

AC 2007-2335: ACADEMIC CHANGE IN HIGHER EDUCATION IN EUROPE

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Academic Change in Higher Education

Abstract

This paper analyses academic change in higher education internationally but mainly in Europe. It examines one College in Ireland as it faces major change and examines whether best practice change that has been successful elsewhere might be appropriate in this particular setting, with its own culture and history. Research is ongoing, using qualitative inquiry and fourth generation evaluation which seeks to address the concerns and issues of stakeholders. It is an illuminative evaluation project that seeks to allow senior management in the College see what is happening elsewhere and evaluate whether such methods might be appropriate in their own college.

The focus here is on a literature review of academic change in Europe and the move of some universities to become more entrepreneurial organisations. Changing academic roles and structures are ongoing sources of tension for academic staff in Europe and there appears to be no panacea for successful change. Collegial and bureaucratic institutions are seen to be outdated because of their slowness in responding to a changing environment. Corporate institutions respond quickly with top down change initiatives but often alienate academic staff and so do not harness and maximise the talent at their disposal. An entrepreneurial organisation appears to be the way forward combining top down and bottom up change.

This requires major structural and cultural change within the College under consideration and is the focus of ongoing research. There is a gap in knowledge in understanding how best practice change which might have been successful elsewhere can be applied to the specific culture of the College in question. The authors are expected to have some of the outcomes of this inquiry at the time of presentation in June 2007.

Introduction

Change in higher education in Europe has been unprecedented in recent times, both in terms of the extent of change and the rate of change. The European Union has set a goal to become the most competitive economy in the world by 2010 and there are other pressures forcing change. These include demands from industry for better qualified workers, demands of society for lifelong learning opportunities and the increasing cost to the taxpayer of an expanding publicly funded higher education system.

In 1987 the Economist magazine characterised Ireland as the poorest of the rich, alongside an image of a beggar on a street, thus portraying Ireland as the poor relation within the European Union. The 1990s saw a reversal of fortune for the Irish economy. An economy burdened by debt, with crippling levels of taxation, a poor enterprise culture and relatively low participation rates in higher education was turned around into a thriving economy within a decade. By 1997 the Economist proclaimed Ireland as Europe's shining light. The so called *Celtic Tiger* economy averaged 9% economic growth between 1995 and 2001 and has the highest rates of growth in the OECD¹. Unemployment fell to 4%, compared to 15% as recently as 1993. Ireland now ranks 4th in the world, behind the United States, Norway and Luxembourg, in terms of gross domestic product². Participation rates in higher education are amongst the highest in the World, 52% in 2002¹.

Ireland's economy is flourishing within a global economy over which it has little control. It is vulnerable to factors occurring in the global economy. If the success of the Irish economy is to continue, then the national workforce must be as fit for the market as is possible. That means being capable of innovation and change as the marketplace dictates. Society, organisations and people living in a learning society require education on a lifelong basis suited to their needs so that they are equipped to deal with the challenges evolving in society. According to the Irish Government's white paper on adult education, modern workers are likely to have many jobs and career paths in their lifetime, and the higher education system in Ireland must respond and prepare people for the needs of an advanced economy.

This academic paper begins by describing the challenges facing a large higher education college in Ireland, with both internal and external drivers for change. The origins of the College date back to 1887 and it now describes itself as a multi-level institution with over 20,000 students. The College began through a workingmen's club and was supported by a cross-section of artisan representatives. Before the terms *widening of access* or *stakeholders* were first used in education, the College sought to provide education for working class students, industry, the community and the disadvantaged sections of the population. From its earliest days it provided educational opportunities for women. It did all of this flexibly with part-time programmes suited to the needs of students and society. The Irish Government is seeking to place its workforce at the higher end of the value chain in a global economy, while the College is set to receive substantial public funding to relocate to a new 'green-field' campus over the next decade. The changing environment for the College is therefore posing a series of challenges both to its leadership and to its academic staff. In order to address these challenges the College is looking at change projects and change initiatives in other countries to decide on the type of organisation

it needs to become and to assess whether this is applicable and practicable for its own College given its history, culture and heritage.

Fullan refers to the difficulty of transferring good ideas and change practices from one educational setting to another. Practice and reform identified in other universities often hide the subtleties and nuances of the setting and the conditions under which such practice and reform may have flourished. One would have to have been in it to understand it. Even if all this occurred, a change agent would have to understand the conditions of the new setting equally and amend the practices and reform to that setting³. Such a challenge is addressed in this paper and in ongoing research.

This paper examines what type of organisation the College might need to become in order to be able to respond effectively to the changing environment. It is argued that the College needs to harness the best talent and best ideas from staff. Yet initial anecdotal inquiry indicates that staff feel disenfranchised by decisions being made over which they believe they have little control. Some appear to be resentful of the uncritical ways that new systems are adopted, e.g. modularisation and semesterisation, and would like to have more say in their own and the College's destiny.

Whilst the *why* and *what* of change necessary in the College are related to pressures from the external environment for change in higher education, the much more difficult question, the *how* of change must be related to the individual internal environment of the College and its culture.

Changing Environment

A review of the external and internal drivers facing the College can be summarised as follows:

1. The movement of the Irish economy to the higher end of the value chain within a global market and the development of a learning society in Ireland. Ireland has perhaps been later than other European economies in addressing this issue and can learn from what has happened elsewhere.
2. The increased financial burden of higher education on the exchequer due to universal participation rates and funding of education for the knowledge economy. This has led to increasing demands from government for greater efficiency, improved service with quality enhancement and consequential reduced per capita funding.
3. Academic change due to the changing demands of society for fairer access to the benefits of a tax-subsidised resource with a focus on lifelong learning that is student-centred. This leads to a widened diversity of student intake and changing demands of these students. Demographic shifts in Ireland as numbers of school-leavers decrease could facilitate increased opportunities for mature students, those who suffer from economic disadvantage and disabled students. Up to now this has not been happening in Ireland because it was struggling just to facilitate increasing numbers of school leavers as the Irish higher education system moved to universal participation rates.

4. Changing academic roles for staff combined with increased pressure to produce research, use of information technology in student learning and the availability of world class learning and resources to students through the internet.
5. The College continues to embrace a more robust, disciplined and comprehensive approach to quality enhancement across the full spectrum of its academic activities. Academic units and faculty now face the duties associated with program reviews, school reviews and research reviews. The requirements for engineering accreditation have also changed recently. Ireland is signed up to the Washington Accord and the accreditation procedures in Ireland are similar to ABET accreditations in the US. This means there is mutual recognition of the academic qualifications for Professional Engineer in Ireland, the US and many other (mainly English speaking) countries. The College has just completed a significant transition of its programs and academic calendar to a modular format within a standard semester calendar framework. But the anticipated benefits in terms of greater student choice and program efficiencies have yet to be fully realised.
6. In 1992 associated colleges were combined to form the current much larger college. Thus began a period of great internal change, for example the restructuring of the College into six faculties. This structure was seen as more suited to the needs of students and society in a growing economy, which was moving from elite to mass to universal participation rates. Today, at this stage in its evolution, questions have surfaced within the College as to whether its organisational structure is appropriate to successfully address the challenges ahead.

How should a responsive organisation be developed based on good practice elsewhere that is capable of responding to these drivers? At the heart of the debate about university reform throughout Europe is the retreat of the state as central financier and an increase in the entrepreneurial character of institutions with research, the growing flexibility of personnel structures and financial resources, the adaptation of curricula to labour market requirements and most importantly new forms of quality assessment, all increasing in importance⁴.

This must all be seen in the context of globalisation and considered against notions of autonomy and academic freedom as well as new forms of responsibility towards society and accountability towards stakeholders. What is at stake is the repositioning of universities as institutes of research and education within knowledge societies, and there are increased expectations of universities to be central players with regard to knowledge production⁴. This generates tensions between researchers, lecturers and students on the one hand, and on the other, the interests of the university to fulfil its policy goals. In other words there is a tension between individual freedom to make decisions and take action, contrasted with the university's need for increased accountability. Similarly, increased accountability requires institutions to monitor quality. But who determines the rules and value systems? Autonomy for an institution can translate into restrictions for academic staff working in these institutions in so far as the institution defines the value system, forms of capital and strategic aims. Quality assurance mechanisms can become so deeply woven into procedures and judgements that they become gradually invisible and thus unquestioned⁴.

As already seen the environment for higher education is now changing at an unprecedented rate. Successive Ministers of Education, on behalf of the Irish government, acknowledge that Ireland's economic prosperity is underpinned to a large extent by its education system. This now places greater responsibility on educators to respond to the needs of this changing environment. What sort of organisation does the College need to become at this time of transition and major change? Where should the priority lie between teaching and research; what about the increased work load associated with the move to the new learning paradigm? If promotions, for example, are based on the amount and quality of research, teaching may be seen as a hindrance that gets in the way of academics real work in their quest for promotion. The College has built its reputation on the basis of the quality of its teaching and graduates, rather than the quality of its research: a people-orientated organisation rather than a knowledge generating organisation. Is all that has been seen by many to be good, to be lost in this transition? It would seem that effective academic leadership is quite different from effective leadership in other organisations. The challenges of a changing external environment must be met by an academic culture that harnesses the considerable talent available within the college and this would seem to suggest a need to emphasise collective decision making.

Irish Economy and Society

Ireland's success at attracting foreign direct investment was facilitated by Ireland's third level educational sector. For example, in 2005 the total output value of manufacturing in Ireland was 250% higher than in 1995; largely as a result of a sufficient supply of operatives, technicians and engineers. Ireland is now concentrating on higher-value activities around science, technology and engineering⁶.

The success of the Irish economy has resulted in wage costs in Ireland rising to amongst the highest in the world, and Ireland can no longer compete with low wage economies. Blue collar jobs are migrating to lower wage economies. An important question looms with regard to how Ireland deals with its present economic health and wealth. Referring to the so called *Celtic Tiger* economy, the Irish government minister responsible for Enterprise, Trade and Employment, Michael Martin has said "the tiger has found a resting place in Ireland but will only stay as long as we remain competitive"⁶.

For advanced economies, the challenge for educational policy makers is to promote the conditions for a learning society⁷. The new world of work requires such a learning society, so that workers can accumulate transferable skills for the changing market. Learning becomes a lifelong process as the needs of society and organisations change. The lack of fit between labour force qualifications and the needs of industry in a fast-evolving economy must be addressed by the educational sector. The skill mix that was suitable for the industrial society is no longer adequate for the knowledge economy⁸.

Reduced Funding and Increasing Demands of Government

The values and ideals underlying academic work in universities evolved during a time when there were relatively small numbers of academics and students, high levels of professional autonomy and relatively little financial support or interest from

government or industry. Academics had permanent employment, authority derived from the high academic standing they enjoyed, control over academic matters, autonomy in research and disdain for what were seen as lesser tasks of administration and management. This began to change with demographic shifts (e.g., the baby boom) and as governments began to view higher education as an economic driver of social and economic development⁹.

According to the British Prime Minister Tony Blair, there are now 17 million students across Europe, up 20% since 1997. Student numbers will continue to grow in knowledge economies as blue collar jobs migrate to lower cost economies. This means that the cost of higher education can no longer be borne by taxpayers alone and European universities therefore have to follow their American counterparts and show greater enterprise in finding extra resources, according to Blair¹⁰.

Academic Change

Expanding participation in education has become a leading theme of policy debate in the learning society. In 1997 the OECD arranged a conference of its education ministers under the title *Lifelong Learning for All*. Policy statements from many governments emphasise that the learning age must embrace as wide a range of the population as possible.

Ireland has suffered historically from low levels of average educational attainment and it continues to make inadequate provision for adult and continuing part-time education. For the years ahead a considerable enhancement of human capital is necessary both in quantitative and qualitative terms. If Ireland is to develop as a learning society then it must provide access to higher education for the large numbers of people who missed out first time around during times of elite participation rates. This is not only necessary from an economic perspective, but also from the perspective of providing for a fair society¹¹.

Only 20% of 45 to 54 year olds attained tertiary education compared with 40% of 25 to 34 year olds. Many of these older workers have contributed to the highly subsidized higher education sector through their taxes so that initially students from better off families could gain higher qualifications and in later years, so that higher education could be expanded into a universal system. Many of these people now find themselves in industries with rapidly changing needs or indeed in some cases they are made redundant because of the higher labour costs associated with our successful economy. They helped fund the university sector whilst the economy developed and are surely entitled to demand fair access for themselves now¹².

Brown & Lauder argue that traditional low trust management systems, based on the underlying assumptions of Fordism, required society to focus predominantly on the top 20% of the school population. Higher Education was organised and provided for this elite pool of students and prepared them for a bureaucratic workplace with hierarchical structures with clear rules and procedures. Assessment of students was based largely on the students regurgitating information fed to them by an expert teacher. Didactic teaching methods were the norm. The massive wastage of talent in the other 80% of the population not receiving higher education was affordable because the majority of jobs required little more than the execution of a set of easily learned routines. This is no

longer the case in a learning society. Learning societies will harness the wealth of talent available and empower the population for active citizenship as well as for changing occupational roles. This would suggest that advanced knowledge-based economies like Ireland will probably require a much larger proportion of the workforce to contribute to the decision making process and to be more self-directed, regardless of their position within the organisation. Education for empowerment must provide workers with the power tools of personal confidence combined with the intellectual skills and education required to interpret the wealth of information and ideological dogma to which they are exposed. Innovation, problem solving and creative skills must also be developed in the workforce along with an ability to learn and research and think critically¹³.

Adult students are recognised by adult educators such as Malcolm Knowles as having different learning needs. Knowles argues that adult learners require a different pedagogy, curriculum design and institutional organisation. In fact, the term pedagogy itself is out of place as it refers to the science of teaching children. Androgogy is the term which Knowles advocates should be used to refer to the science of teaching adults. Most androgogical researchers advocate according the learner a role in shaping the purpose and process of learning. This promotes personal development and is motivating to adult learners. Knowles argues a competitive environment should be discouraged. He suggests adults respond best in a collaborative environment and that the behaviour of the teacher probably influences the character of the learning environment more than any other single factor. He suggests that teachers convey in many ways whether their attitude is one of interest and respect for the student, or whether the students are seen as receiving sets for the teacher's transmission of wisdom. Knowles believes that once teachers put students in dependent roles they are likely to meet rising resistance¹⁴. There are detractors from this view. Our own research has shown that adults will sometimes relinquish self-direction and autonomy when learning something new. They may well suspend some of their rights at the door of the college in order to learn. They temporarily accept an unequal relationship between teacher and student and accept the authority of the teacher provided the teacher has something to offer to justify his/her authority^{38/39}

The mission of the College to continue to offer educational opportunities on a part-time basis to mature students poses challenges that are both educational and financial for the academics and managers of the College.

Changing Academic Roles

At the heart of a student-centred learning paradigm is the assumption that all students are different and learn in different ways¹⁵. With the shift to mass participation there are more students to teach who, to paraphrase Ramsden¹⁶, are no longer a gifted and motivated academic group, capable of surviving the bleakest of bad teaching, but more like school students in their range of ability and the corresponding demands they place on staff time and energy. Ramsden also highlights the fact that these students now expect and demand more from a teaching staff who they sometimes see as lacking enthusiasm and providing poor support. Government is on their side in this regard as students are seen as important stakeholders in the process¹⁶.

Modern students are very different to earlier generations of students in the way they learn according to Sjoer & Veen. They refer to the *NET* Generation of students who

scan screens with ease and consider learning as a playful activity where they are challenged to solve puzzles and ill-defined problems. The *NET* generation who they also refer to as *Homo Zapiens* are skilled and experienced with information and communications technology (ICT) in the solving of these problems but are poor at memorising facts, particularly from books. They refer to the clash of the *ICT inside culture* and the *ICT outside culture*. The insiders they describe as *digital natives* who have learnt by doing as they have grown up as part of the *NET* generation. Outsiders consist of *digital immigrants* who have adapted to ICT but have not grown up in this world. Presently, most curricula are designed by digital immigrants (academic staff) for digital natives (young students)¹⁷.

Quality Enhancement

Sporn points to the new phenomenon of accreditation in Europe strongly connected to issues of quality. She cites the European University Association (EUA), based in Switzerland, as one example of a body who offers services through peer review to universities internationally¹⁸.

The European University Association (EUA) has conducted institutional reviews in over 140 universities in over 35 countries over the last eleven years. It has recently carried out institutional reviews of all seven Irish universities. The EUA were commissioned by the National Qualifications Authority of Ireland (NQAI) in association with this college to carry out an institutional review in 2004/5. In particular the EUA was requested by the College and NQAI to evaluate the College's internal decision making structures and processes as well as its internal arrangements for quality. The College got quite a good review, the EUA referring to the College as a dynamic and rapidly changing institution consolidating a new identity. It welcomed the introduction of modularisation and the planned move to a single campus with the unique once-off opportunities this brings with it. The EUA supported the College in being aware and supportive of staff who may not wish to become involved in research activities but who can benefit from professional development activities. They believed the realistic approach taken by the College to research and scholarly activity would encourage and facilitate the development of a research culture and higher levels of research activity. They were critical though of the heavy teaching load, for young academics in particular, and the bureaucratic stipulations regarding teaching hours. Questions were raised about the lack of specific action plans within the Institute to implement the long term strategic plan to 2015. In particular the College had not dealt with resources, obstacles, timing and responsibilities.

The EUA saw a well-balanced approach between managerial and collegial attitudes. They ascertained that the President was seen by colleagues as having a clear vision of the actions needed and enjoyed strong academic support. This, the EUA team concluded, left the climate propitious for the ongoing introduction of major reforms. The team noted that the College had full responsibility for quality assurance and is obliged under legislation to agree the procedures for this with NQAI. Recommendations were made which would require change to the management structure of the Institute as well as changes to procedures.

Organisational Culture

Organisational change is often necessary to implement policy formed as a response to complex and diverse views sometimes expressed external to the organisation, where change is expected to take place. There are often constraints imposed externally and change must be implemented in a way that will require change to working conditions, often perceived unfavourably, by a range of stakeholders.

The interest and motivations of stakeholders are long term and cannot be ignored. They are concerned about their continued ability to earn a living and maintain their families' quality of lifeThey are also concerned about their status of employment and the type of work they do¹⁹

Organisational culture has been variously described by writers such as Handy, Berquist, Becher & Trowler and others as incorporating power, role, task or person culture and as collegial, managerial, negotiating and developmental. It is sometimes described as *the way we do things round here*. The Functionalist approach according to Trowler sees culture playing an important part in the survival and development of the organisation. Members are given a sense of meaning and identity. Trowler argues that where this culture is strong, the organisation is well able to succeed in its environment and has a clear understanding of itself and its mission. The concept of organisational culture is an important factor in managing organisations and particularly when attempting to bring about change²⁰. According to Alvesson the term organisational culture has no fixed meaning and it is used in very different ways in the literature. It is used to refer to ideas, values and ideologies, rules and norms, emotions and expressiveness, the collective unconscious, or as behaviour, patterns, structures and practices. Alvesson sums up culture as a tricky concept used to cover everything and nothing. But he also notes that there is often too little awareness of cultural aspects which guide actions among managers and companies especially where there is an interest in *quick fixes*²¹.

Becher & Trowler have carried out extensive research on this issue in the UK and they describe culture as sets of taken-for-granted values, attitudes and ways of behaving which are articulated through and reinforced by recurrent practices among a group of people in a given context. They go on to argue that the ways in which academics engage with their subject matter and the narratives they develop are important structural factors in the formulation of disciplinary cultures. Further, this culture is both enacted and constructed. The academic is at least partially empowered to construct or re-construct the cultural environment both consciously and more often, unconsciously²².

Every organisation has a culture. Alvesson suggests people learn culture as they operate within an organisation. Patterns of behaviour, practices and norms have evolved in the College based on a hierarchical, bureaucratic structure. Work practice was decided by a small number of people at the top and there was little consultation with staff who would be affected. Change was often enforced upon an unwilling community. Teaching unions were strong as staff aligned themselves against what they sometimes might have seen as an overly strong use of power by "management". *Management* was seen as a noun rather than a verb.

Jary & Parker refer to the multiple and conflicting goals and loyalties of staff. Loyalty to organisation can sometime conflict with loyalty to discipline, family or social interests. Management failure to understand this, can lead to demoralisation in the work force. They are critical of a market model being applied to the public service²³. Pugh suggests organisations are organisms not mechanisms that can be taken apart and reassembled differently as required. He goes on to express the view that organisational change must be approached very carefully. The implications for the various groupings must be thought out and the participants convinced of the benefits from their point of view. To initiate change and ensure it is long term and meaningful, staff at all levels may need to see the need for change and commit to the process²⁴.

Duke refers to the middle band of management in an organisation that can be notoriously resistant to change that may prove more acceptable both above and below. There are also what Duke refers to as *the men in grey suits*, senior lecturers or programme chairs, of long standing, and wielding great influence, sometimes through committees or less formally, as the protectors of their discipline or of the university's identity²⁵. In the shift from elite to mass and universal education, coupled with the explosion of disciplines, Trowler argues that academics are struggling to hold on to values and practices from the past. These include elite values, modes of specialisation, divisions of labour and institutional governance. Reactions from staff can include, he suggests, not only negativity and resistance, but also the enthusiastic adoption of change in some instances and the strategic undermining and reworking of it in others²⁰.

Fullan argues that cultures change in a thousand small ways through teamwork - and the team is large. Culture does not change by dramatic announcements from the boardroom. The culture within any organisation has its own individuality³. According to Ramsden, many academics place loyalty first to their profession. He offers evidence that academic staff are shown to be driven mainly by an absorbing interest in what they do but individual autonomy and self-determination of their own priorities continue to be vitally important to them. Their loyalties can be cosmopolitan in that they can lie outside the organisation by affiliation with professional groups, as well as within it. Evaluation and standards are through peer review by the international community of scholars. Attachment to their professional community may result in high levels of professional arrogance by some, towards people seen as not part of their professional community¹⁶.

Taylor et al argue that change will not result from government edict alone. Cultural, economic and political considerations are important to consider along with the local agendas and interests of those people affected. They argue that effective change in educational practices requires more than positive hopes and aspirations, though these are important in mobilising support. Long-term effective change requires an operationalisation of ideas and their institutionalisation in structures, cultures and practices. This does not mean a closing off of debate, they go on, because better ways of conceptualising the policy will be developing all the time. There must be a change in individual attitudes, behaviours and practices. Structural change is often easier than change to cultural and individual behaviour they conclude¹⁵. Allen & Fifield argue that effective organisational change is more likely achieved when it is in line with the cultural, social and political norms of organisational life²⁶.

Management & Leadership

Kotter describes success in change management as being 80% leadership and 20% management. He goes on to differentiate between management and leadership. Management deals with complexity whereas Leadership is about coping with change. Management brings order and consistency to complex organisations involving planning and budgeting. Leadership is about setting direction, developing a vision of the future and setting strategies for achieving the vision. Management is about controlling and problem solving. Leadership is about motivating and inspiring²⁷.

Competent academic leadership is dynamic, optimistic, energetic, outward looking, supportive of academic endeavour, outcomes focused and concerned with change and development, according to Ramsden, who warns that if the balance between leadership and management is not right, then this will lead to problems. Strong leadership without strong management is characterised in academia by innovative courses failing because of a lack of control. But strong management without strong leadership will lead to a sense of disempowerment and irritation with a likely culture of compliance combined with a minimal desire to change. Ramsden goes on to argue that academics believe that efficient management that gets things done effectively is different from inspirational leadership, but just as important. Strong leadership produces appropriate change and when combined with strong management is combined with order, consistency and predictability. Similarly good teaching inspires student learning and innovation but it must be combined with good management to ensure objectives and goals are kept in sight and on track¹⁶.

Ramsden believes that successful leaders challenge the existing process, inspire a shared vision, empower others to act, lead by example and celebrate achievement. Transformational leaders share the leadership, motivate people to do more than they thought they could, work collaboratively towards a common purpose and adapt to change in a positive way. Leadership may emanate from surprising sources. For example junior academics may more readily adopt new teaching methods because of the recency of their own, perhaps negative, learning experiences. This leadership should be supported and recognised. Leaders' visions draw support if they are intellectually and emotionally engaging enough for people to commit to them. The best visions are positive ones that move towards a dream and not just away from pain. Negative visions are often poorly developed responses to external pressures and usually short term. They give an impression of a group who only pulls together when it has to, according to Ramsden¹⁶. Senge suggests that the only vision that motivates you is your own. That is why a leader's vision must be shared if staff are to implement it. Of course visions might be created by a group and then sold to staff. But if people doubt the vision they are likely to reject it. Sometimes they will go along with it but to get the best from staff they must want the vision too, according to Senge. Devising a means to a shared vision requires excellent communication skills and an awareness of the culture of the internal environment²⁸. Ramsden points out that mistiming can be disastrous and that effective academic leadership is authoritative and not just doing what people want. He also suggests that few academic teams can operate well without a leader who is willing to make strong decisions¹⁶.

In this type of environment mistakes will be made. Mistakes should be seen as opportunities for learning and accepted as part of the change process but the good

manager will ensure that mistakes are not below the waterline. Mistakes are seen as the gap between vision and reality, between theory and practice by Ramsden who cites trust and confidence in a leader's authority as something that has to be won. Trust comes from restraining motives of self-interest and carrying the same burden as followers. Recognising one's own fallibility and limitations of knowledge as well as admitting mistakes are important in this regard. Above all, promises must be kept and so care must be taken to say what you mean and mean what you say. Credible leaders minimize the gap between rhetoric and action. Motivation must never be confused with manipulation and respect must be two way. In this way a leader displays integrity and builds trust, suggests Ramsden. He also believes that conflict should not be avoided but that evidence should be presented and interpretations exposed to scrutiny¹⁶. This is what Senge describes as dialogue and is based on mutual respect. This requires that staff sometimes make themselves vulnerable and this requires a safe environment that must be fostered by the leader. Ramsden argues that the bedrock of productive disagreement is mutual respect and that the most productive teams are constructed on the principles of shared vision and collective regard¹⁶.

Steers and Porter define work motivation as the process by which behaviour is energised, directed and sustained in organisational settings²⁹. Lomax discusses the contradiction of managers wanting staff to contribute independently but yet wanting to influence them. He argues that if professional staff are to be encouraged to take ownership of projects then they must be empowered and given control³⁰. Empowerment is power sharing and encourages employees to participate fully in the organization, according to Daft³¹. This would seem to suggest that the College would need to examine the changes occurring in the external environment and empower staff to address these changes.

Ramsden criticizes academic leadership that is either excessively lax or dumbly aggressive and assertive. He reasons that staff will not give their best to people who appear not to understand them or their needs. He observes that too much academic management has been reactive, leisurely and amateur. Too much academic leadership has been focused on short term goals and betrays a lack of trust in people. He points out that there are ditches on both sides of the leadership road. But just as effective teaching is based on an understanding of how students learn, effective academic leadership is based on an understanding of how academics work. Fullan describes sustainability in leadership as the capacity of a system to engage in the complexities of continuous improvement consistent with deep values of human purpose.

In small international electronic surveys of university staff, Ramsden identified the following as the main challenges university leaders face:

1. Maintaining quality with fewer resources (doing more with less);
2. Managing and leading at a time of rapid change;
3. Turbulence and alteration in HE;
4. Student numbers and responding to new types of students.

Ramsden contrasts this with books on academic leadership and management of the 1980s relating to an elite system of education with slow change, small classes, collegial committees etc.. Ramsden provides evidence that extreme freedom to self manage leads to underperformance in academics – hardly surprising perhaps? Furthermore he produces evidence that salaried scientists performed best when they formulated their

expectations and goals with supervisors, senior professionals and colleagues, rather than individually.

Ramsden argues that academics are usually sceptical about the quantification of academic outputs (student numbers, completion rates, publications etc..) which in some cases, they believe, may actually diminish quality. They see quality as being traded for quantity suggests Ramsden, who provides the graphic example of assessing the productivity of research on the basis of the value of grants is like awarding the Melbourne cup to the horse that ate the most oats. Ramsden goes on though, that despite the differences in emphasis between academics, management, students and employers on what should count as outputs, there is an amount of consensus too. Academics accept that numbers of publications, especially peer reviewed publications, have an important part to play. Similarly there is general agreement that students must learn the power of the imaginative acquisition of knowledge, as well as the more traditional form of knowledge acquisition, which is sometimes preferred, perhaps because it is more easily assessed and defended for rigour.

Ramsden highlights four areas that are repeatedly criticised by students:

1. Poor quality of assessment processes not testing higher order skills and not providing formative feedback on student learning.
2. Failure to implement active, independent learning and away from didactic teaching methods.
3. Unclear aims, objectives and standards
4. Ineffective and unenthusiastic delivery, too much lecturing and not enough interaction.

Also highlighted by Ramsden, are the lecturers with the IQs to match Einstein's who have numerous publications, but *who could not teach a dog to sit*. Just as academics sometimes slip into using assessment methods which are most easily provided and defended rather than those which might be more appropriate but more difficult to provide or defend, similarly managers sometimes use evaluation which is easily measured or defended against charges of bias or unfairness, rather than more appropriate but more troublesome types of evaluation¹⁶.

Changing an Organisation

Argyris & Schon³² and Senge²⁸ developed management thought and organisational structure in Massachusetts Institute of Technology in the 1990s. Senge, in particular, deals comprehensively with the development of *learning organisations*. According to Senge it is necessary for organisations to learn faster than the rate of change in the external environment and develop strategies to create new conditions and solve problems in unknown future situations. This requires vision by top management and courage to empower staff to implement bottom up change. Senge believes it is necessary to understand that the process is not just improvement, but a whole new way of life. Srikanthan believes that the learning organisation represents the ultimate transformation of culture and is well suited to the collegial culture of academic change in universities³³. Fullan suggests that adaptive work demands learning and experimentation without fear. Failing is usually a pre-requisite for success but the key

to good management in this scenario is to ensure that mistakes do not cause irreparable damage and are used for organisational learning.

Senge argues that many traditional organisations inhibit learning. He believes that fear of mistakes, and managers not allowing new ideas to develop are part of the problem. A learning organisation must be supportive of its staff and forgiving of mistakes. Senge further suggests that real empowerment must be practiced to allow innovation. Low trust organisations are characterised by employees demonstrating minimum levels of commitment because there is no reason or incentive for them to do otherwise²⁸. Similarly Schon advocates a learning environment where we must become adept at learning. We must reflect on what we do, learn how to learn and find out how to transform our organisations, institutions and societies³⁴.

Academic Change Internationally

The pressure for change in Ireland is a fairly recent occurrence. But earlier developed economies have already addressed many of the issues now facing higher education in Ireland. Let us examine how the pressure for change elsewhere has impacted on those systems. The credit framework, the movement towards transferable skills rather than discipline content, modularisation and semesterisation, accreditation of prior and experiential learning, the increasing diversity of student intake and the increasing demand for accountability have put pressure on academics to adapt to change.

Throughout Europe university leadership has been strengthened due to the state's withdrawal. Proponents of these changes argue that the increased congruence between accountability and decision making power reduces the time taken to make decisions and increases the quality of those decisions. In this way the university can become entrepreneurial and competitive, they claim. But Sporn warns that such changes can cause scepticism and distrust and that maintaining a good relationship between faculty and management is an enormous challenge. She warns that institutional leaders must be aware of the pitfalls of introducing top-down strategies without bottom-up identification by the academic community¹⁸.

Sporn argues that there is a new distribution of power spreading in universities in Europe accompanied by new public management (NPM) looking to the US for guidance. NPM has identified inefficiency, over-regulation, bureaucracy and inflexibility as problems in the higher education sector. Many elements of the reform resemble US practice such as strong leaders, governing boards, quality and accountability and performance-based budgeting, according to Sporn who continues that generally the driver has been the effort to make institutions more competitive, entrepreneurial and market orientated. The implicit goal she suggests is to cut public funding, increase tuition fees and for institutions to raise funds themselves. The state will withdraw as institutions gain autonomy and undergo transformational change. She argues that continental Europe is following the UK and US down this road with erosion of the power of unions and professionals and gains in importance for managers and high profile chief executives. NPM was applied in different ways in different countries. For example she points out, that Sweden used the total quality movement to restructure higher education into learning organisations. Quality is defined according to indicator based performance measurement. In Norway, management by objectives (MBO) was used to redefine the relationship between state and universities. But in both countries,

reform has really only touched the surface with behaviour at department and individual faculty level unchanged. Sporn claims that Austria has been one of the most innovative countries with regard to higher education reform. Increased autonomy to universities will see them decide on employment contracts, allocation of resources without needing ministerial approval. All staff will be subject to evaluation¹⁸.

However, the conduct of universities becomes a series of reactions to directives from governments controlled by varying philosophies at different points in time. The government forms the immediate external environment for the university and dictates the level of autonomy it will have and the level of accountability that will be necessary³³. Taylor et al point to the market liberalisation principles of Australian governments with a rhetoric of devolution. But this new autonomy is really decentralization with schools getting reduced budgets and having to manage within a framework set by head office. This has resulted in competition between schools and a weakened commitment to education as a public good¹⁵.

It is appropriate at this point to briefly consider educational ideology around the three axes categorised by Trowler²⁰:

1. The aim of HE (Newmanite or vocational)
2. Discipline based (propositional or general transferable)
3. Functions (Research or Teaching)

Trowler argues that traditionalists favour Newmanite, discipline-based research orientation. Some traditionalists in Trowler's study were concerned that increasing access would open the boundaries of the academy to weaker minds. In our own engineering faculty the question is repeatedly being asked as student numbers and diversity increase and as we implement wider assessment methods "are we not dumbing down by doing this?". Some academics appear to resent having to progress high numbers of students who they perceive to have limited ability, because they fear it will have a negative impact on their professional discipline.

The progressive view, according to Trowler, is student centred. The development of transferable skills rather than propositional; and experiential learning being valued. Elitism is rejected and mass access favoured. Social inequality is addressed by giving students a step up. Academic and professional standards are less important than the ability of the student or graduate to benefit as far as possible. Teaching is favoured over research and a Newmanite philosophy is preferred.

The entrepreneurial view, suggests Trowler, is that vocationalism is favoured over the Newmanite ideal, skills over content and teaching over research. For the enterprise academic a binary divide between research universities and teaching institutes of technology is appropriate and protects against academic drift and ensures a more down to earth standard of teaching. This view supports a pride in excellence in undergraduate teaching.

The move to modularisation is intended to offer choice to students as well as make the system more efficient but Trowler's research also highlights the point that students will often opt for modules that are easy to take rather than what is sensible to take. Trowler warns that some of the rhetoric about student centred learning in the UK has more to do

with top down corporate management for efficiency or managerialism as it is referred to, normally in a pejorative way, by academic staff.

Key words in the debate on organisational change are provided and interpreted by Felt: flexibility (moving away from tenured contracts), mobility (movement of students, teachers and researchers around the global network of universities), enterprise (interaction with users of knowledge), transdisciplinary (capacity to tackle complex problems crossing territories) and finally efficiency (more students and proportionally less resources – at least from government). During Felt's case study analysis of decision making structures, university autonomy and changing paradigms in higher education policy, in eight countries in Europe, he identifies collegial and managerial as two polar extremes. He suggests the collegial university which combined professional autonomy with high levels of staff participation in management was the ideal on which many universities were structured in the 1970s. The main criticism of this model was the lack of flexibility towards external change and slow adaptation to the demands of stakeholders. There was a lack of accountability and often no clear responsibility for decision making. He concludes that the price to pay for increased amounts of public funding was an increase in accountability to the state and the taxpayer. Diametrically opposite is the managerial model. This uses a management style often found in the private corporate sector. This is often a top-down executive management hierarchical system. There is less academic freedom and no collegial decision making structures. Goals are set by external sources and academics have freedom only to decide how to fulfil them⁴.

Felt places in between these two extremes two further models:

1. A bureaucratic model, providing relative autonomy with the individual but in a mechanistic and bureaucratic institution. Rules and procedures slow down the rate of change and hinder adaptation to new needs.
2. An entrepreneurial model partly exists in the UK (similar to US model) and searches for new markets and maintains financial security by maximising external funding.

Similarly McNay provides a model (see Fig. 1) of four university types with two dimensions:

- 1 Policy definition
- 2 Control over implementation.

University type A, Collegium, has the freedom to pursue university and personal goals unaffected by external control. Type B, Bureaucratic, is managerialist, with a focus on regulation, consistency and rules; its management style is formal with a cohort of senior managers wielding considerable power. Type C is the corporate university where the management style is commanding and charismatic. There is a crisis driven competitive ethos and decision making is political and tactical. Students are units of resource and customers. Type D is the enterprise, orientated to the outside world and espouses continuous learning in a turbulent environment. Management style is one of devolved leadership where decision making is devolved and its dominant unit is the small project team. Students are seen as clients and partners in the search for understanding. McNay

concludes that all universities draw on each type of management but that the dominant pattern in the UK and Australia has moved from A to B to C to D³⁵.

McNay's Model

	Policy definition: loose		
Control of implementation loose	A Collegium	B Bureaucracy	Control of implementation tight
	D Enterprise	C Corporation	
	Policy definition: tight		

Fig 1

Our College

The College in its strategic plan 2006 – 2009 states:

We aim to create an entrepreneurial college that devolves as much decision making as possible to operational units within a structure of accountability, budgetary allocations and policy framework....functions will focus on financial strategy which includes sourcing funds, the financial evaluation of strategic plans and the identification of financial risks and exposures, determining appropriate resource allocation mechanisms which reflect agreed College policies. Incentivisation of income generation will be encouraged. (p43)

For the College, there appears to be some attempts at a shift from the existing type B, bureaucratic model to the type D entrepreneurial model, as described by McNay. But to achieve this, there would appear to be a need to loosen control of policy and to become more entrepreneurial, hence more ready to face a turbulent environment. Ramsden suggests the move to mass education requires a shift from the middle manager as a rotating post operating by consensus in a small elite system to a trained professional leader managing a large diverse modern university department. Management by consensus is too slow and unwieldy to respond adequately to the turbulent environment¹⁶. But this is in conflict with the recommendations of the OECD and EUA for rotating academic chairs (heads of department/school). At the same time the bureaucratic model with tight control of policy and implementation has been shown in our College to be unsuccessful at getting adequate change at the speed required by the new environment. Nor is it likely to get the best and most imaginative solutions now necessary, from academic staff, in this process.

Supporting this theme are Coaldrake & Stedman, who suggest that most universities around the world are moving from loose policy control to a policy that is more firmly

determined, away from organisations featured by collegium and bureaucracy to one closer to the corporation or enterprise. A trend towards more entrepreneurial universities has major implications for policy and culture. As some members of the academy will be better positioned or able to capitalise on research and other opportunities, rewards in the form of status, promotion and resources will flow unevenly through the system. According to Coaldrake & Stedman successful higher education institutions will be those who can mobilize people and facilities flexibly into project based teams across organisational boundaries. This will require the linking of individual energies in line with the goals of the organisation. Coaldrake & Stedman warn this is often viewed as managerialist. Whilst no university can expect optimum output and innovation by imposing inspection and control on staff, neither can it be expected that some invisible hand will guide the path of individual academics or that effective change will happen by academic introspection and reflection. Herein lies the kernel of the problem for most academic institutions undergoing change. Coaldrake & Stedman conclude that academic freedom does not include freedom from responsibility to stakeholders. They suggest the need to develop mechanisms for negotiating the match between organisational goals and individual work and to allow substantial freedom for academic staff to contribute to those goals³⁶. So how is this to be done?

The Learning University

The benefits of responsive learning organisations have been highlighted by Senge¹⁹ and others for industrial settings. The intended move of the College to become an entrepreneurial university means that it will be necessary for staff to respond innovatively to the changing environment. This will require high levels of organisational learning.

Fullan refers to the Complexity (or Chaos) theory where the link between cause and effect in organisations is not easy to trace and that change occurs in non-linear ways with paradoxes and contradictions abounding. He refers to living on the edge of chaos as living with uncertainty and believes that creative solutions arise out of interaction under conditions of uncertainty, diversity and instability. Complexity theory is about learning and adapting under such uncertain conditions. Fullan uses the term *collaborative schools* to equate to professional learning communities in educational organisations³. Many writers on academic change such as Trowler, Duke and others refer to the learning university as a possible organisation structure that may well be suited to the modern higher education organisation facing uncertain conditions. Based on the original concept of Senge, Duke argues that whilst the term *learning organisation* is dropping out of fashion, the substance it relates to is still rising in importance. Changing academic role and identity are chronic contemporary concerns, according to Duke. He refers to fast-changing times with new clienteles, demands and expectations, new social, economic and environmental problems and circumstances, and the need for the university to change and do new things in new ways, whilst managing the tension between continuity and change²⁵.

According to Fullan the secret to success of adaptive learning communities is intricate embedded interaction inside and outside the organisation which converts tacit knowledge to explicit knowledge on an ongoing basis. This requires sharing of individuals' emotions, feelings and mental modes and a building of trust so that people

can draw on emotional support as well as practical help. There is also a building of peoples capacity to deal with ongoing challenges and problems³.

Duke argues that the democratized nature of the learning university would not be good news for those attracted to high office by power and glory. Most of the functional management is transparent and indirect – features not loved by those who like to exercise power and control. It is about trusting and empowering people down the line. He argues that empowerment is the Achilles heel of many traditional managers. Gratification must often be deferred and shared with a team, again not good news for managers intending to fast track their careers based on the results they have achieved or for those who wish to massage their own egos²⁵.

Wonacott, in *The learning Organisation: Theory and Practice*, taking a critical and very pragmatic approach, refers to the learning organisation as something more theoretical than actual – more a concept to focus aspiration than some objective state. He quotes Senge as saying effectively that *ten years after he first used the term no one quite understands what a learning organisation is, least of all him*³⁷. Meanwhile, Duke wonders can organisations learn? How do organisations adapt to new and changing environments? Similarly Wonacott poses two conceptions of organisational learning but both pose puzzles for him:

1. Learning by organisations poses the puzzle of how the learning of organisations can take place outside of individual human brains?
2. Learning in organisations poses the puzzle of how the learning of individuals becomes organisational?

Duke believes that learning must take place in individuals but as a result the organisation develops. In this way, in its capacity to adapt to the changing environment, the organisation learns²⁵. Wonacott argues that social units can learn from experience but they do not always do so when individuals learn on behalf of the system. Organisations may not be able to create a future based on the learning of individuals. For one thing unlearning old habits, old beliefs and old behaviours may just not happen. Learning is a construct and not an activity that can be measured but change in performance as a result of learning can be the essence of the learning organisation. But the idea that the learning organisation is a finished product that can be attained is doomed to failure because the learning organisation is a developing entity continually responding to change and hence continually changing itself. Latest knowledge of the environment must be used by the organisation to survive and this requires ongoing learning and most importantly change, according to Wonacott³⁷.

Wonacott continues that individuals often have different mental models, levels of personal mastery and systems thinking which inhibit team learning. Teams may not function well where there is a power differential between team members. For example a subordinate may not want to say in front of a manager that which he/she believes the manager does not want to hear. Some members of the organisation may not want the responsibility that comes with such an organisational change. Mistakes are inevitable for this type of organisation but organisations are often intolerant of mistakes - how will managers respond to mistakes? At the same time holding managers to short term business results as well as to long term organisational learning and change are not simultaneously achievable.

Wonacott concludes his article with the comment that although learning organisations are difficult to implement they exert a powerful intuitive appeal. Herein lies the danger perhaps? Such an organisational structure may be easier to aspire to than implement. In addition, the individuality of peoples learning will be influenced by their attitudes and values and there must be health checks when individual learning contributes to organisational development. Senge believes this can be achieved by opening aims, policies and rationale to everybody for critical review.

Duke is optimistic the university can become a learning organisation whereby “the whole institution continuously learns and adapts towards purposes agreed and valued by its members. Traditional collegiality and modern organisation development might then come into union” (p 109)²⁵. Ramsden refers to transformational leadership in the learning organisation and suited to a dynamic environment. This leadership style engages followers through inspiration and exemplary practice, collaboration, spontaneity and trust. Leadership should provide clear goals, a climate of respect and cooperative authority structures¹⁶.

Conclusions

It can be seen that the one constant in the future for higher education will be ongoing change. The changing environment requires responsive university organisations. It has been shown in this paper that there is no panacea, but the College in this research has made a decision to devolve power to staff and encourage bottom up academic change under top down policy definition in a pincer type movement. Will this be successful?

At present academics in the College are being asked to meet the needs of a more diverse group of students, to teach more flexibly using information technology, to redesign curricula to take account of the more rounded skills demanded by industry, to subject their teaching to evaluation, develop and implement improvements, and use more formative assessment aligned to learning outcomes. There are pressures on academics to deliver more to the community, not only by widening access and increasing social capital but also through developing and delivering new innovations such as service learning modules and supporting disadvantaged students. These academics are presently meeting these challenges so it seems reasonable to find out what their views are about the type of organisation the institute should become and how they think change should be implemented. This is the subject of ongoing research.

Research Questions being addressed include:

1. As the College moves to become more entrepreneurial how much will collegiality contribute to academic change?
2. Will there still be elements of the corporation with top down direction from managers who believe they know best?
3. Will middle management who have spent long periods of time in a type B organisation be capable and willing to change?
4. Will other aspects of the culture of the College adapt to a new model, for example academic staff, students and teacher unions?
5. Will reduced control of policy provide sufficient freedom for academic staff to reach their potential in an entrepreneurial model that allows staff the academic freedom to address the challenges?

Is it just a case of getting agreement for the selection of an appropriate organisational structure and change paradigm like one would select dinner from a menu? Practice and reform identified in other universities often hides the subtleties and nuances of the setting and the conditions under which such practice and reform may have flourished. Fullan refers to the difficulty of transferring good ideas and change practices from one educational setting to another. One would have to have been in it to understand it. Even if all this occurred, a change agent would have to understand the conditions of the new setting equally and amend the practices and reform to that setting.

Such a challenge is daunting.

Bibliography

- ¹ ESRI (The Economic and Social Research Institute) *Overview of the Irish Economy*. [http://www.esri.ie/content.cfm?t=Irish Economy&mId=4](http://www.esri.ie/content.cfm?t=Irish%20Economy&mId=4) accessed 16.08.2004
- ² OECD (2005) *Education at a Glance*; <http://titania.sourceoecd.org/vl=14317649/cl=20/nw=1/rpsv/factbook/> acc. 31.01.05
- ³ Fullan M. (2005) *Leadership Sustainability: System Thinkers in Action*. California; Corwyn Press.
- ⁴ Felt, U (2001) *University Autonomy in Europe: Changing Paradigms in Higher Education Policy*; University of Vienna
- ⁵ Sporn, B. (2003) *Convergence or Divergence in International Higher Education Policy; Lessons from Europe*. Vienna University.
- ⁶ Ireland 2010 supplement to Irish Times newspaper July 2006
- ⁷ Ranson, in Edwards, R., Ranson, S., & Strain, M. (2002) *Reflexivity: Towards a Theory of Lifelong Learning*; in *International Journal of Lifelong Learning*, Vol. 21, No. 6.
- ⁸ Tuijnman, A., (2003) *Measuring Lifelong learning for the New Economy*. Compare, Vol 33, No 4, Dec. 2003
- ⁹ Coaldrake, P. & Stedman, L. (1999) *Academic Work in the 21st Century, Changing Roles and Policies*; Australia: University of Queensland Press.
- ¹⁰ Blair, T (2006) *Paying the Price*; Newsweek, August 2006
- ¹¹ Skilbeck, M. (2001) *The University Challenged. A Review of International Trends and Issues with Particular Reference to Ireland*. Dublin; HEA.
- ¹² OECD Factbook 2006 <http://lysander.sourceoecd.org/vl=9841364/cl=28/nw=1/rpsv/factbook/>
- ¹³ Brown, P. & Lauder, H. in Halsey, A.H., Lauder, H., Brown, P & Stuart Wells A. (1997) *Education, Culture, Economy and Society; An Introduction to a New Agenda*; Oxford: Oxford University Press.
- ¹⁴ Knowles, M. Holton, E. & Swanson, R (1998) *The Adult Learner: A Neglected Species* 5th ed. Houston: Gulf pub.

- ¹⁵ Taylor, S. Rizvi, F. Lingard, B. & Henry, M. (1997) *Educational Policy and the Politics of Change*. London & NY: Routledge Falmer.
- ¹⁶ Ramsden, P. (1998) *Learning to Lead in Higher Education* London, Routledge.
- ¹⁷ Sjoer, E. & Veen, W (2005) *Active Learning for NET Generation Students*; Netherlands: Delft University (5th annual ALE conference)
- ¹⁸ Sporn, B. (2003) *Convergence or Divergence in International Higher Education Policy; Lessons from Europe*. Vienna University.
- ¹⁹ Kotter, J.P. Schlesinger, K. (1979) Choosing Strategies for Change. Harvard Business Review March/April (p102)
- ²⁰ Trowler, P. (1998) *Academics responding to Change; New higher Education Frameworks and Academic Cultures*; SRHE & OU Press; UK
- ²¹ Alvesson, M. (2002) *Understanding Organisational Culture*. London; Sage.
- ²² Becher, A & Trowler, P.R. (2001) *Academic Tribes and territories: Intellectual Enquiry and The Culture of Disciplines*. 2nd ed. Philadelphia; OU Press.
- ²³ Jary, D & Parker, M. (1994) *The Neo Fordist University: Academic Work and Mass higher Education*. Newtown: Conference paper, New U.
- ²⁴ Pugh, D. (1978) Understanding and Managing Organisational Change as cited in Mayon-White (Ch 13, p141 –145, 1988) *Planning and Managing Change*, London: Chapman.
- ²⁵ Duke, C. (2002) *Managing the Learning University*. Buckingham, SRHE & OU Press.
- ²⁶ Allen, D.K. & Fifield, N (1999) *Re-engineering Change in Higher Education*. Sheffield: Information Research, Volume 4 No 3 February 1999, 1 - 49.
- ²⁷ Kotter, J. P. (1998) *Winning at change Leader to Leader*. Vol. 10, Fall San Francisco: Drucker Foundation and Jossey-Bass Inc.
- ²⁸ Senge, P.M. (1990) *The Fifth Discipline: The art and Practice of the Learning Organisation*. N.Y. Doubleday
- ²⁹ Steers, R. (2000) *Motivation and leadership at work*; London: McGraw-Hill.
- ³⁰ Lomax, P (1996) *Quality management in education : sustaining the vision through action research*; London/NY: Routledge
- ³¹ Daft, R. L. (2001) *Organization Theory and Design*. 7th ed. Minnesota: Southwestern college pub. co.
- ³² Argyris, C. & Schon, D. (1978) *Organisational Learning: A Theory of Perspective*, Reading: Addison Wesley.
- ³³ Srikanthan, G (2002) *Can Universities Learn*: RMIT University, Australia: CMQR.
- ³⁴ Schon, D (1995) *The Reflective Practitioner: How Professionals Think in action*. New York; Basic Tools.
- ³⁵ McNay, I. (1995) *From the Collegial Academy to the Corporate Enterprise: the Changing Culture of Universities*, in Schuller, T (ed) *The Changing University*. Buckingham; SRHE & OU Press
- ³⁶ Coaldrake, P. & Stedman, L. (1999) *Academic Work in the 21st Century, Changing Roles and Policies*; Australia: University of Queensland Press.

³⁷ Wonacott, M. (2000) *The Learning Organisation: Theory and Practice*. Ohio State University: Centre on Education & Training for Employment. ERIC: Myths & Realities No. 12.

³⁸ Kelly, K (2006) *Moving a Part-Time Engineering Programme to a Student Centred Paradigm*. Dublin Institute of Technology: Level 3 – An online Publication

³⁹ Kelly, K (2006) *Experiences in the Dublin Institute of Technology Moving to a Student Centred Paradigm for Mature Part-Time Students*. Conference paper presented at 10th IACEE World Conference on Continuing Engineering Education (WCCEE); Vienna April 2006.