Becta
leading
next generation
learning
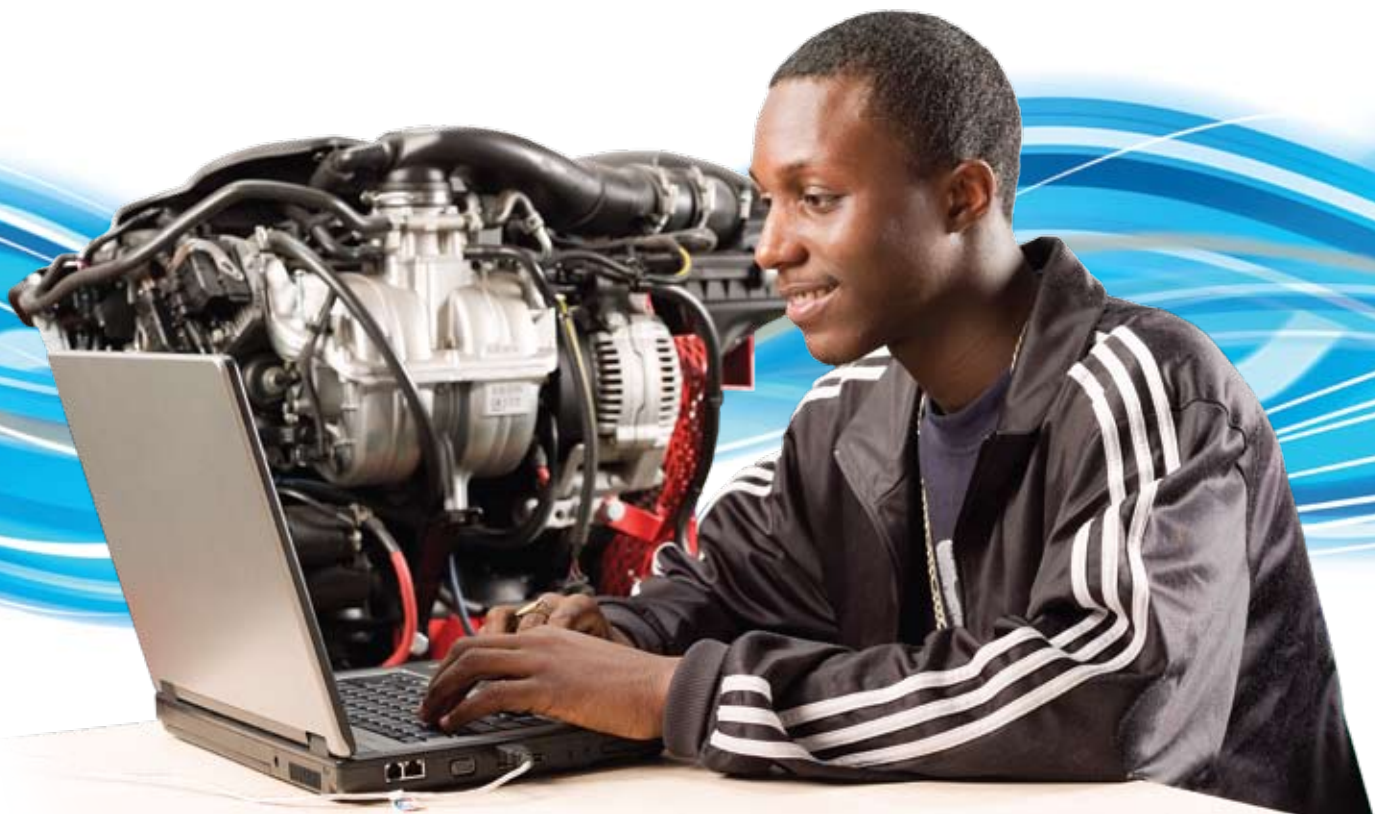
In conversation with Becta
Harnessing technology in FE and Skills
Questions of leadership

Contents

Foreword

Jane Williams

We are presenting this second edition of *In conversation with Becta* pieces at a time of uncertainty in the world, highlighting a new imperative for colleges and providers. At a time of great economic change, Further Education (FE) has a major role to play in supporting people to develop their skills and love of learning, employers to develop their workforce capability and the population at large to have opportunities to extend their life choices. Underpinning FE and Skills with a strategic approach to harnessing technology enables colleges and providers to respond even more effectively to those learner and employer needs. This presents leaders in the FE system with some of the toughest challenges so far, given the urgency for all teachers and trainers to be up to date in using technology and capable in using e-learning to retrain and upskill people in a rapidly changing environment.

We believe colleges and providers are better prepared than they would otherwise have been, thanks to hard work across the sector in implementing the Harnessing Technology strategy. Since we published the *Technology strategy for further education, skills and regeneration: Implementation plan for 2008-2011* there has been considerable debate leading to progress in many areas. We have seen greater collaboration to share best practice, commitment to continuing professional development (CPD) to improve quality of teaching and greater access to flexible e-learning tools for the learner.

The challenge to all of us is to maintain the momentum and two developments should assist. First, in the spring, we are launching a sector-wide technology improvement leadership tool – Generator – which will enable providers to assess their use of technology, benchmark themselves against other providers and develop improvement plans. We are grateful to all colleges and providers who have been testing the framework. Second, we are working with national partners to bring together the first national CPD prospectus for technology-enabled learning, which will also be launched this spring.

The *In conversation with Becta* series was launched to promote opinion-forming discussion and debate at every level. The first edition focused on the application of new technologies; this edition addresses key questions of leadership.

If you would like to join us in our ongoing conversation and/or give us feedback on this publication, please email feskills@becta.org.uk

Jane Williams
Executive Director, Further Education Regeneration and Delivery, Becta

1. Introduction

This is the second in the series of publications in which Becta highlights significant issues surrounding the uses of technology for people working in FE and Skills. In the first edition, ten leading voices among learners, providers, leaders, managers and policy advisers gave their views on the *Technology strategy for further education: Implementation plan* and how developments such as Web 2.0, mobile technology and podcasting were often replacing traditional teaching. It opened up a whole debate about what are the most appropriate teaching methods and styles.

The second edition goes further, addressing key concerns of those who must lead the way to effective management and implementation. One message comes through strongly: only if leaders show an interest will others follow. Change is challenging and people need good reasons to pursue it. They need to see the benefits it brings to learners and how the technology helps them to do what they do best–teach and support learners better.

The nature of the changes we face are uncertain, which puts greater onus on leaders to think ahead. Roger McClure, Chief Executive of the Learning and Skills Improvement Service, says: "You've got to be adaptable because you don't know exactly what will happen, but you've got to have a vision of what the future might be like."

For Toni Fazaeli, Chief Executive of the Institute for Learning, the way to meet the challenge is through CPD: "Leaders have to see CPD not only as a headline, but to think about what is the CPD that will work on the ground, so that using IT becomes like driving; it's such an automatic part of your life that you don't even think about it."

All the debate around IT in education and training is fundamentally about using the technology to improve the quality of learning, says John Stone, Chief Executive of the Learning and Skills Network. "What's important is the interplay between technology and teaching staff who could be best placed to see how it could help learning." In the end, it means doing what must always be expected of good leaders: "Create the structures that bring together people who are best placed to identify where the interests of learners lie but without claiming that you know where the journey will end."

Major General Tim Inshaw, Director General Training and Education, Ministry of Defence says, "We must harness technology to enable better management of the myriad of training pipelines" and "to respond better to the expectation of the young recruit for whom the concept of learner-focused training is becoming the norm." Indeed, according to Shirley Waterhouse, Director of Educational Technology, Embry-Riddle Aeronautical University: "In American institutions the use of technology has become a major factor for many students and parents when making decisions about where to study."

In recent months, a partnership has grown between Becta and the MoD – a good example of cross-departmental co-operation – bringing together FE leaders and senior military personnel to enhance the quality of technology enabled teaching and training. It is indicative of the wider multi-agency approach leaders in this edition of *In conversation with Becta* say is urgently needed.

Agencies such as the Learning and Skills Council and Ofsted need to work more collaboratively, says David Hunter, Chief Executive of Lifelong Learning UK: "They're all looking at IT in their own way, but not collectively."

All agree that the role of the leader is to make sure that technology serves the learner. "Leadership has to come from the curriculum side. They provide the ends and direction, and then the 'techies' provide the means," says David Hunter. For Tim Marshall, Chief Executive of JANET UK, good leaders need know very little about the actual technology: "We don't want technology experts but leaders who know how to get advice and expertise and to trust them. Becta is well positioned to help leaders understand the overview. They know the alternatives, they understand the options."

Frank McLoughlin CBE, Principal of City and Islington College, says good leadership is about setting realistic goals to help others do the job: "The leadership role is to set a realisable mission for the college, then to energise people, give power away, distribute power within the organisation."

Where we learn and how we acquire knowledge may be changing radically, says Seán Rowland, President of Hibernia College (an online institution). But the leadership issues are the same, as learners in any setting would choose to be part of a community. "We are now very well aware that what has worked for generations on site will work online. Technology is not going to replace physical institutions, it will complement them."

Toni Fazaeli
Chief Executive of the Institute for Learning

Toni Fazaeli

Institute*for*Learning **IfL**

Protect time for continuing professional development in technology

Leaders will have varied levels of skill and understanding in technology and most will have come from a generation where it's their second or third language. But we have to remember that new technology is there, not for its own sake, but for enhancing learning, so we have to embrace it. Leaders should be a role model.

It's actually an advantage if you're not confident because it gives out a signal that we can all learn and develop new skills and that technology matters. An example here is the principal who mastered digivideo and filmed herself in a message to all her staff in the staff newsletter. This is setting the tone from the leadership.

Of course it's essential for leaders to identify who has the expertise across the institution and to set the budget, but Becta has shown that it's not enough to only have the hardware and the facilities. Something more significant has to happen for those who are struggling, so CPD is essential.

CPD needs to go local within the institution. Conferences and workshops are useful for raising awareness – full stop. Learning from each other, having time to experiment, to learn privately or with colleagues, to have practice in using new technology is what's important.

Analysis of data from the membership of the Institute for Learning (IfL) shows a mixed picture; there's a wide range of confidence among teaching staff, but not enough is being done to help people develop their skills because there is so much pressure on their time. Leaders need to protect that so teachers get time at *local* level – and that's got to be time that's not timetabled with teaching and meetings, it must be free time so that teachers can work together. Leaders have to see CPD not only as a headline, but to think about what is the CPD that will work on the ground so that using IT becomes like driving; it's such an automatic part of your life that you don't even think about it.

For example, many of our members are using REfLECT, our e-portfolio for recording and reflecting on CPD and professional networking. Although its main purpose is CPD, it also builds up their confidence in using IT by using it through a back route, and this spills over into their general practice. It can also be used on the move through more familiar new technology, such as mobile phones.

REfLECT provides each member of staff with a private space to store working material and evidence for the 30 hours of CPD which they must undertake each year to maintain their licensed status. In using the facility for professional development, they are also gaining experience in skills such as logging ideas and activities, action planning and blogging. Thanet College used a similar system, beginning with a pilot of 15 volunteers. The personalised form of working was very popular, and has spread, because staff felt it left behind compliance and passive behaviour and encouraged professional autonomy and responsibility.

The role of middle management is really important. Our members' experience shows that you can have a senior management that's really committed, but further down the line in the week by week planning is where it can run into the sand if there's no protected time for teachers to work together to share good practice – it gets taken up with covering for absent colleagues, meetings and administration. Middle managers need to think of the end goal and what's most likely to succeed, where the blockages are and how best to support grass roots activity. This is clearly an area where good leadership, to set the direction for the whole institution, is crucial.

The economic downturn means there's even more urgency for teachers and trainers to be up to date in using technology. We're used to teaching youngsters who are skilled in technology, even if they're not skilled in using it for learning. But there are going to be many more adults looking to retrain and upskill people who have lost their jobs. They will need people who can teach and train tomorrow's workforce. IT is going to be such a big issue for so many people so that they can be as up to date as possible to strengthen their chances of employment. So for us there isn't the luxury of time. Leadership must be focused on bringing about that quality of service that's needed at the present time.

David Hunter
Chief Executive, Lifelong Learning UK

David Hunter

Skills for Learning Professionals

Leaders should take "a students' eye view" of technology

You have to think about the ends you want to achieve. When I visited Cisco Systems and a number of colleges and universities in America, it taught me a lot of lessons about IT. They didn't all use the same methods – some used a method that linked everyone up to everything and some used Tablet PCs – but the most creative approach I saw was at Columbia University where they had concentrated on making teaching and learning more dynamic and interesting.

To give a couple of examples, they had used video cameras to build up 3D images for anatomy students. Now anatomy has been a difficult area in medical teaching for years – books can only use 2D images – but these 3D images of cadavers got the students into the cutting room straightaway, as it were. And in Environmental Studies I saw a simulation dealing with a mining town in which people were being poisoned. The students took the role of various people in the town and used a range of IT applications to investigate and debate the issues.

How technology affects the ends, that's more important than connecting everyone up. As a leader, you need to have knowledge of what the technology can do and I wouldn't have known about those things unless I'd been to see them.

You also have to take a student's eye view of the learning process. I was talking to my son about some photo software he was using and when he couldn't get it to work and I suggested that he read the instructions, he pointed out that no-one reads instructions these days. Young people just crack on and do it, they work their way through things and you have to adapt to that.

The average FE institution has an ageing staff population and technology is not the first thing on their mind. You need champions who can show the advantages of technology to those of us who are a bit long in the tooth. Unless people can see the advantages of using it, you're beating your head against a brick wall. But good tutors are always looking for more interesting ways of doing things and those people will give it a go.

CPD is the only real tool in your box to get people enthused, and again, you're back to finding those champions who can enthuse others. But being able to enthuse other people doesn't necessarily go with the technology skill sets – you have to have both. Technical people can set up marvellous systems but that's no good if other people don't relate to them. Leadership has to come from the curriculum side. They provide the ends and direction, and then the 'techies' provide the means. If you don't do it that way round, you're in trouble.
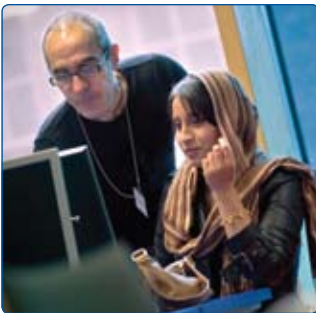
Another challenge is money. There's always a cost to this. Hardware such as virtual learning environments (VLEs), for instance, are very demanding on cost.

It's interesting looking at how many college programmes are available without going into college, and there aren't many. Why hasn't the Open University idea come more strongly into our sector? Why are we still putting up massive buildings and assuming people must go into college? Obviously there's a lot of practical stuff that must be done in college, such as hairdressing and motor mechanics, but a lot of Arts courses could be done online and we haven't really moved to that next step.
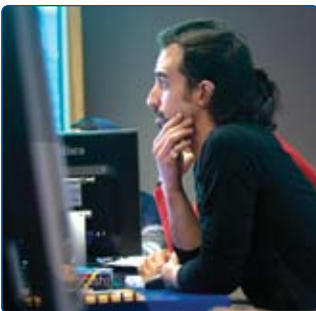
Organisations are answerable to a lot of outside agencies. But how do these national agencies, such as the Learning and Skills Council and Ofsted, work together? They're all looking at IT in their own way, but not collectively. Working together could be very powerful. For example, Chris Humphreys of the UK Commission for Employment and Skills says that you could link the Individual Learner Number to the tax database and that would make it possible to track outcomes and destinations from learning processes. We could look at whether doing certain courses actually results in getting employment in that sector. That sort of information would help us to be very focused.

Major General Tim Inshaw
Director General Training and Education, Ministry of Defence

**Major General
Tim Inshaw**

MINISTRY OF DEFENCE

Training systems must take account of the needs of individual learners

The Ministry of Defence (MoD) directly employs a workforce of some 304,000 people, split between 226,500 in the uniformed Armed Forces and 77,500 civil servants. All of these require training to make them effective in their role, be that in one of the two major operational theatres, in military Headquarters or in the MoD Head Office. This is not a simple military/civilian split: although frequently overlooked there are roles for civil servants in operational theatres and the MoD doubles as a military Headquarters as well as being a Department of State. As a result, Defence is one of the largest deliverers of skills training, further and higher education in the UK today. It runs over 200 training schools, from very small operationally-focused units that may train only a few individuals each year in highly specialised areas, through large technical training establishments, to the Defence Academy of the United Kingdom, which principally delivers postgraduate courses.

The main purpose of military training is, of course, to provide effective front-line sailors, soldiers and airmen. But Defence also has a wider obligation to ensure that its Service personnel, who serve on average for around six years, are well placed to make a positive contribution to the UK economy when they step out of uniform and return to the civilian job market. As one of the early signatories to the Leitch Skills Pledge the Department is committed to ensuring as much of its training as possible is accredited to provide a civilian recognised qualification - by April 2011, 95 per cent of those being posted to their first job after initial training will have secured a full Level 2 qualification.

Although operational training must take priority, Defence has worked closely with the Learning and Skills Council (LSC) to ensure, wherever possible, that space is made available in the initial training pipelines so that the demands of an accredited apprenticeship may be met. The LSC funds the 'gap' between what is militarily required and a full apprentice framework. Consequently, Defence is also one of the largest deliverers of apprenticeships in the UK and a major FE provider in its own right. For those trades which are very specific to the military, Defence has secured Awarding Body status from the Qualifications and Curriculum Authority (QCA). This allows Defence now to award nationally recognised qualifications in areas for which, until now, Service personnel received no credit beyond the Armed Forces.

So what are the challenges facing Defence training? As military equipment cost inflation continues to outstrip the Consumer Price Index there is a continuing need to ensure that our courses are as cost efficient and effective as they can possibly be. A Defence Training Review was conducted in 2001 and concluded that a degree of physical rationalisation of delivery was overdue, and that the greater use of technology in training could improve both the efficiency of the training and the effectiveness of its output. Much of Defence training has always

used cutting-edge simulation technology and, working with Becta, this will continue. But the greater challenge is to harness the available technologies to make our skills training delivery more efficient and more engaging to new recruits. Often these are young people who have under-achieved at school but may be highly proficient at online social networking, even if only to the extent of frequent text messaging! Experience suggests that they respond well to military training and the inculcation of Service ethos – but this process may be accelerated and success rates improved further if our training systems take better account of the needs and expectations of these individuals.

Much good work has already been achieved in embracing new technology – a huge range of advanced applications are already in service ranging from multi-million pound high-end aircraft simulators to iPod-based training applications capable of delivering learning in operational theatres. But the key challenge is to take a coherent view of the application of technology across the three, largely autonomous, Armed Services and provide the facilities for efficient identification and exchange of good practice between them. Moreover, we need to harness technology to enable better management of the myriad of training pipelines. A third aspect of the challenge is that we must be able to respond better to the expectation of the young recruit for whom the concept of learner-focused training is becoming the norm. And all this whilst ensuring that we maintain the ability to inculcate in these young people the military values that are regularly proven to be such a crucial element of our ability to achieve success in operations.

To meet this challenge we have much to learn from the FE sector – it is its output, the learners, that we are taking on and, if Defence is to continue to be an effective supplier of FE, we need to understand how the capabilities, expectations and needs of our recruits have changed, and will continue to change very rapidly.

Tim Marshall
Chief Executive Officer, JANET UK

Tim Marshall

Set your sights realistically on what your organisation can and must achieve

The main mistake people repeatedly make is to assume that if you have a technology company or enterprise then you need technologists to lead it. Failing that, chief executives and other key leaders go out of their way, quite unnecessarily, to become experts.

When you think of it, this is absurd. College principals would never assume they need detailed knowledge of every discipline, subject and business aspect of their operations. But somehow, overwhelmed by the all-pervasive nature of IT, it is easy to lose sight of the core principles of leadership.

I am someone who's worked in an industry based on technology and cutting-edge technology and television that moved into e-learning. I moved from the BBC to the hard-nosed world of Disney and into e-learning at JANET UK. All these organisations are underpinned by state-of-the-art technology of which I know little – but I am aware of what it can do. I have the advantage over the technologists because I have no pre-conceived ideas. I am interested in the implications of technology and can see how the big picture changes but I do not get bogged down in the detail.

No-one can be expert in everything. We don't want technology experts but leaders who know how to get advice and expertise and to trust them. Becta is well positioned to help leaders understand the overview. They know the alternatives, they understand the options.

So, where does a good leader stand with regard to IT? First, set your sights realistically on what your organisation can and must achieve. Ignore the people who say: "This has been tried before and it can't be done." If you do not retain the optimism that it can be done, you might as well pack it in.

Second, occupy the moral high ground. This is not some philosophical distraction; it is about deciding what is right in a business sense and sticking to your guns. We need leaders in this society who come at decisions through consultation and argue from a moral basis. So long as you have a robust style, you can win through.

Third, you need to drive change to ensure that as far as possible, everyone in your field of activity is a strategic partner. This means you must be open, up-front and honest. Working with Disney made me realise I have to negotiate, convince, arbitrate; never humiliate them but give them respect and dignity.

On the need for morality, there has to be middle-management training so that they all walk the talk of company values. How many public sector organisations really do have underpinning company values? They may have a strategic plan and mission – but what and where are the values? In fact, training is at the heart of effective implementation of technology at every level. You have to be able to say to every staff member and manager: "I will ask this of you and I know it's a lot, but I will give you all the help and training you need to ensure that you do the job well and with satisfaction." Training is not an option; it is what empowers people.

Most of all, we need brave leadership that will stand out against laziness (by which I mean risk aversion). In the public sector there is a tendency to spend a lot of money on studies, rather than to give people the money to get on with it.

Ask yourself some key questions when deciding an IT strategy and direction:

• Is the solution going to bind me to a range of proprietary products which does not leave me flexibility further down the road?

• What are the hidden costs in order to sustain our commitments?

• Does it do the job it's understood to?

• What if suddenly a system with competitive advantages were to emerge, will we have the capacity for change?

• Overall, have I the flexibility to maintain the competitive edge I desire?

These are some of the simple questions that must be asked to ensure good leadership. Then there is the question of the need to create a winning team, which is where the best leaders excel. David Kirk, captain of the All Blacks – one of the great world-class teams – sums up for me what good leaders should aim for. He says a winning team wins by a large margin, with members who make few mistakes and enjoy what they are doing even in the toughest moments of the game or during training. His work has had an important influence on my thinking and from it, I offer some pointers. To be a winning team we:

• expect our leadership to demonstrate commitment to our values

• ensure that we have the required skills, resources and professionalism

• are adaptable, flexible and use initiative to promote improvement

• support one another and celebrate success.

Roger McClure
Chief Executive, the Learning and Skills Improvement Service

Roger McClure

Leaders must have a vision for a very uncertain technological future

Many leaders use the PEST formula (Political, Economic, Social and Technological) when thinking about strategy for their organisations and it's important to put the 'T' into PEST. Most leaders are good at understanding politics and economics and are very good at the social aspects, but not so good at technology. That's partly generational because most of them have not grown up using technology.

There are two types of difficulty that leaders face in relation to technology. One is the idea that "technology is never going to work, don't touch it," and the other is "I'm up for technology, but I can't see what application it's got for learning." So, firstly, you have to get them to understand how technology involves them, but you have to get them involved rather than push them. Then get them to think about a future that you don't yet know. You've got to be adaptable because you don't know exactly what will happen, but you've got to have a vision of what the future might be like. After that, you need a vision of how it will change your staff.

'Leaders' here means leaders at all levels, from Governors right the way through to learners. This is a huge agenda for the learner voice and for those who lead the learner voice. It's the perfect opportunity for the customer, the learner, to feed back into the system about what they want. If you're not asking people about the technology being used, it's a huge opportunity missed.

All senior leaders have to ask these questions – What's the potential of e-learning and technology and how can it benefit our business? What can we do that's going to make us better? What's the future, even the next three to four years, and what's the impact going to be on my organisation?

A major issue for FE colleges is how we should integrate technology into new ways of learning in new-build. How do we need to be different? One of the criticisms of Building Schools for the Future is that it has just produced electronic ways of doing old style learning. An example of this is the old-fashioned view of learning that's still very teacher-centred – all the time, not just when it's appropriate. For example, the teacher is always in control of the whiteboard, even when it's a state-of-the-art electronic whiteboard.

Becta's research (based on its annual survey) into the characteristics of organisations that use technology effectively has shown that they have a clear technology strategy led by a dedicated member of the senior team, while those that are less effective have a fragmented approach. It's got to be based on leadership from the top and led throughout the whole organisation.

Less effective organisations don't see the opportunities in technology relative to competing demands on resources. They also often have the idea that technology is for management information systems but are unable to see what it's got to do with learning.

Another issue is leaders who are under the control of the technologists. It's seen as 'technology' and then delegated to someone lower down and then it becomes divorced from strategic aims. And then it's someone else's specialism, not everyone's.

There's also the issue of early and late adopters. Some people wouldn't invest early because they couldn't see what the payoff would be and now they feel disempowered. The question for leaders is when to jump in. The longer they leave it, the more difficult it gets, especially if you are a traditional learning organisation.

A further issue leaders have to confront is whether they see technology as a way to control people. This is where leaders have to think through the organisation's values. Will colleges use it just to register students and make them turn up on time or to help them learn? It's the same with the identity cards debate or any kind of statistics about people – it can be used to control them. Who will you give information to? Employers? Parents? Your partners in a consortium? As senior leaders and governors, you have to think about where your legal responsibilities lie.

And e-safety is a real conundrum. It's like film censorship and that's why you have to have values. Is the flow of information going to be free, or what are you going to do to protect people? This is a real issue with the 14–19 agenda bringing more young people into colleges.

Leaders have to think about what information you're collecting, what it's for and what kind of environment you want to have. Any process reflects the values of your institution; no decision is value-free. When you're working on your vision and strategy, you need to have a very clear idea of why you're investing in technology, not just because the college down the road has it.

Frank McLoughlin CBE
Principal of City and Islington College

**Frank
McLoughlin CBE**

CITY AND ISLINGTON
COLLEGE

Set the direction, energise people and give power away

There's a distinction between leadership and management. You've got to have both, but leaders have to create a sense of mission, of taking the organisation on a journey. It's got to be rooted in our values, what we believe in. Our mission is to deliver world-class education and our values are learning, excellence, aspiration, diversity, equality, results – we've all signed up to that.

We don't want to spend too long defining 'world-class', but it must mean using technology – not just bells and whistles for the sake of it, but it must harness technology for the maximum benefit of the students. It's not about the hardware any more but what you do with it. Technology is like a golden thread that runs through the college. It impacts on everything we do, from teaching and learning, to how we operate as a business to liberate resources to invest back for the students, to how we communicate with everyone.

There has to be intellectual challenge. I can set the direction, but people have to be able to challenge me on it because a vision and mission that's not rooted in reality is nonsense. The leadership role is to set a realisable mission for the college, then to energise people, give power away and distribute power within the organisation.

But you have to know what's going on. Once you have set the Strategic Plan and the Annual Operational Development Plan, once you've set the values and the direction, the key then is to have performance management programmes – you've got to have a system where you can monitor processes and outcomes.

You can see this in our balance scorecard software, which can monitor performance across a great range of indicators. I saw something like this in America in a community college, but they were asking crazy prices for the software. But having seen the possibilities, we could establish the kind of information we wanted and what we wanted it for.

Our in-house team then worked for months to build an elaborate database. Now we can produce information in real time for audit committees and so on from individual student level to the whole college level. We can drill right down into the indicators. For instance, we can find that staff sickness might be good overall, but if there is a problem in one pocket of the college, we can ask for a report on that.

Managers have got to give power to people and let them get on with the job. Empower people as low down in the organisation as you can. For example, the Learning Centre staff are working with curriculum staff to assess what are the most used websites and resources for different courses. This allows them to set up a Top Ten for websites that can be regularly updated to let people know where the most useful resources can be found.

We've also developed an electronic registration system. Schools often have expensive handheld technology for this, but here every classroom is web-enabled, which means you can have electronic registration in real time. Because it uses the PC that's already there, it's not incurring further capital costs. It saves enormous amounts of time on, for example, the administration of EMAs, which used to be paper-based. This leads from the original leadership aims to make the organisation an efficient business to maximise the share of resources available for the benefit of students.

There was some resistance from the staff at first, but we ran a pilot with enthusiasts that showed how the registers would benefit staff and students. Because the information was there immediately, there were no delays in paying students their EMAs. They could see the benefits of regular attendance and so retention improved. And because all the information was held centrally, staff could check the information easily and this freed them up to do the things that only people can do, which is teaching and supporting students.

We have a culture of setting IT at the heart of the college, so we have to run pilots that show the benefits and listen to staff when they have ideas. Our communications process is very much up as well as down – people are encouraged to feed into the e-technology group to define how our technology is going to move forward. Teaching staff and heads of services can feed back up through the committee structure with proposals to senior management about, for example, how to manage the internet.

Saving time allows our managers to develop their teams and themselves. Things are changing so rapidly, in the ways that you can use podcasts, for example. It's a steep learning curve that we need to keep on top of all the time, identifying what's good and relevant to our students.

Seán M. Rowland
President of Hibernia College

Seán M. Rowland

A new learning community is born online

Things have improved immensely in online learning. Initially, IT was certainly open to question for quality and reliability, but there's been a growth in participation and quality over the last ten years. There are more sophisticated and more academic opportunities for adults, whether school-based or learning from the home or the office. There's a new level of acceptance, and that's wonderful.

You have to be vigilant in oversight of quality. In pursuing this it's been very important getting the opportunity to work with leading academics who are at the top of their game and doing cutting-edge research. We've found that the opportunities have been immense – we have brought in leaders from around the world who can work together online. The productivity and simplicity is fantastic. Years ago you wrote away for your reports and it took literally months, but now it's at your fingertips. Consulting with colleagues in, say, Germany would have taken weeks, now it takes minutes.

There's a wonderful level of communication that allows more equality of access across education systems because the best learning can be shared. Not only do we know more about what people are doing, we can also talk to them. That can be passed on to the students. But I have to go back to the fact that we have to be incredibly vigilant to keep standards high because, as well as the good quality material, there's also a lot of rubbish out there.

Learning online has opened up opportunities for people to come into teaching who never thought they could. Wonderful people are coming into teaching. Many people who learn online can't give up their jobs or take a flat 50 miles away, but IT means that access has broadened and the pool enlarged. For example, mothers with three or four children can now take their teacher education in their own community.

We need to be absolutely sure that the content is of the highest quality because we cannot compromise on excellence when we're training the people who will be preparing the next generation.

The key is accreditation. Any course online should be at least as well accredited as onsite courses. In the UK we're working with Canterbury Christchurch University and the Training and Development Agency for our programme called iTeach, which delivers online initial teacher education to students across England wanting a flexible and convenient route to becoming a qualified teacher of maths, chemistry or physics. Our Master of Science (MSc) in Financial Management and Control has been formally accredited by the Chartered Institute of Management Accountants (CIMA) to allow exemptions from their three strategic level papers. The MSc in Pharmaceutical Medicine is accredited by the International Federation of Associations of Pharmaceutical Physicians.

And leaders have to remember that technology is like the dial tone on your phone; you need it but it should not get in the way of what the call is about. IT is just a tool for teacher education – it should not get in the way of education. For instance, I find that most adults in teacher education are not interested in using video. They don't want to bother with looking good for class, they would rather use audio. We're exploring the possibility of working in Kenya and South Africa, focusing on teacher education. Some areas are well provided with broadband, some rely on satellite, some would need DVDs and blended learning. You have to focus on the needs of the community. Whether you're in America or Europe or Africa, it's important to respect the culture you're being invited into and to adapt.

You have to listen to your students. We're now very aware that what has worked for generations on site will work online. Technology is not going to replace physical institutions, but it will complement them. Anyone providing e-learning must be aware that human beings work in groups and need to be part of a community. Our students communicate with their tutors and each other electronically, but we also set up regional groups. Then if people decide they want to meet up with Tom, Peter and Susan on Saturday, they can drive to see each other. You need to have small learning communities that develop friendships with people comfortable with working together in groups. We're strong on getting to know each other. Our students taking the in-service MSc in Pharmaceutical Medicine are working in 28 countries around the world, so we bring them on site once in the USA and in Ireland.

It's not all or nothing, it's a blend. It's wonderful to see at graduation groups of friends that have formed through learning.

John Stone
Chief Executive, Learning and Skills Network

John Stone

Leaders must be a role model in the use of technology

Leadership in IT is a bit different from general management issues where leaders usually have a considerable amount of knowledge. But with IT, leaders are not so informed or in their comfort zones because of the pace of change.

In general management you have to have a vision of what the end point is; with IT you approve the general direction but you don't know where it's going to end, you don't know what it might lead to.

When I went to Ealing and Hammersmith College, there was already a strong commitment to the use of technology but without being specific about where it might lead. What's important is the interplay between technology staff and teaching staff who could be best placed to see how it could help learning.

You have to set up a culture that looks at how technology could be used to help learners. You're on a journey, you set the cultural direction and create the structures that bring together people who are best placed to identify where the interests of learners lie but without claiming that you know where the journey will end.

Staff have demands on their time and are at different stages of commitment to IT so it's up to management to set priorities. If no-one at the top is seen to be interested, then people won't put in their precious hours and minutes. It's about shifting the equilibrium.

I was lucky at Ealing and Hammersmith College because there were already a number of people who were keen on the technology and had a vision of where it might go, but the core development was to set up the student learning environment. The existing MSDOS system was looking a bit long in the tooth, so I said we should develop it and I suggested a Windows system based on what I'd read in the Times Educational Supplement. But they looked doubtful, went away and considered it and came back with a web-based system. It was important to allow them flexibility, and they came back with a better solution than the one I'd thought of.

It was developed, not in a strict project management sense, but more by having a sense of direction. Leaders have to tell themselves that they don't have the answers. Technology is never an end in itself, it's about finding out how individuals learn and how technology can be used in those individual circumstances. That complexity and variety is not something any one person can have in their head.

Individual enthusiasts are important. You have to give them air time to put their views. Leaders might put their ideas from the top, but teachers trust people like enthusiasts and they, in turn, listen to teachers. Spotting those enthusiasts and giving them time to talk to teachers is an important part of the mix.
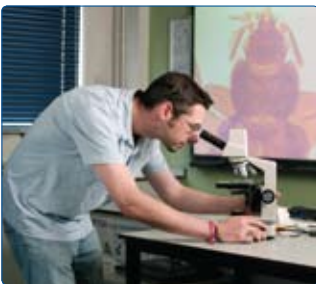
Should management of IT be bottom up or top down? It has to be both. It's about galvanising support and giving people the space in which they feel they can make a difference and that they're being effective and that people are listening to them. But resources and general direction are very much the purview of the management; someone has to be setting the landscape and laying out the fields and hedgerows, laying out plans and resources so that things go properly forward.

Dr Shirley Waterhouse
Director of Educational Technology, Embry-Riddle
Aeronautical University, United States

Dr Shirley Waterhouse

Get the balance right between spending on infrastructure and preparing the teachers and learners to use the technology

In my experience with e-learning at my institution and in my consultations with others throughout the world over the last 12 years, I believe the main hindrance faced by all of these institutions is leadership's lack of knowledge about e-learning. I don't mean to be disrespectful, but most leaders just haven't had the time to become as knowledgeable as they need to be in order to lead the e-learning effort. After all, most of these leaders were students before the widespread adoption of e-learning and would not have had occasion to experience it firsthand. In many cases this lack of knowledge has resulted in 'overspending' on the technology infrastructure and 'under spending' on preparing teachers and learners to use the technology. In addition, it has meant inadequate planning and processes to keep up with the accelerated pace at which e-learning technologies are emerging.

In most other important areas in which leaders are required to concentrate, leadership's expertise and guidance trickles down the institution. This is not the case with e-learning. Often, a few innovative teachers and IT personnel who took it upon themselves to experiment with technology to improve learning are involved in the early adoption of educational technologies. This practice has created a 'trickle up' effect resulting in the absence of critical institutional e-learning strategic plans and processes.

When I begin e-learning strategic planning consulting projects with institutions, my work is in three phases. In the first phase, which I consider to be the most important, I educate top leaders and teachers in the important aspects of successful e-learning. I start by putting top leaders in the role of online learners to help them understand how the technologies are used. This leads to a discussion of the time, resources, and skills needed by teachers to create e-learning. I follow this experience with a full briefing on what I consider to be the ten essential elements of e-learning. (Also during this first phase, I work with teachers to provide awareness sessions on how e-learning strategies could help them improve teaching and learning.)

The first three elements are basic foundation stones and must be addressed first:
• leadership commitment
• technology infrastructure, and
• e-learning strategic plans and processes.

The other seven elements are:
• learner support
• teaching support
• library resources
• quality control
• online student services
• content development resources, and
• learning spaces.

In the second phase, I conduct a study to determine the current state of e-learning at the institution and provide a rating on each of the ten essential elements. This report becomes a 'frame-of-reference' upon which to base the third phase, the construction of an e-learning strategic plan.

Following this, there has to be long-term commitment that 'survives' if the individual enthusiasts move on. This is a key issue for leaders. You need plans and processes which provide control mechanisms that remain in place even when there are leadership and staffing changes. Technology systems have to be routinely evaluated and refined on a regular basis. Also, as technologies emerge, there must be processes for reassessing their value to the institution, either in student information systems or in teaching and learning technologies. Finally, processes are needed that ensure that teachers, support staff and students are well-trained on the effective utilisation of technologies.
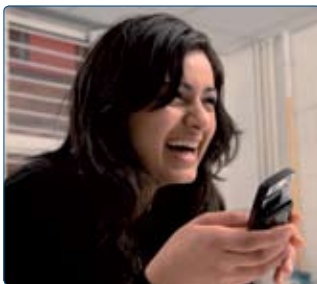
Of course, with the growing pressures for constant reassessment and re-evaluation of the learning technologies, budgeting is an important issue, especially in a downward economy. However, most institutions I am familiar with in America now have a good understanding that a current, reliable technology infrastructure is mission critical and realise that technology must be considered a strategic asset. It took about ten years in America for this evolution to occur, starting around 1995 going up to about 2005. Most institutions in America have established chief information officers (CIOs), who work closely with top leaders on the technology infrastructure. It is well established that funding for technology upgrades is an institutional priority.

In fact, the technology infrastructure in American institutions has become a major factor for many students and parents when making decisions about where to study. EDUCAUSE, a leading organisation focusing on the effective use of technology in higher education, publishes a guide on its website for parents and students to use to evaluate the technology system of an institution. There is a common practice among American institutions, referred to as 'tech refresh,' which means that typically every three years computers and computer systems are routinely upgraded. In the economic crisis currently affecting American institutions, many have extended the tech refresh cycle to four or five years.

In the end, the need is to get the balance of spending right and avoid that significant problem – an 'over' investment in the technology infrastructure and an 'under' investment in programs that aid teachers and students in understanding how to utilise the technology in order to maximise its potential.

Conversation points

- How much do leaders need to know about technology? Is it essential to have leaders who are themselves experts in the new technologies?

- If leaders are not themselves experts in technology, how should they go about making decisions about its use for their organisation?

- How important is it for leaders themselves to be seen using technology?

- Given that teachers and support staff have to keep up to date with new technologies and develop new skills, how could you protect the time they need for continuing professional development (CPD)?

- How can middle managers become enthused to develop the use of technology within their teams? What is it that leaders have to do to ensure that this happens?

- How can you ensure that decisions about technology involve users and are fully informed by current needs and practice?

- How should the relationship between leaders and IT experts be characterised and managed?

- Does online learning create unique problems for maintaining quality in teaching and learning?

- How do you know how capable your staff are in using technology? Should this be part of the remit of Ofsted and other external auditors?

- How do you know how capable your learners are in using technology?

- How could you organise effective feedback from the IT users (teachers, learners and support staff) to leaders, managers and experts to improve your quality of provision?

- How could you encourage your staff to share their good practice and expertise?

- Who in your organisation should keep up with the latest developments in technology, who needs to know about them and how should this information be disseminated?

- How could you organise interaction between technical and teaching staff to get the most fruitful outcomes?

- How can you make best use of technology enthusiasts?

- Are there dangers in relying heavily on technology enthusiasts and champions?

- Is funding becoming less of a challenge as technology gets cheaper?

Conversation points (continued)

- How can you as a leader ensure that technology is used to broaden access?

- How important is it that teaching and support staff are as familiar with latest developments such as social networking as the learners are themselves?

- How could national agencies further their work collaboratively to support the use of technology, and what might this achieve?

- What might be gained by cross-sector working with schools and HE?

- Can you maintain a sense of community in your institution with the growth of online learning?

- Does the growth of online learning mean the end of education and training institutions as we know them?

- What is needed to encourage innovation with technology by FE and Skills providers?

Biographies

Toni Fazaeli

Chief Executive, the Institute for Learning

www.ifl.ac.uk

Toni started her career as a teacher, and has taught in prisons, FE and adult and community colleges and providers, as well as schools. She was an inspector for the Further Education Funding Council for seven years. Before joining IfL, Toni was a deputy director in the FE and Skills group at the Department for Innovation, Universities and Skills (DIUS), where her policy responsibilities included the FE workforce, teaching and learning and personalising learning.

David Hunter

Chief Executive, Lifelong Learning UK

www.lluk.org

David was previously Chief Executive of the Further Education National Training Organisation (FENTO) and the Association of Northern Ireland Colleges. He was proactive in working towards the formation of LLUK as the Lifelong Learning Sector Skills Council, which came into effect on 1 January 2005. David has been a manager in FE, in adult and community education, and in the voluntary sector. Much of his work in all these fields has been in relation to partnership working and social inclusion.

Major General Tim Inshaw

Director General Training and Education, Ministry of Defence

www.mod.uk/DefenceInternet/home

Major General Inshaw began his current appointment as Director General Training and Education in November 2007. Previous posts in his 33-year military career to date include Commander 1 Signal Brigade/Rhine Garrison and Chief G6 for HQ ARRC and three year tour on the General Staff as Director Capability Integration (Army). He has held a variety of appointments in Germany, Northern Ireland and Great Britain. During service he did a degree in Electrical Engineering at the Royal Military College of Science.

Biographies (continued)

Tim Marshall
Chief Executive Officer, JANET UK
www.ja.net

Tim Marshall is the executive director leading on innovative strategic development for JANET, the education and research network. He aims to develop the best commercial practice in the public services, with a strong focus on e-learning. Tim brings a wealth of technological experience from both the public and private sectors, having been a senior manager in the BBC before joining the Walt Disney Company as Senior-Vice President and then Buena Vista Productions International as Managing Director.

Roger McClure MA IPFA
Chief Executive, Learning and Skills Improvement Service
www.lsis.org.uk

Roger McClure was previously chief executive of the Scottish Further and Higher Education Funding Council (SFC) and a pro-rector of the London Institute. He spent six years at the start of his career as assistant and then senior auditor with the National Audit Office during which he was seconded to the University Grants Committee as its first-ever financial advisor. He became director of finance at the Polytechnics and Colleges Funding Council (PCFC) in 1988 and director of finance at the Further Education Funding Council in England (FEFC) in 1992.

Frank McLoughlin CBE
Principal, City and Islington College
www.candi.ac.uk

Frank McLoughlin became Principal of City and Islington College in July 2002 after 22 years in FE. Frank is a key figure in the leadership of the FE Reform Agenda. He is a founding member and Secretary of the influential 157 Group, a member of the Self Regulation Implementation Group and on the National Steering Group of the Deloitte Employability Programme. He is also an executive member of the Islington Strategic Partnership. He was awarded a CBE in the Queen's New Year's Honours list 2009 for services to FE.

Seán M. Rowland
President of Hibernia College
www.hiberniacollege.net

Seán M. Rowland, brought together his colleagues from the corporate, education and technological communities in 2000 to create Hibernia College, Ireland's first, and to date only, accredited online third-level institution. He began his career as a teacher and after five years moved to the USA where he established and became Executive Director of the Centre for Irish Management at Boston College.
He also established the Irish Institute at the college, working with young Irish professionals, political leaders and educators to promote Irish/US relations.
In 2008 he won the Ernst and Young Emerging Entrepreneur of the Year award.

Biographies (continued)

John Stone
Chief Executive, Learning and Skills Network
www.lsneducation.org.uk

John Stone is a leading proponent of e-learning in FE. As Principal of Ealing, Hammersmith and West London College he was vice-chairman of JISC, where he also chaired the learning and teaching committee. Since 2006, he has been chief executive of LSN, where he expanded its work on personalised learning to include support for the Mobile Learning Network (MoleNET).

Dr Shirley Waterhouse
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Shirley Waterhouse was a professor in the Embry-Riddle Aeronautical University Department of Computer Science, where she won the outstanding teaching award, prior to her present post as the Director of Educational Technology at the world's leading aviation/aerospace educational institution. She currently teaches a graduate course at ERAU on e-learning pedagogy. Shirley is an international consultant focusing on e-learning pedagogy and e-learning strategic planning, and has written six books; her most recent is *The Power of E-learning: The Essential Guide for Teaching in the Digital Age*.