associated with implementing strategy (see Figure 1). The role of this body is to set priorities and to identify projects designed to implement the strategic goals of the organisation against appropriate criteria. This body approves and provides the resources required by the project teams and sets-up accountability processes. This group has the function of:

- Deciding which projects are to be resourced based on organisational priorities;
- Identifying the project sponsor;
- Appointing a project leader suitable projects;
- Approving the project scope;
- Allocating funding and resources;
- Collating the reports of all the projects across the portfolio;
- Making recommendations on the effectiveness of the strategy.

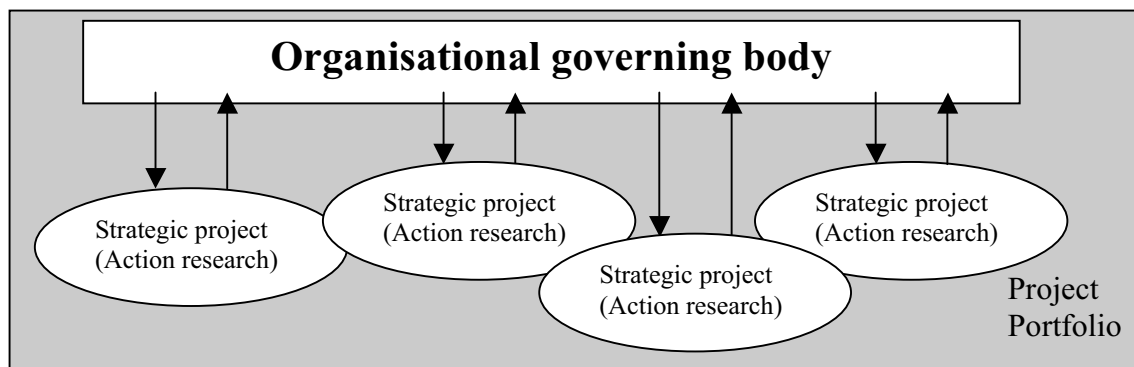


Figure 1: Organisational process to manage a portfolio of projects

Each project is set-up and resourced as a self-managed project team. The action research process forms the basis of the operation of the project team. Ongoing cycles of planning, doing and reflecting then follow with reports periodically at the end of each development cycle.

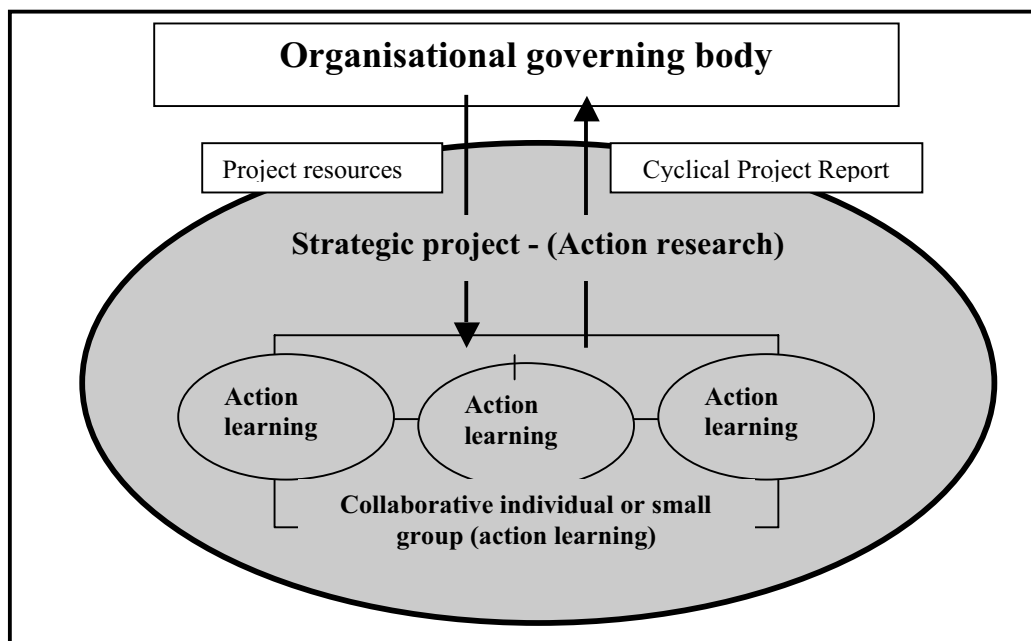


Figure 2: A model for adoption of strategic (innovative) educational projects

Figure 2 expands the action research projects to indicate how action learning is embedded within the overall project. Individual practitioners in each project engage in their own adoption process for the innovation. Each is involved in a process of professional growth through action learning.

Time for collaboration and sharing of experience allows each member of the team to engage in regular 'learning conversations' with their peers. The emphasis is not solely on achievement of goals, but on also learning. The associated project management process is designed to facilitate the process. It consists of certain key steps:

Planning Phase

- Project team is formed.
- Goals of the project are clarified and which include to the strategic goals of organisation.
- Set up communication processes, including regular meetings;
- Analysis of staff development needs;
- Identify other resource needs;
- Develop timeline to include key events (e.g., formal reporting cycles, meetings etc.) but enable flexibility;
- Develop the budget;
- Obtain sign-off and approval.

Design and development phase

- Each individual practitioner on the team develops his/her own action learning plan to investigate some aspect of the project of interest and relevance;
- Staff development is provided in accordance with the needs;
- Regular sharing and reflection activities are scheduled to identify and maximise the learning;
- Each individual feeds his/her own learning of the project;
- Formative evaluation of the progress of the project occurs during this phase.

Evaluation phase

- At the end of each development cycle, the project team reports, addressing the questions:
What were the goals of the project?
What was achieved?
What has been learned?
What is planned for next cycle?
- A summative evaluation is conducted at the end of the project.

The organisational governing body uses the formal reporting from each project to gauge the progress of the strategic initiative as a whole and to inform the strategy itself. Adjustments to the strategic goals are then fed back to the project teams. This group also makes decisions about whether to continue supporting, reduce support or cease supporting the projects.

Conclusions

Implementing radical strategic change or educational innovation projects introduce high levels of uncertainty to an organisation. An educational innovation project has implications for professional practice, such as the need to re-appraise approaches to teaching. In these cases, it is not just a question of adopting an innovation, the particular characteristics of how teaching professionals work need to be built into the management process. Action research and action learning processes involve teachers in reflective activities with peers which are central to meaningful change and should therefore form the basis of the managing such projects. Linking to broader organisational management processes will ensure the resources

and supports are provided. The organisational processes must function to support and value learning as a key outcome and provide the environment for this to occur. Accountability mechanisms need to provide the freedom for staff to innovate but also ensure that the learning is documented and shared with those outside of the project team. The final outcome of an educational innovation will emerge as the teachers come to understand it and apply their new knowledge.

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