National College for School Leadership

The Leaping E-learning Community

Online Networked Learning

Think of one learner in your network!

...a pupil

...an adult

...a leader

How can ICT create the capacity to enable them to learn how to learn better ?

The running, jumping, leaping e-learning community is the ultimate professional learning community. Networked Learning Communities identify the integration of ICT into effective organisational structures and learning opportunities that enhance teaching and learning at all levels within individual schools, school-to-school and network-to-network.

Janner Herd

ICT in Action in Learning Networks

Introduction

This document summarises the work which was carried out by the 'ICT development & enquiry group' of the Networked Learning Group (NLG). The NLG has supported the establishment and development of school to school networks from 2002-2006. The group started in 2004 and consisted of network practitioners, members of the College e-learning team and interested academics.

The group undertook a range of development and enquiry activity, using the experience and expertise within many school networks such as Bedfordshire School Improvement Partnership, Hartlepool NLC, South Ribble NLC, Effective E-learning and E-teaching NLC and Transforming North Cluster. This document is therefore at the cutting edge of thinking about how ICT can be used by networks of schools to have maximum impact on the learning of young people.

Aims of the group :

- Identify the use of ICT to facilitate networked learning across the schools in the network.
- Identify the use of ICT in effective organisational structures and learning opportunities that enhance teaching and learning at all levels within individual schools, school-to-school and network-to-network.
- Identify the use of ICT to enhance personalised learning for pupils and adults in a network.
- Identify the use of ICT to mainstream knowledge about good practice from the networks.

The Department for Education and Skills has since launched its e-Strategy, Harnessing Technology: Transforming Learning and Children's Services. The strategy promotes the use of digital and interactive technologies to achieve a more personalised approach within all areas of education and children's services

The question we asked the networks:

How do, and how could, the schools in your network work collaboratively online?

Summary of responses:

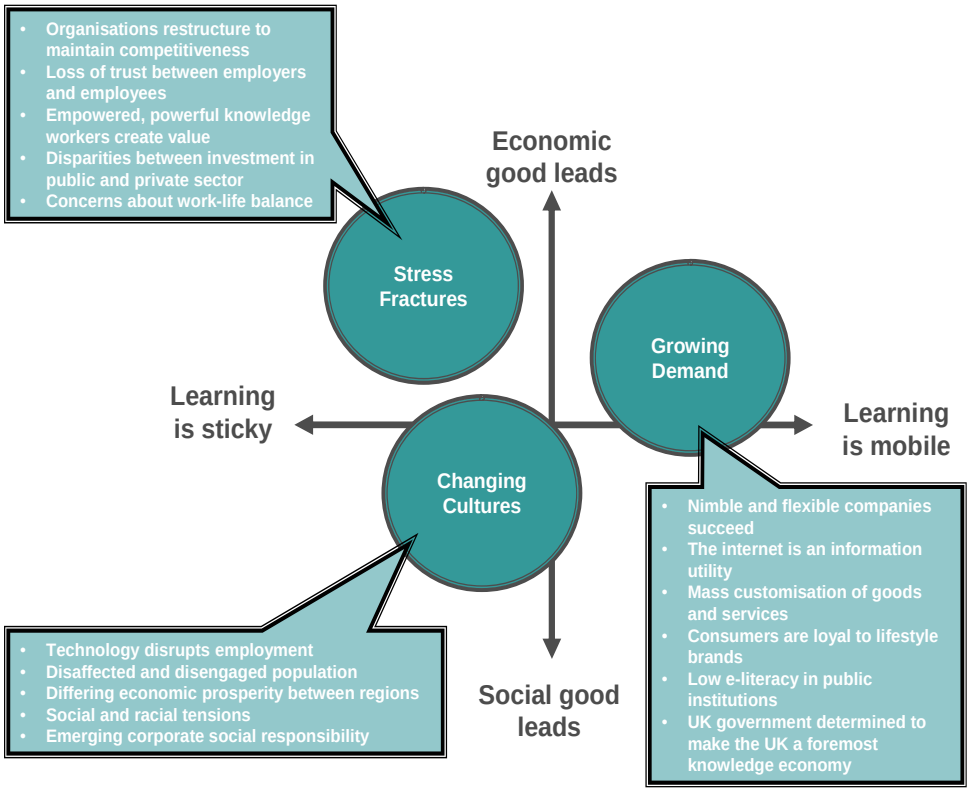
The task was to identify the current use of computers in schools and learning networks and to think about how this could be grown into a central architectural feature of a professional learning community.

Specific Key Activities

futurefocus@dti

futurefocus@dti is a purpose built resource within the Department for Trade and Industry in London. It is a unique, totally neutral and confidential facilitation and mentoring process which extends individual and group thinking about how the future may be changing, generates creative ideas and collective agreement about what actions should be planned and implemented.

The use of these facilities allowed a group of headteachers and leaders in ICT across a range of networks spread right across England to meet with strategic NCSL staff and academics. futurefocus@dti allowed thinking to take place against a backdrop of possible and certain future changes, improved strategic and resource planning. It enabled these teams to work better together and led to some clear thinking about how to bring about change.



What rapidly became obvious was that, in an environment in which growing demand sits in between a system led by a balance of economic and social good and where learning is mobile, change takes place very rapidly. Already, every August on results day, in the newspapers, there are examples of pupils as young as six who are able to pass a GCSE examination in ICT. Children born in 2006 will grow up in a world that is massively dependant on the computer chip, where every toy has buttons to press and makes appropriate noises, words or tunes. Computers for toddlers are now the norm. What will their expectations be by 2020? Keyboard dexterity and the ability to multitask was noted as a key differentiating factor between pupils and adults in every school represented on our group. It was also notes that where vision and clear leadership were missing, then adult learners (ie teachers) were quite happy to stay within their existing comfort zone with regard to ICT knowledge. Building the 'School of the Future' is about rebuilding schools into professional learning environments that will serve the whole community on demand. This document attempts to begin to define how this might be managed.

The Present	Changing Cultures	Stress Fractures	Growing Demand
	Technology replaces some jobs and creates new ones	Increased prosperity and higher disposable income	Competitiveness relies on sensing and adapting to change
	High cultural barriers to swapping from manufacturing to services	Britain has successfully made the transition to a knowledge economy	UK industry and consumers join the internet revolution
	Social structures begin to unravel	'large number of white collar workers laid off	Companies use knowledge to develop customised products and services
	On street crime rises sharply	Relationship between employers and employees irrevocably weakened	Gated retailing communities cater for every need
	Average age of criminals falls	Re-engineer the learning and assessment process	Internet learning off to a rocky start
	Motivation and performance declines	Government forced to become more directive	e-Literacy low in public institutions
	Some regions find it hard to transform the economy	Concern about the consequences of the pursuit for growth	Most corporate training material in e-text book format
	Racial and social tensions rise	Re-engineering process begins to falter	virginlearning.biz launches MIT maths course
	Local communities engage with institutions	Scrutiny of work-life balance. Demand for customised conditions of employment	Lifestylers develop close relationships with education content providers.
	Secondary school system begins to fragment	UK achieves near wireless coverage	Consumers just want to learn
	Local businesses take notice…	Large organisations use a hub and spoke structure	UK learning brand weakened and companies look to lifestylers to guarantee supply of quality recruits
	…and willingly take a more active role in school life	Regular training and reskilling essential - and difficult	Declining knowledge pool affecting UK competitiveness
	Schools generate and retain revenue	Personalised approach to learning	Teachers focus on process rather than knowledge
	Investment in capital equipment and projects	Interactive government finally arrived but public sector is slow to change	Government leads partnership to reform learning
The Future	Britain's first 24x7 school	Rise in the number of teaching microbusinesses	GlobaLEarn UK launched

Learning Futures Scenarios, created at futurefocus@dti

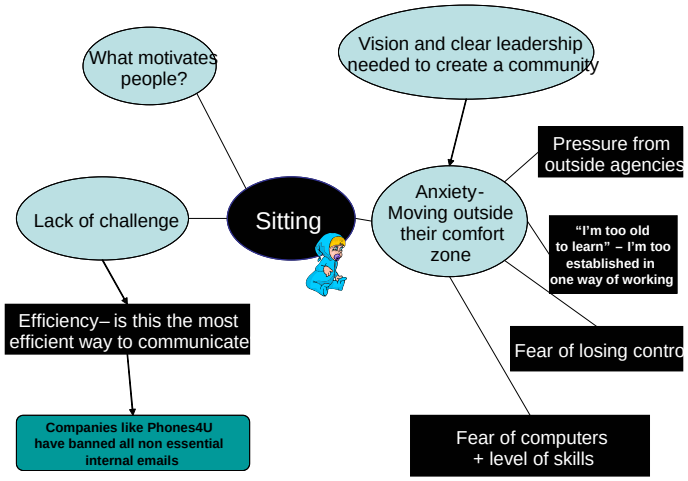
"Generating and sustaining networks that know how to turn ICT to their advantage is not easy, because we know too little about the dynamics of online communities, both in general and in education. Networked Learning Communities in the National College for School Leadership will contribute substantial knowledge over the next few years."
David Hargreaves (Education Epidemic) 2003

The E-Confident School – how do we achieve this?

The ICT D&E group developed a 4-stage model to provide a framework for describing how far schools and networks have got on the road to becoming 'e-confident'. The four stages in the model are

1. Sitting
2. Crawling
3. Walking
4. Running

Some schools in learning networks are still at a very early stage of development of their use of ICT, represented in the diagram below:



ICT communities at the 'sitting' stage will typically have an infrastructure which only just, if at all, reaches the targets set in 2000:

- 1:8 Computer:Pupil Ratio by 2004
- Internet Connection by 2003
- Network access to Information Management Systems by 2003

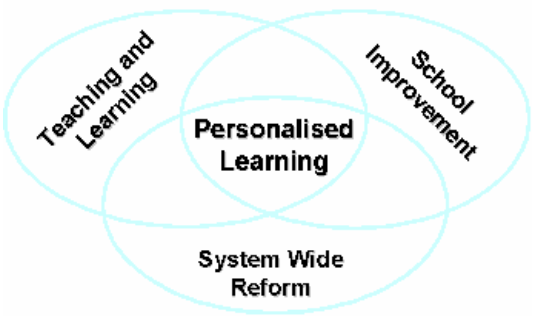
2003 was the year that Charles Clarke laid out the future of ICT in schools when on May 21st, speaking in the conference on "Fulfilling the Potential – Transforming Teaching and Learning Through ICT in Schools (ICTiS)". He said:

"My vision is one where schools are confidently, successfully and routinely exploiting ICT alongside other transformational measures. By doing so they will be delivering an education that equips learners for life in the Information Age of the 21st Century…We want every school leader and governor, every teacher and member of support staff and every pupil to become e-confident"

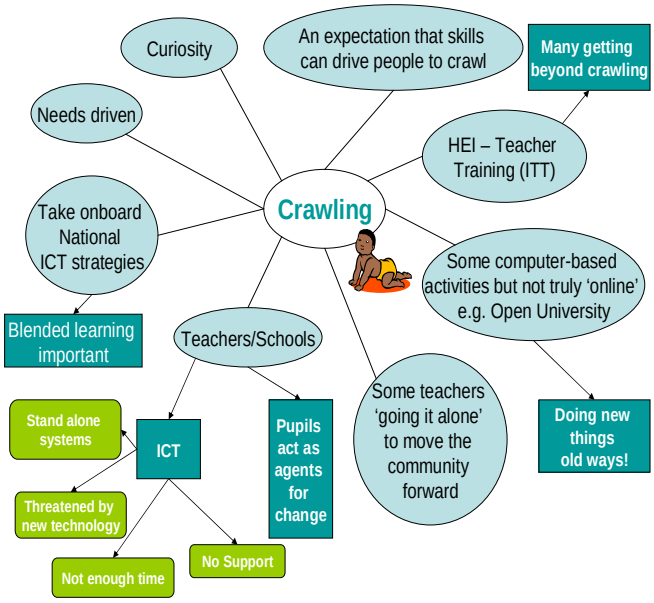
To achieve this aim, the use of ICT in schools must become:-

- Integrated
- Embedded
- Confident
- Based on a "Whole School Approach"

The research of the use of ICT in Networked Learning Communities has gone a long way to demonstrate how learning networks can pass through the crawling, walking and running stages of ICT development to mature into professional, online learning communities. For many schools great leaps will need to take place to move them in line with the targets laid out in the "Harnessing Technology" document produced by the DfES as the ICT component of Every Child Matters. The aim of the document is to ensure that ICT acts as vehicle for access to personalised learning as well as an aid for teaching and learning and school reform. ICT has enormous implications for system wide reform.



The second stage towards e-confidence will have the following characteristics:



Delivering value from ICT

Creating a professional learning community only occurs when it is sculptured around the central architectural feature of an *effective ICT system*. When schools fail to manage such a system it is not because of the technology required or skills demanded of staff are not available. Rather, problems arise because of a lack of suitable scoping followed by the development of a curriculum structure approved by all of the staff involved. In delivering value from the introduction of IT into all aspects of school life, the prime requirement is a **shared language**. IT interventions are always complicated because they contain the added mysteries of technology, specialist staff and a distinct, highly dynamic jargon. However any programme of major change needs to sign up all staff. Time needs to be taken to develop a common and shared language, whatever individual's current level of ICT expertise.

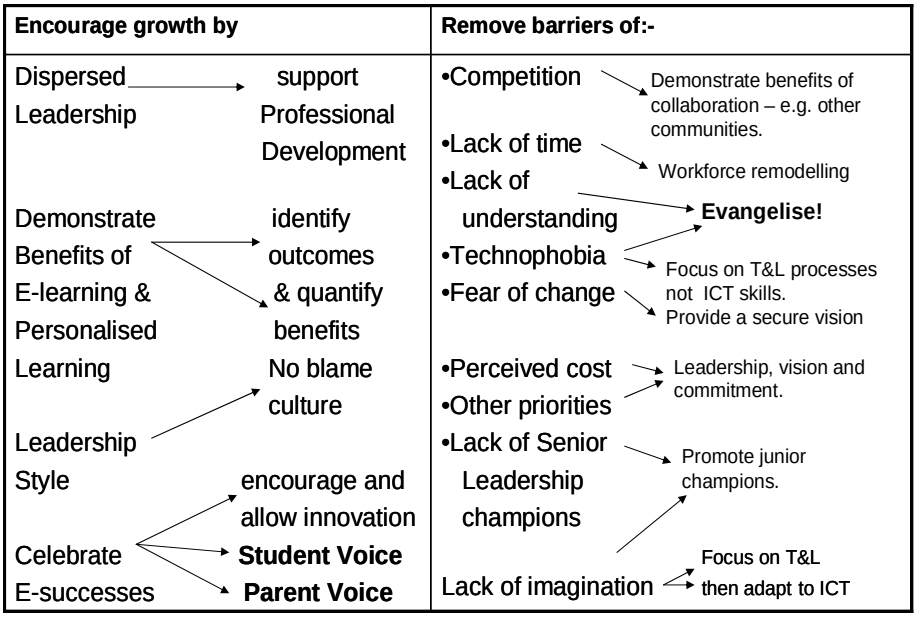
Recrimination, de-motivation and general obstruction can result and hold back ICT developments, particularly in adults, while the enthusiastic, unfettered pupils continue to develop ICT skills at speed. The symptoms that indicate problems with staff are typically:

- Staff either refusing or finding all manner of reasons for not attending ICT INSET.
- IT staff retrenching into a technical vocabulary.
- Time delays, again with all sorts of excuses.
- Overspending or ineffectual spending
- Continual changes to requirements by staff who lack an understanding of the capabilities of the software.
- Defensiveness by groups of staff.

Rather than addressing these problems with 'band-aid' solution, schools need to focus on the fundamental issue – **a real lack of communication.**

"If you don't know what good practice looks like and you can't translate it into a common and shared language, improvement won't happen" Professor Richard Elmore, Harvard University.

Developing Collaborative Communities

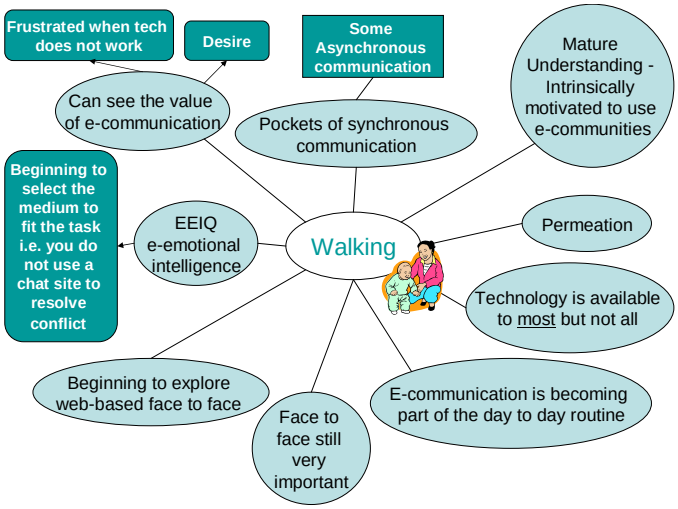


Effective Communication

The communication required in the early stages of a developmental journey from a 'crawling' to a 'running' e-learning community must:

- Provide a shared vision
- Co-ordinate each stakeholder's efforts
- Motivate all the work towards an agreed common goal.

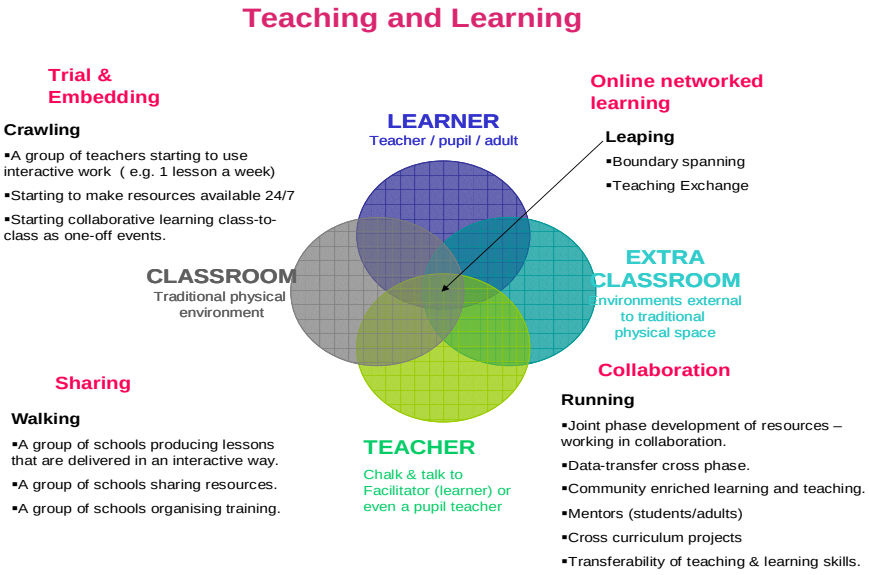
Both within an individual school and across a network, effective communication will not be satisfied by the occasional newsletter, message from a leader or the appointment of younger, more enthusiastic teachers to act as go betweens. ICT development should not be positioned as 'informal', which often leads to a lack of complete involvement and behind which many leaders hide their own technophobia.



To enable effective communication the primary requirement is for a shared language, encapsulated in jointly owned frameworks understood by all and which enable a way of working together. Such an approach begins with a joint understanding of the vision of the intended programme. This needs to be demonstrably aligned to both the curriculum and each individual school's objectives.

It is critical that school leaders drive this stage but equally critical that all other stakeholders understand the articulated, strategic intent. The vision provides the focus, identifying the qualified benefits that form the objectives and required curriculum re-designs.

The running, jumping, leaping e-learning community is the ultimate professional learning community. It has gone through the trial and embedded crawling stage and, as sharing becomes the norm, moves through walking and into the running stages as encapsulated in the diagrams. The teacher changes from the traditional chalk and talk demonstrator into a facilitator and learning takes place at pupil, adult and leadership levels. The classroom expands beyond the traditional physical environment to the limits of time and imagination. ICT development moves from the current school activity to being much more visionary. This includes a readiness to learn the whole science around teaching and learning around ICT and the integration of an Information Management System as part of a whole school approach.



E-monitoring and e-assessment would be integral to the system as would a central area for saved staff resources and the sharing of best practice. Only then will it become a sustainable 24/7 school.

ICT development moves from the current school activity	A "Future ICT Vision" in every school:
Discussions – at all levels	Reliability
Existing Technology	Training & Competence
Vision: to some level in most schools	Fluent, Fair & Consistent Use
Network Cabling	Leadership
Link to All Classrooms	Integration
ICT Suite & Server	Mobility
Curriculum Hardware and Software	Proactive Involvement & Participation
	The 24/7 Community

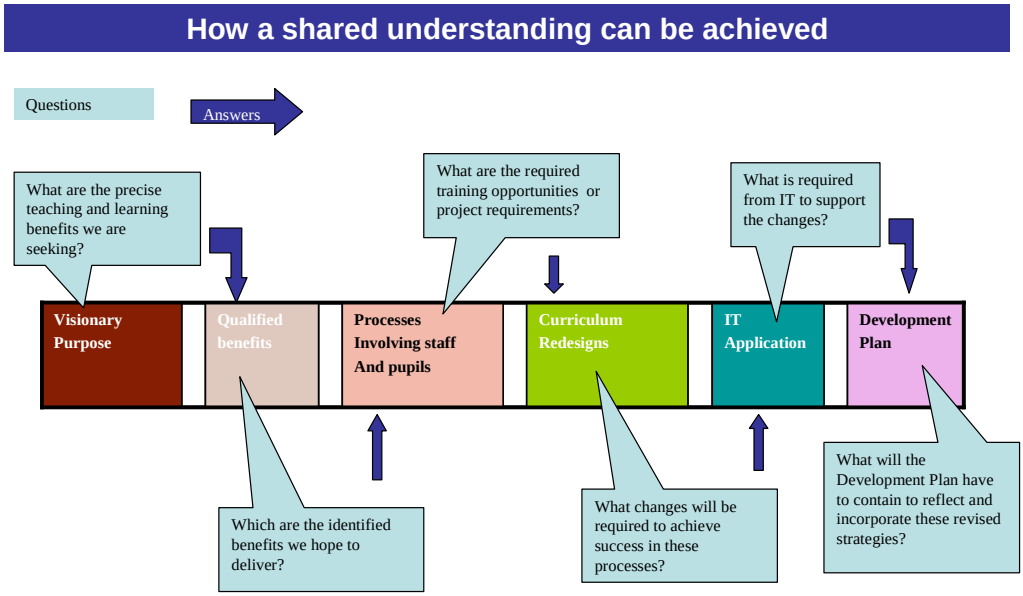
Hardware and software are getting cheaper and better continually and this will obviously make it easier to impress into day-to-day teaching. The pupils and younger staff are a rich source of expertise and key advocates for ICT and the changes to the learning environment. The School for the Future project will help schools to redesign existing buildings to house new pedagogical methods. Enablers will continue:

- Structured Leadership
- Initial Training plus ongoing Training & Competence Programme
- Good relevant Software
- Central Data Place for Staff
- Broadband (LGfL)
- Email and/or community communication
- Networked IMS (SIMS.net)
- Curriculum Online

- Acceptable Use Policy
- Use of Assessment Software
- School Website

Barriers will also continue. Money, time and accommodation will always be a problem unless Leadership Teams begin to think in completely different ways, i.e. “outside the box” to overcome the lack of coherent vision and structures. Cultural resistance will continue while staff lack confidence, are technophobic and are embarrassed by student expertise. How can this be overcome? There is an answer – stick to emphasising the teaching and learning foci and introduce a process for developing a shared understanding which gives ownership to all staff.

How to develop a process for shared understanding



This is achieved by linking the Development Plan, IT infrastructure and Curriculum design to the quantifiable benefits desired and the visionary purpose.

In creating a visionary purpose, the Leadership team define the precise teaching and learning benefits they wish to achieve and then quantify the expected benefits improvements should deliver to the school, network and community. In doing this they are laying down the boundaries to ensure any subsequent work remains focused. As each step progresses the degree of involvement of individual stakeholders change. The leaders have the vision but the teaching staff and ICTstaff pick up the thread and are the prime movers when considering their specialisms. The end product will then reflect the efforts of all involved, truly a joint effort, with each group focussing upon their areas of expertise. All this can be achieved through a joint language encapsulated in an approach that links IT and the curriculum.

The benefits of such a system are:

- It enables communication between a diverse group of people.
- The change can be broken down into small vision statements, each of which can be given to an appropriate project group, dividing the work and leadership widely throughout all available staff.

- It provides a visualisation to enhance communication to a wider audience.
- It provides a foundation for benefits tracking and whole school monitoring.
- It is a foundation for learning with, from and on behalf of in a lateral manner that is truly networked learning at adult and leadership level.
- It is a system that includes those who shy away from responsibility and those who are enthusiastic about new technology in a structured working forum.

The last forty five years of ICT application have constantly pointed out the pitfalls of blindly embracing each new wave of technology unless it is driven by real and tangible curriculum benefits. The proposed system above links ICT to a structured and clear governance process that is accountable and clear.

An Example

Glen Waverley Secondary College in Melbourne, Australia has a 'running, jumping and leaping' e-learning community that links with local schools, other schools in Australia and schools in England. Taking just one example of their work, the integration of ICT into the curriculum, it is easy to fit this into the shared purpose journey.

The development of Learning Enquiries has really moved this schools towards that of an e-learning 24/7 community, involving parents and the wider community. It is based on a vision of embracing life-long learning and creating a personal future for each child passing through the door. The community embraces the transformation of learning by design, not by accident. For this school the central premise in large scale improvement is encapsulated in the following;

Visionary Purpose	Qualified benefits	Processes Involving staff And pupils	Curriculum Redesigns	IT Application	Development Plan
What is Powerful Learning? **What is it Powerful to Learn?** **What Practices, Organisation and Structures will achieve these?**	**Outcomes for Provision/ Sharing/System-wide** •Informing the thinking in relation to the development of new models of education provision in the region in the context of declining enrolments and blueprint imperatives in relation to student learning and retention •Improved communication with parents about principles underpinning effective learning	•**Remodeled** leadership structures and capacity that supports the Learning Enquiries •**Integration** of a Pastoral Care model congruent with the Learning Enquiries •**Flexible timetabling** enabling teams of teachers to take shared responsibility and be accountable for the progress of a specific group of students	•**Transformative learning spaces** built around a shared vision already established, re-conceptualised curriculum, flexible timetabling, built around teams of teachers responsible for learning groups •Accessible in-school model that can transform teacher views about how effective learning and innovative schools can operate •Opportunities for teachers to work at GWSC in a Learning Enquiry demonstrating what good practice looks like. •Development of key insights that span the disciplines in a student's learning journey. What key insights must all students understand when exiting the Learning Community?	**Digital learning environments** providing innovative models for: •Effective on-line assessment for learning and reporting of student progress •Students reflecting on and tracking their growth as learners •Sharing of resources between school, home and cluster primary schools to support the learning community. •Supporting the system in the development of organisation -wide digital **information management system**. This can include supporting feeder schools in successful implementation of IMS. •**Availability and use of evaluation data to support system-wide innovation**	•**Learning Equiries - an innovative and transformative multidisciplinary approach to curriculum.** •Design and implementation of a curriculum assisting students to thrive in a knowledge society •Deep understanding and learning within and across the disciplines with students linking and transferring the knowledge, methods and purposes of disciplines in performances of understanding •Identifying the skills and attributes students need to develop to successfully complete a Learning Enquiry and ensuring teams of teacher explicitly teach these and monitor student progress. •Teams of teachers working collaboratively to support and monitor the progress of students within their Learning Enquiry •Use of external expert research to evaluate the innovation and monitor value added learning outcomes •This will include curriculum developed around Fertile Questions, student directed research and student demonstration of understanding within and across the disciplines. This to occur within flexible timetabling

Glen Waverley Secondary College

Melbourne, Australia: member of

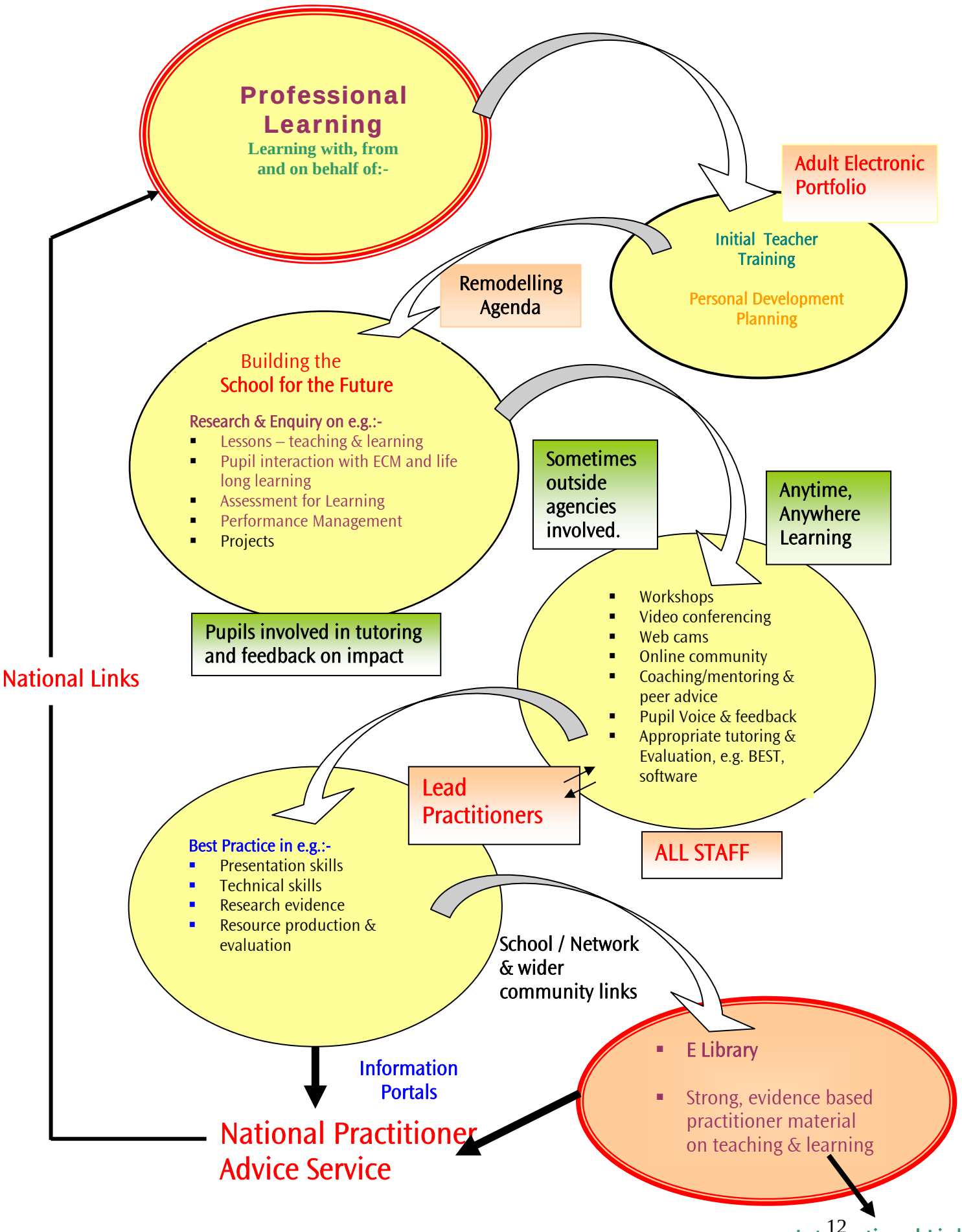
Effective E-Learning and E-teaching NLC

How this translates for the individual teacher , the pupils, the school and the network….

Who	Why	What	Input into:-	How
For self	Leading to personal enrichment and renewal	Personal reflection	▪ Professional Learning e-portfolio ▪ Appraisal	**Professional Learning Practices** • Personally designed • Inclusion of all learning experiences aimed at renewal and continuous improvement • In-house CPD which provides different entry levels targeted at staff needs • Classroom visits • Peer mentoring and coaching • Meetings • School-based initiatives • Externally based courses • External and internal conferences.
For organisation	Furthering strategic intent in both local and wider communities and networks.	Quantitative data	▪ External and internal data ▪ Value added ▪ External and internal assessments and examinations	**Support Structures** • High expectations → Appraisal → Self determination → Goal /target setting → Collaborative working → Collaborative processes to determine needs and evaluate impact • Time • Ongoing process • Formative & summative • Summative → Capuring → Monitoring → demonstration
For students	Enhancing the capacity to assist students to achieve the intent of the network Vision and Values	Student feedback	▪ Student voice ▪ Student online surveys and questionnaires ▪ Reflective learning journals ▪ Online working	**Ownership** • Self-assessment of needs • Negotiated direction • Supportive environment → Friends → Classroom peers → Cross school groups → Teams and project groups → Cross network groups • e-portfolio • externally available courses • peer coaching
For the team and the community	Enhancing learning with, from and on behalf of colleagues within a network. Collaboration and collegiality	Peer evaluation	▪ Learning study visits ▪ Research lesson study ▪ Learning enquires	**Learning Design: essential elements:** • ownership → self – assessment of needs → guidance in self-assessment → negotiated direction • Constructivist approach → Action learning → Reflective practice • Supportive relationships and collaboration in pairs, teams etc. • Scaffolded expert guidance: → Skilled practitioner → Expert presenter → Writings by acknowledged experts • Peer/self evaluation • Multiple Data sets used for evaluation of needs and evaluation of impact. • Demonstration of learning

Lemon = **Processes**	Peach = **Outcomes**	Green = **positives**

The Future?



The Journey has already started!

A collaborative exercise undertaken by the futurefocus@dti group looking at some innovations already up and running in some networks.

	Traditional Class	Within School	Across Schools	Community	International
Collaborative Learning	• Students with videos of each other • Learning platform • Student projects • Using "forums" for collaborative enquiry.	• Students with videos of each other • Learning focused extra-curriculum projects. • Distributed Leadership • E-forums, chat rooms.	Networked 'show & tell' workshops. Celebrate other schools' success. City wide E-Inset. E-forums and chat rooms.	1. Teachers create learning material on a shared site that can be accessed by all students. 2. Children & Adults being able to access work from home. Parents and students learn together. 3. Sharing expertise. 4. Invite non-teacher experts into schools /forum.	Use shared learning platforms. Recognisable address system for access.
Assessment and Portfolios	• Students know their targets. • Target boards – pathway to success. • Teacher observations / peer analysis software • Exemplar materials	• Exemplar work on net. • Departmental use of analysis software as part of department improvement plan. • E- Portfolios	External moderation/ accreditation using analysis software. Peer assessment across schools e.g. coursework reviews. Publish "rubrics" AfL. E- Portfolios	Student led learning communities to include help and advice. School observations, video conferencing, ----analysis software. Exchange exam portfolios with Exam Board partner schools.	Peer moderation or discussion about work. Assessment comparison across international boundaries.
Independent Autonomous learning	Introduce web access laptops/suites. Structured hyperlinked curriculum units. Targets set by pathways to	Reflect good practice into other curriculum areas. Use web portal for home access. students, follow success----→.	Involve Primary feeders in Web hub to share good practice in teaching, learning & assessment.	Involve industry and commerce in web hub liaison. E-surveys giving parents and community a voice.	Link with partner exchange schools including teacher training and sharing practice in teaching and learning.
Resources	• Students create resources for each other. • Resource sharing within departments. • Video examples of good work: 'ideal model' material	• All rooms networked. • Data projectors. • Video access for mentoring students and teachers. • Open access in schools. Bandwidth.	Video conferencing 6th Form Confederation teacher exchanges and expertise run Inset. Sharing resources with other schools.	Collectively accessible software. Community access to school resources & e-learning resources, e.g. grids and portals (SWportal). Community open access. Rural outreach- village IT etc via laptops / net.	Shared creation of resources. (Gemmi project)

To Summarise:

- Focus on one step at a time
- Take control of the whole process, particularly suppliers
- No idea is a bad idea – be prepared to trial new ways of working
- Time is more important than investment, particularly training for each new ICT resource for all members of staff. Identify people who can champion new software, develop it as a teaching and learning aid and promote this across the community.
- Have a structured whole school approach by:
    - Good project management with forward thinking and planning
    - Making ICT a natural talking point
    - Having a vision of how ICT can be integrated across the school and the network
    - Include all staff – administration, teachers and teacher assistants.

In 1943 Thomas Watson, Chairman of IBM said " I think there may be a need for 5 computers in the world".

Fifty years later, and twenty five years after the introduction of the first PC, we live in a world where many living rooms and classrooms have more than five computers. The ECM agenda is the start of an electronic portfolio that will pass with the individual through their school life and on into adulthood, reflecting continuous change, continuous learning and continuous development of new skills.

In our view of the future we see:

- the development of a National Practitioner Advice Centre linking up teachers across the United Kingdom and around the world
- the development of dedicated e-libraries
- anytime, anywhere learning

It is already happening…….

Harlow Star 10 August 2006 :

A Teaching Assistant from Harlow became one of the first people in the country to complete a pioneering online degree course. Jane Day of Milwards Primary School will receive her B.A. (Hons) in Learning, Technology and Research from Anglia Ruskin University in the autumn. It will be the first time during her three year course that she has had the opportunity to meet any of her tutors or fellow students face-to-face.

The style of learning, which involves working together in online communities via the internet, allowed the mother of three to keep her job while carrying out her research and studies in her free time. Jane said " I actually found that working and studying made it easier in some ways because I was able to use my work in a lot of my research".

Jane was encouraged to do the course by the headteacher at the school. She now has to decide if she would like to pursue a one year post graduate course to become a fully trained teacher.

The networks that participated in this study were:

- The following were interviewed in 2004 about their online activities.
    - Bedfordshire Schools Improvement Partnership (BSIP)
    - Hexham Partnership of Schools
    - JANUS NLC
    - Local Enquiry and Research Network (LEARN)
    - Primary Learning Network(PLN)
    - South Ribble Learning Consortium
    - Arts Learning North West
    - CONE NLC
    - Hartlepool Learning Network Community
    - Opportunity Network
    - North of England Cluster of NLC's
    - The Leading Edge Network Community
    - Effective E-Learning and E-Teaching networked Learning Community (Triple E) BHEK Leadership for Learning Community
    - East Manchester – A Leading E-learning Community
    - South West London NLC
    - Do Different NLC
    - South West Area of Northants (SWAN)

- The following networks took part in the research at the DTI:

    - **Bedfordshire Schools Improvement Partnership (BSIP)**
    - **Local Enquiry and Research Network (LEARN)**
    - **South Ribble Learning Consortium**
    - **Hartlepool Learning Network Community**
    - **North of England Cluster of NLC's**
    - **Effective E-Learning and E-Teaching networked Learning Community (Triple E)**

- Glen Waverley Secondary College in Melbourne Australia (Triple E) sent over all the material from the work taking place in Melbourne, and we are very grateful for the input from the Melbourne schools.

- This project involved E-Learning Facilitators from the Online Department in Nottingham as well as Facilitators and Online staff from Cranfield.

- We would like to thank the staff at futurefocus@dti for their help and support.

References:

▪ Future Scenarios	futurefocus@dti
▪ Delivering value from IT	Professor Chris Edwards and Rob Lambert Cranfield University