



Innovative forms of Enhancement in Teaching and Learning

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The concept of change incorporates the idea of enhancement and innovation. It is the superior concept within which these forms of change are located. Enhancement is fundamentally about *trying to make things better and succeeding in this enterprise* although perceptions of success may differ among the people involved. Innovation is essentially about changing things but it may or may not lead to improvement. This is partly because enhancement typically builds on what already exists and the change may involve only small incremental changes whereas innovation is often associated with more radical transformative change for the individuals concerned. Innovation tends to be more experimental with potentially greater risks of failure.

LTSN is very grateful to Professor Andy Hannan and Professor Harold Silver for this contribution to our QE debate. It examines the characteristics of innovation based on a major research study which focused on innovation in teaching and learning.

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Summary of key points

- ❑ 'Innovation' like enhancement is a process of planned deliberate change. Like enhancement it is directed towards some notion of improvement but it does not necessarily result in this.
- ❑ Innovation is essentially about changing things and the departure from the old ways may be considerable, whereas enhancement often implies a gradual process building on what already exists.
- ❑ An innovation in teaching may but does not necessarily bring about improvements that enhance students' learning.
- ❑ Innovations that fail to enhance student learning may nevertheless be seen by some as successes and become widely adopted if they meet other needs, eg for student autonomy, for economy, for bureaucratic efficiency or for more management control.
- ❑ Student perceptions of the impacts of enhancement and innovation in teaching may differ from the teacher's perceptions. We do not know enough about the nature of the student experience in HE and their perspectives on the innovations to innovations that affect them.
- ❑ Innovators create, adopt and adapt. People who engage in innovation do not necessarily see themselves as promoting original ground breaking change. What they do is new in their circumstances.
- ❑ The research found that innovators were motivated by a combination of reasons that included personal belief and commitment, experience and opportunity, and the pressure of circumstances outside their control. The great majority of innovators believed that their involvement in innovation was unlikely to result in promotion.
- ❑ Reasons most often cited for introducing new methods of teaching and learning (in order of frequency) were:
 - ❑ the need felt by these members of academic staff to improve student learning;
 - ❑ changes in the student intake;
 - ❑ the demands of external agencies;
 - ❑ the need to cope with curriculum change or other reorganisation.
- ❑ Innovators were willing to take on extra work and learn new skills, risk their careers or unpopularity with colleagues, if they felt that they could improve the quality of their teaching or if they felt they had to depart from old methods to cope with new demands.
- ❑ Much of the innovative effort had been directed to improving student learning in the areas of IT and skills development.
- ❑ Increasingly policy had become an important context for innovation. Much innovation was 'guided' or 'directed' by institutional or government sponsored policies and funding, targeted on specific strategies and outcomes.
- ❑ Innovations were greatly influenced by local circumstances with regard to students, courses, institutional and departmental structures and pressures, as well as by specific disciplinary and professional cultures.

- ❑ The nature and operation of the institution and its sub-units (faculties, schools, departments...) were very important factors in the innovation process, influencing the incidence of innovation, its success and the likelihood of its becoming embedded.
- ❑ Innovators emphasised the importance of the attitudes and support (or otherwise) of colleagues, senior managers and those responsible for the allocation of departmental or institutional resources and rewards in promoting innovation.
- ❑ It was difficult to demonstrate the success of innovations and so obtain the approval of colleagues. Senior and middle managers were sometimes resistant and hostile, but where they gave strong support this greatly enhanced the chances of success. Staff at all levels could be indifferent or antagonistic to change, and innovators persistently described their isolation.
- ❑ Much importance was attached by innovators and others to the interest and commitment shown by a vice-chancellor or a deputy or pro-vice-chancellor. Such support could influence relevant policy and decisions, and the committee and other units dealing with teaching and learning.
- ❑ Initiatives to improve teaching and learning that were located in departments or drew respected representatives from departments into schemes run at the centre were more likely to succeed.
- ❑ There was a problem with sustaining innovations. Even a successful scheme could be shelved once other departmental or institutional priorities assert themselves. The most difficult issue in this respect was that of the real or perceived conflict between the requirements of research and of teaching and learning.

Innovation in teaching is most likely to take place when:

- ❑ the innovator feels a degree of security within an understood community or cultural context, recognises the need for change and has encouragement or support from the head of department, dean or other person in authority;
- ❑ the institution has a policy establishing parity between research and teaching and learning, including for the purpose of promotion, and the policy is reflected in practice;
- ❑ colleagues and people in authority show an interest in disseminating the outcomes of innovation;
- ❑ resources are available through the department, an innovations fund or similar fund, and an educational development or learning support unit.

Innovation is most likely to be obstructed by:

- ❑ low esteem of teaching and learning, compared with research;
- ❑ lack of recognition and interest by colleagues and people in authority;
- ❑ institutional or other policies and action plans laying down firm directions that preclude individual initiative;
- ❑ excessively bureaucratic procedures for approval, support and resources;
- ❑ quality assessment procedures or other procedures that inhibit risk-taking.

Dissemination and transfer:

- ❑ Many innovators found it easier to transfer their idea in the wider disciplinary community rather than across subject communities in their own institution. In most institutions there is some resistance to importing initiatives 'not made here',

but there was a general sense that innovators found echoes of their work more readily with colleagues teaching the same subject in other institutions.

- There is a significant role for LTSN subject centres to help and encourage teaching staff to innovate in their own contexts, to gather and promote the products of such innovation and to facilitate sharing and exchange within disciplinary communities.

Introduction

This paper summarises the findings of a study by the authors of innovations in teaching and learning in higher education (A. Hannan and H. Silver *Innovating in Higher Education: teaching, learning and institutional cultures*, Open University Press, 2000). It is offered as a contribution to the LTSN facilitated debate on quality enhancement and is intended to help develop a better understanding of the meaning of innovation in teaching, learning and assessment practices.

The research study was conducted in two phases, in 1997-8 and 1998-9. *The first* focused on innovators and innovations in 15 universities in all parts of the UK. *The second* was concerned with institutional contexts for innovation, and consisted of in-depth studies of five universities, of which four had been part of the first phase study – Glasgow, Middlesex, Nottingham and Salford - and to these was added the Open University (not least because it is the UK's biggest university). In the first phase interviews were conducted with 221 people. These were mainly innovators identified from other projects (for example, TLTP and Enterprise in Higher Education) or from conferences, publications and other sources, and a number of senior staff responsible for funding and procedures affecting innovation. In the second phase 116 interviews and six focus groups were conducted. The great majority of the interviewees and all of the focus group members were randomly selected teachers in two subject areas – English studies in all five universities and a selected subject that was prominent in the given university (medicine, biological sciences, electrical and electronic engineering, business studies, technology).

Individuals and teams innovate, institutions and their sub-units innovate and manage innovation, and national agencies sponsor innovation. The emphasis in the study was on individuals and teams, with departments and institutions as the contexts in which they operate – together with the subject communities to which individuals belong and which departments generally represent.

Meanings and definitions

'Innovation' is deliberate. 'Change' may be a process to which we do not contribute. Innovation may be the work of one individual or the result of interaction amongst colleagues, in a course team, across subjects or institutions. It may originate in teachers' dissatisfaction with their existing teaching processes or in the level of satisfaction or achievement of students, in the lecture theatre, laboratory or seminar. Rightly or wrongly it is now frequently equated with the use of new technologies.

Innovators create, adopt, adapt. **The project had a clear view of innovators as taking initiatives in their circumstances.** The adoption of something new developed elsewhere inevitably involves adapting to the needs of students and teachers, resources and environments. Whatever the origins of an initiative, 'in their

circumstances' means people interacting, in contexts that include institutional structures and pressures, as well as disciplinary and professional cultures. Levels of expertise, support and resistance differ, and innovation does not necessarily mean successful innovation. Initiatives may be well or ill considered or prepared, and are not necessarily successful.

There is an obvious link between this discussion and the current debate taking place about the notion of 'enhancement' - <http://www.ltsn.ac.uk/enhancement>. Innovations are intended to bring about the improvement of teaching and learning, but do not always succeed in doing so. For example, some forms of programmed learning that make use of computers may be inflexible, unresponsive to student needs and too narrow in their scope, thus actually alienating rather than motivating students. More widely, structural innovations such as semesterisation and modularisation may result in students becoming over-assessed and thus more instrumental in their approach, adopting learning styles that are more superficial. Innovations that fail to enhance student learning may nevertheless be seen by some as successes and become widely adopted if they meet other needs, eg for economy, for bureaucratic efficiency or for more management control.

For innovations to be seen as enhancing quality, they must result in improvements in teaching and learning, in making the process and outcomes richer and more worthwhile.

The sort of changes that teachers in HE make on a daily basis by updating their materials or adjusting their teaching, in order to meet the specific needs of a particular group of students, are not usually innovative, but may become so if they amount to a significant shift in focus, direction or method. Incremental adjustments responding to the perceived or articulated needs of students may eventually result in a new way of doing things, or at least new in those circumstances. The extent to which this process is planned varies, but it may be part of a conscious attempt to be reflective about practice, adopting an action research approach involving the investigation of a problem, the formulation and implementation of an innovation, and the evaluation of its impact. This is clearly a learning process for the HE teacher.

Although many innovations are conceived and implemented by individuals, increasingly policy has become a decisive context for innovation, whether it is institutional or national. Whereas innovation may once have derived exclusively from the ideas of enthusiasts, it has increasingly become 'guided innovation', often supported by funds from national programmes and loosely concerned with the improvement of teaching and learning. Much innovation then became 'directed innovation', driven by institutional or government sponsored policies and funding, targeted on specific strategies and outcomes.

Innovations in teaching and learning have in recent years been framed by radical change in institutional structures. It is easier, at departmental or institutional levels of decision making, to change the structures, environment, resources, opportunities, for student learning than to change the culture of teaching. Technological, organisational and curricular changes can at these levels be the outcome of decisions arrived at by fiat or negotiation. Although curricular change may imply changes in teaching and learning, **it is immensely more difficult to achieve any basic change in attitudes towards teaching and learning than in the organisation of the curriculum.**

Innovators in teaching and learning are not necessarily concerned with change in the content of the curriculum. Their practices may originate in or be supported by

institutional units such as educational development units, but they may equally, sometimes more substantially, find energy and confidence in their disciplinary allegiances. A key finding of the project was **the variety of perceptions of the nature and value of innovations**, and the differences in the level of priority that innovators and others gave to their disciplinary context within and beyond the institution.

Innovators and innovations

In phase one of the project, the subject identity of those interviewed was as follows:

<i>clinical and pre-clinical science</i>	4
<i>professions allied to medicine</i>	39
<i>engineering and technology</i>	8
<i>built environment</i>	19
<i>mathematical sciences, IT, computing</i>	8
<i>business and management</i>	19
<i>social sciences</i>	13
<i>humanities</i>	15
<i>art, design, performing arts</i>	17
<i>education</i>	3
<i>central management</i>	9
<i>support services</i>	20
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N.B. Some subjects (e.g. geography) fall in different categories in different institutions. Some 'central management' personnel (e.g. pro-vice-chancellors on short term appointments) are also academics and innovators in their subject. Some 'support services' personnel are innovators on secondment to an educational development unit or its equivalent.

Very few of the interviewees saw themselves as inherently 'innovative people', though some did describe themselves in such terms as being 'at home with change' or willing to take risks. Some were inclined to innovate as a result of previous involvement in innovations, for example in secondary schools or industry, opportunities offered by government or other programme funding. Others were prompted by some of the salient current features of higher education. The experience of innovators when they were newly appointed suggested that such newcomers could be placed in four categories:

- ❑ *Younger academic staff who 'settle in' and wait to become established or secure before considering taking innovative initiatives.*
- ❑ *Staff of all ages who, on appointment, inherit teaching situations that are 'not working' for various reasons.*
- ❑ *Staff appointed with important skills that they (and others) feel need to be applied at a time when new solutions are sought.*
- ❑ *Staff who are impatient to innovate when appointed because of their previous experience and commitment.*

The local situation of innovators varies considerably. Very many made it clear to the project that as people interested not only in innovation but also in the enhancement of teaching and learning in general, they were in a small minority (sometimes of one) on the course or in the department. Under pressure from national and institutional initiatives to raise the profile of teaching and learning, it is likely that this may have

changed since the end of the project in some institutions. Given the activities of the subject centres, it is also likely that more potential innovators are aware of developments elsewhere.

Some innovators are engaged in multiple innovations, and some innovations fall into multiple categories. A rough typology of the innovations encountered in the project and the frequency of occurrence were as follows:

1. Making use of computers (<i>web, internet, intranet, computer-aided learning, computer based learning, computer-mediated communication</i>)	77
2. Skills (<i>personal, transferable, key, core, employability, communication and problem solving</i>)	45
3. Team projects, group learning (<i>co-operation and collaboration</i>)	40
4. Student presentations (<i>individual or group</i>)	16
5. Interactive seminars or lectures	16
6. Work-based learning	16
7. Problem-based learning	16
8. Resource-based learning (<i>packages, booklets, etc.</i>)	14
9. Distance learning or open learning	12
10. <i>Peer tutoring, mentoring or assessment</i>	9
11. Others (<i>for example, student-directed learning, learning journals/portfolios, profiling, reflective practice</i>)	18

Many of these cover a wide range of initiatives, notably using computers and focusing on skills, the latter being an example of the overlap of categories – since it may also involve problem-based learning. Student presentations, for instance, may be by individuals or groups and in a variety of contexts (to a seminar, to a wider group, to an assessment team - which again may or may not involve employers or others outside the institution). Assessment may be an independent innovation or an extension of other innovations. The typologies of innovators and innovations give only a rough idea of the diversities.

Reasons for innovating

The background for innovators taking their initiatives is some combination of belief and commitment, experience and opportunity, and the pressure of circumstances outside their control. There are also more immediate incentives. Of 103 innovators who responded in the first phase to a question about their motivation to introduce new methods of teaching and learning, the largest group (34) defined it explicitly in terms of the need to improve student learning. Others defined it in terms of changes in the student intake (31), the demands of external agencies (21) or the need to cope with curriculum change or other reorganisation (11). The detail of these accounts of motivation involves responses to departmental decisions, the balance between resources and student numbers, the match between teaching approach or arrangements and student needs and intended learning outcomes.

The ESRC study was targeted on institutional frameworks as well as on innovators. The investigation of random samples of teachers in selected subject areas in the second phase produced a general sense that with regard to teaching and learning the situation was becoming increasingly difficult and something had to be done. Employers were said to be complaining that graduates did not have a broad enough education or did not have the communication and other skills that the employers needed. The traditional methods were described as not working. Students were said to be too passive and some means of involving them more effectively had become necessary. All staff interviewed could adduce such reasons for making changes in

teaching and learning procedures without necessarily accepting the label of 'innovator' for themselves. The innovators were undoubtedly willing to take on extra work and learn new skills, risk their careers or unpopularity with colleagues, if they felt that they had to depart from old methods to cope with new demands.

An important development since the project data were collected have been the various attempts to raise the profile of teaching and learning through the preparation of new staff for teaching and increased professional development within the institutions and nationally. The question of innovation has become an increasingly important issue in both short and award bearing courses. It has therefore become more possible in many institutions for innovators to find in such courses or other activities opportunities to sharpen the reasons and procedures for taking initiatives in teaching and learning.

However, there was evidence from the project of opposition from some academics, often those generally resistant to change, to the way in which professionals in educational or staff development were perceived as presenting themselves as 'experts' on teaching and learning. These lecturers were suspicious of any generic approaches and were resentful of what was sometimes seen as intrusion by those not qualified in their disciplines. Certainly, **those initiatives to improve teaching and learning that were located in departments or drew respected representatives from departments into schemes run at the centre were more likely to succeed.**

Factors which support or inhibit innovation

A crucial caveat that emerged in the interviews with innovators related to the issue of careers and unpopularity. The prospect of promotion, career enhancement or other rewards was not mentioned in connection with motivation to innovate. Only a minority of the 16 universities visited gave special prominence to involvement in innovation or excellence in teaching in the promotion process, and even in those that did there was a great deal of scepticism about its impact. **The great majority of innovators believed that their involvement in innovation was unlikely to result in promotion.** What continuing effect the policies and incentives of the funding councils, the Institute for Learning and Teaching and the LTSN may have on the institutions' promotion and other reward policies is an issue that emerged after the project.

Having chosen to innovate, however, it was important for innovators to obtain support, to have the space and the facilities to introduce new methods, to receive encouragement. One of the most significant findings of the first phase of the study was that **the nature and operation of the institution and its sub-units (faculties, schools, departments...) were very important factors in the innovation process,** influencing the incidence of innovation, its success and the likelihood of its becoming embedded. The position of the institution in national categories such as 'old' and 'new' could sometimes be important in other respects, but in all of them it was the immediate and wider aspects of institutional structure and culture that framed the process and outcomes of an innovative initiative. **In relation to issues of teaching and learning it was not always possible in the project to establish clear differences between 'old' and 'new' universities.** Although basic differences were frequently discernible, there was, for example, important commitment by some old, research-focused universities to improving teaching and learning.

The innovators placed great emphasis on the attitudes of colleagues, senior managers and those responsible for the allocation of departmental or institutional resources and rewards, particularly in a prolonged period of changes of many kinds. These attitudes could range from the most to the least supportive. Many innovators thought that teaching and learning innovation was not valued or adequately resourced. **More than half of those who responded to a question about attitudes commented that their colleagues considered innovation to be unnecessary, too time-consuming or threatening.** Others thought their colleagues to be supportive or to have mixed reactions. Some innovators mentioned the need to change their practices in order to respond to factors like TQA (external pressures). When TQA visits took place, 'innovators' were sometimes given prominence and their contribution was recognised in contrast to their usual experience. This project was not designed or funded to extend the enquiry to the attitudes of students, and the small amount of student feedback evidence available did not provide a clear view of responses to these innovators and innovations. Some innovators reported positive colleagues' attitudes when an innovation proved to be successful. Senior and middle managers could be reported as supportive or resistant and hostile. Staff at all levels could be indifferent or antagonistic to change, and innovators persistently described their isolation.

Innovation in some universities was clearly influenced by the extent and purposes of institutional or other funding dedicated to improving teaching and learning. It was particularly clear in the second-phase case studies that **much importance was attached by innovators and others to the interest and commitment shown by a vice-chancellor or a deputy or pro-vice-chancellor**, and the influence these could have on relevant policy and decisions, and the committee and other units dealing with teaching and learning. Regardless of such institutional commitment, however, it was possible for negative attitudes to prevail at lower levels of management. Even in more traditional institutions, however, there has always been room for individuals to innovate in what they teach and how they teach it. The problem in the present situation is that in all institutions there is the danger that once the immediate difficulties have been overcome, and perhaps when a source of funding has come to an end, an innovation may prove to be short lived. Even a successful scheme can be shelved once other departmental or institutional priorities assert themselves.

The most difficult issue in this respect was that of the real or perceived conflict between the requirements of research and of teaching and learning. Given the demands of the Research Assessment Exercise, experienced staff had frequently been placed under pressure to sacrifice teaching commitment to that of research (and in some cases, if they were not potentially 'research active', had been required to take early retirement), and new staff were often socialised into what was effectively a culture of research. Although in research-led universities this could be widely the case, it could also be the case in departments of universities that did not give research the same level of priority at an institutional level. In these latter institutions research could be, whether overtly or not, the highest priority for a particular department or faculty. Younger staff would also be aware that their future careers in this or some other university would be more likely to depend on their research than on their teaching record. **Some universities with a strong research identity were already deeply committed to raising the profile of teaching, including the encouragement of innovation**, and given more recent developments other universities may now be doing the same. Nevertheless, one of the strongest bases for resistance to innovation in teaching and learning remains the sense that it takes time, effort and probably reward away from the research priority.

Given the crucial importance attached by innovators to these various features of the institution, its culture and procedures, and the attitudes of colleagues and managers at different levels, the project concluded:

Innovation in teaching is most likely to take place when:

- *the innovator feels a degree of security within an understood community or cultural context, recognises the need for change and has encouragement or support from the head of department, dean or other person in authority;*
- *the institution has a policy establishing parity between research and teaching and learning, including for the purpose of promotion, and the policy is reflected in practice;*
- *colleagues and people in authority show an interest in disseminating the outcomes of innovation;*
- *resources are available through the department, an innovations fund or similar fund, and an educational development or learning support unit.*

Innovation is most likely to be obstructed by:

- *low esteem of teaching and learning, compared with research;*
- *lack of recognition and interest by colleagues and people in authority;*
- *institutional or other policies and action plans laying down firm directions that preclude individual initiative;*
- *excessively bureaucratic procedures for approval, support and resources;*
- *quality assessment procedures or other procedures that inhibit risk-taking.*

Dissemination

Examining innovation in the context of the institution – the focus of the project – raised one important difficulty. The ‘culture’ of the institution, in the eyes of the teaching staff interviewed in both phases, often meant no more than a culture of research or a culture of constant change. More important to the teaching staff in general was their immediate environment, generally the department, as a proxy for the subject to which they frequently expressed a primary loyalty. The conditions of the university meant that there was often either little interest in an innovation in teaching and learning, or extreme difficulty in disseminating the innovation within the institution. Working with an educational development unit or a teaching and learning committee or within a professional development programme could mean some dissemination, and though responses within the department differed **it was there, in the institutional ‘sub-culture’ that innovators felt that their initiatives really belonged.** Particularly in more traditional universities this isolation could be seen as natural and inevitable, but in most institutions innovators could be embittered by the indifference of immediate or senior colleagues.

Since the department stood as proxy for the subject, **it was in the wider disciplinary community that many innovators found opportunities for transfer.** In most institutions there is some resistance to importing initiatives ‘not made here’, but there was a general sense that innovators found echoes of their work more readily with colleagues in other institutions. In some cases this was in the collegial atmosphere of meetings of subject staff in a region (along a motorway corridor or in a multi-university city), the national or international workshops or conferences of the subject association, or through the medium of a subject-based journal or other publication or web-based network. There were instances of enthusiastic transfer and development of initiatives reported by colleagues elsewhere in this way.

There is abundant international literature describing the dual loyalties of academics to their institution and discipline, with the latter cutting across institutional and national boundaries. It is important in this connection that the Teaching Quality Enhancement Fund of the Higher Education Funding Council for England has targeted developments in teaching and learning both through the institutions and through the subjects, the latter involving the creation of the 24 subject centres. Recognition of the subject loyalties of staff has informed the activities of many educational development units, learning support units and the like, for example by close collaboration with departments or part-time secondments of department staff to the units. Such **recognition of the dual 'communities' to which academics belong**, within the institutions and in their subject across higher education, helps to strengthen the attempts described by innovators in this project to transfer their experience in both directions.

Since the project was completed the Learning and Teaching Support Network has been created. Given the above it is clear that the LTSN provides a new and important infrastructure to support innovators and diffuse the results of innovation.