Framework for Developing a Strategic Plan for Learning through Information Communication Technology

[Information Communication Technology: Desktop and laptop computers; software , including assistive software; interactive whiteboards; digital cameras; mobile and wireless tools including mobile phones; electronic communication tools including email, discussion boards, chat facilities and video conferencing; Virtual Learning Environments; LMS learning management systems; SMS student management systems]

KEY QUESTIONS:

How can ICT enhance or betray the conditions of value in teaching and learning?

Where are we now? Where do we want to be? How will we get there? Where do we begin?

How we understand both the "L word" and "Information Communication Technology" (ICT) is critical to the successful development of a strategic plan. The nuance in the Ministry's use of a prepositional categorisation of learning and ICT is also significant.

The New Zealand Ministry of Education talks about **learning *about* ICT**, **learning *with* ICT, and learning *through* ICT,** (Ministry of Education, 2003, p.8). It is the latter, "the learning *through* ICT" that represents the Ministry "grail" for improving learning experiences and outcomes.

It is this last that most fully realises the potential; of ICT and that this strategy is designed to promote. (Ministry of Education, 2003, p.8[1]).

[Review Questions from: BECTA – How to identify your schools ICT position](#)

MoE "Learning with ICT" – BECTA ICT as a management tool.

1. Is ICT used to improve professional efficiency and effectiveness?

2. Are planning and other similar documents stored electronically?

3. Are there sufficient resources for teachers to prepare materials electronically?

4. Is management information used to inform provision?

MoE "Learning about ICT" – BECTA ICT as a subject.

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[1] Ministry of Education (2003). ICT strategy document - Digital Horizons. Learning through ICT. A strategy for school, 2002-2004. Revised Edition. Wellington: Learning Media.

NZ Curriculum:Technology: ICT

1. Is the full range of the Technology Curriculum: ICT being delivered?

2. Do all pupils receive their statutory entitlement?

3. Are pupils getting the opportunity to develop their knowledge and understanding as well as their skills?

4. Are standards of attainment in line with national expectations?

5. Are the needs of pupils with special educational needs, including gifted and talented pupils, catered for?

MoE "Learning through ICT" – BECTA ICT across the curriculum.
NZ Curriculum: All areas

1. Does the use of ICT make a significant contribution to teaching and learning within the subject?

2. Does the subject context encourage pupils to make decisions about their own use of ICT?

3. Do curriculum contexts enhance continuity and progression in the development of ICT capability?

4. Is ICT used, where appropriate, to enable pupils to access the curriculum?

5. Is ICT used to challenge and extend more able pupils?
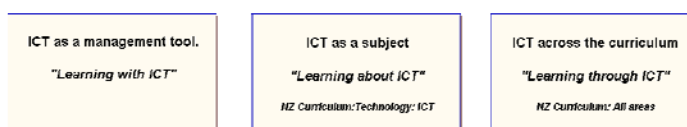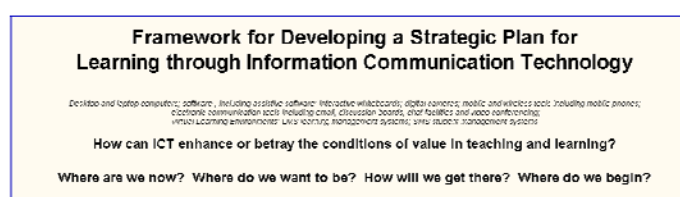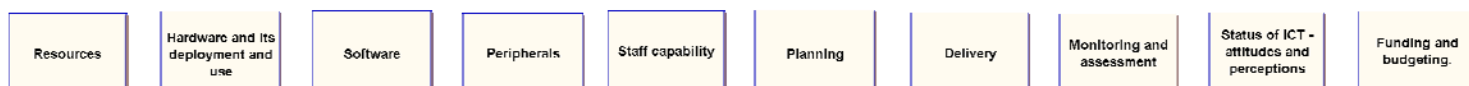
Developing a Strategic Plan for Learning through Information Communication Technology

A mashup of the BECTA Self Review Framework and
"Where are we now? Where do we want to be? How will we get there?"

BECTA Self Review Framework To assess and benchmark the use of ICT across all school activities.		Where are we now?	Where do we want to be?	How will we get there?		
				Where do we begin?	Where to next?	Then where?
Elements				**2006**	**2007**	**2008 &beyond**
1: Leadership and management	**The Vision** There is no expressed vision from those leading ICT. The vision does not distinguish clearly between the different opportunities offered by ICT. It is limited to the potential impact of ICT on marginal aspects of the school's work or is mainly focused on the acquisition of resources. The vision recognises the potential for ICT to enhance some aspects of the school's key functions including learning and teaching. This vision is consistent with the school's aims. An inclusive vision clearly identifies the potential of ICT for enhancing all aspects of the school's work. It recognises the distinctive contribution of ICT and identifies how this supports the school's wider aims and aspirations. There is an innovative and inclusive vision which anticipates future developments in practice and technology.					
	Strategic Leadership There is no defined strategic leadership					

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of ICT; individuals act independently of each other. The strategic leadership of ICT has been left to individuals who may not be part of the SMT/leadership team. The headteacher invests responsibility for the strategic leadership of ICT in the senior management/ leadership team. The headteacher provides clear and pro-active strategic leadership for ICT along with members of the SMT/leadership team Strategic leadership for ICT includes the headteacher, senior management team and governors					
Use of management information systems The use of ICT for management is not co-ordinated. Systems are not integrated and there is limited access. ICT is generally only used to replicate manual processes. The school uses an assortment of ICT systems which do not share data. Access is only through the school office. ICT use is limited to isolated aspects of the school's management and much work is still done manually. All teachers make appropriate use of ICT for management, administration and planning. Current systems do not easily enable staff to share resources, access data or contribute to databases. ICT is used effectively to support management tasks. Appropriate access					

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is readily available across the school and widely used by most staff to share data and resources. This has a clear impact across all management areas. The school has a fully integrated management information system, the use of which is subject to regular review and improvement. This is available to all staff within and beyond the school. This significantly improves the management of the school.					
Monitoring and evaluating effectiveness of the strategy The school does not have a whole-school strategy for ICT. There is some monitoring of the implementation of the ICT strategy. This is usually the result of external processes or is a reaction to internal events. Regular monitoring of the implementation of the strategy at all levels informs future planning. However, this is not always objective and it is rarely used to demonstrate accountability. There is regular, effective and evidence-based evaluation of progress. The school uses this to prioritise future planning and to demonstrate its accountability Regular evaluation of processes and outcomes informs future thinking, planning and innovation. The school					

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demonstrates its accountability both internally and externally to relevant partners.					
2. Curriculum **The development of pupils ICT capability** The ICT curriculum is unplanned and does not meet statutory requirements. The ICT curriculum is poorly planned, covering only some aspects of ICT capability. Statutory requirements are not fully met The ICT curriculum, including cross-curricular opportunities, is planned to cover all aspects of ICT capability and meets statutory requirements. Planning recognises the need to differentiate between pupils of differing ICT capabilities. . The ICT curriculum is well planned to meet statutory requirements and to enable pupils to develop their ICT capability, through both discrete and cross-curricular opportunities. Planning includes an element of challenge with clear opportunities for pupils to extend their capability. The ICT curriculum is well planned to enable all, or nearly all, pupils to develop their ICT capability, through high-quality experiences across the whole curriculum. Planning at all levels ensures that pupils are challenged to make creative and innovative use of ICT to extend their capability.					
Breadth of development for ICT capability					

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Pupils experience a narrow range of ICT applications mainly focused on low level tasks. There is an over-emphasis on skill development. Pupils experience a limited range of ICT applications. There is variation in the extent to which knowledge, skills and understanding are emphasised. Many pupils experience most aspects of ICT with an appropriate emphasis on knowledge, skills and understanding. Most pupils have positive and appropriate experiences in a wide range of ICT applications. All, or nearly all, pupils have good quality experiences of a wide and sometimes innovative range of ICT applications.					
Curriculum leadership There is little or no curriculum leadership or co-ordination of the ICT curriculum, so that individual members of staff work in isolation from each other. There is ICT leadership in some curriculum areas, but no whole-school approach to this. There is little awareness amongst the staff of changing technologies and developing professional practice. In most subjects the ICT leadership ensures that the curriculum is kept up to date and informed by developments in both the technology and professional practice.					

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	Subject leaders routinely update their curriculum in the light of developments in technology and practice and ensure that staff keep abreast of these. All subject leaders ensure that the curriculum responds innovatively to the changes in technology and practices. There is a strong culture of ICT curriculum innovation.					
3. Learning and Teaching	**Planning for ICT in learning and teaching** There is little planning for the use of ICT in learning and teaching because most staff are uncertain about identifying appropriate opportunities. Some staff plan for the use of ICT but overall there is much variability in their confidence to do so. Many staff have the confidence to identify opportunities for the use of ICT and regularly build this into their planning. Nearly all staff know when, and when not, to use ICT and this leads to effective planning. A few staff go beyond this and can see new opportunities to extend learning and teaching. All, or nearly all, staff know when, and when not, to use ICT. This leads to school-wide, high-quality planning, much of which is innovative.					
	Pupils' expectations for					

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the use of ICT Pupils have little expectation about using ICT as a natural part of their learning in school except in ICT lessons. There are few curriculum areas or occasions where pupils use, or expect to use, ICT. When they do use ICT they often lack the confidence to transfer their ICT capability to new situations. Pupils have growing expectations about the use of ICT and readily apply ICT when given the opportunity. Many are able to transfer their ICT capability to new situations. Pupils have clear expectations about opportunities to use ICT and make full of these when they arise. Most are confident and able to apply their ICT capability in new contexts. All, or nearly all, pupils have high expectations about the use of ICT whenever and wherever appropriate within and beyond school. They make links between different learning contexts and are able to apply and further develop their own ICT capability.					
Leadership for learning and teaching with ICT There is no clear leadership which promotes the effective use of ICT for learning and teaching. Some subject leaders are aware of, and may promote, the use of ICT for learning					

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	and teaching but there is no co-ordinated approach across the school. Many subject leaders promote and develop effective use of ICT in their subject. This is beginning to be led strategically, with some co-ordination across the school but implementation is variable. There is an agreed whole-school approach to the use of ICT in teaching and learning. This is led strategically by senior management, promoted by all subject leaders and consistently implemented. There is strong strategic leadership at all levels which actively encourages and develops innovative practices for the use of ICT in learning and teaching. This ensures consistently high-quality implementation.					
4. Assessment	**Reliability** There are no coherent systems for making reliable assessments of pupils' ICT capability. ICT work is monitored and assessed only infrequently. Some assessment and recording of ICT capability occurs, but it is inconsistent, uncoordinated and rarely extends to pupils' application of ICT in other subjects. There is wide variation in practice. ICT capability is assessed and recorded and includes pupils' use of ICT in some other subjects, but there is some variation in practice.					

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	ICT capability is reliably and consistently assessed and recorded and is supported by assessment in some other curriculum areas. Some moderation occurs within school.					
	The assessment and recording of ICT is reliable and consistent and routinely includes capability across the curriculum. Moderation occurs within, and between, schools.					
5. Professional Development	**Identifying individual staff skills and needs**					
	There is no planned audit of staff skills or needs in relation to ICT.					
	There is little attempt to audit staff skills and needs in relation to ICT. There is a reliance on individuals identifying their own needs, usually in relation to the development of ICT skills.					
	There is some planning for the identification of individual staff ICT needs. This is often generated by the arrival of new technologies or resources and focuses more on ICT skills than the use of ICT to improve learning and teaching.					
	There is a regular and systematic audit of staff skills and needs in relation to ICT. This covers both ICT competence and the effective use of ICT in learning and teaching.					
	Comprehensive audits of staff ICT skills and needs form part of the annual performance management process. They include the effective use of ICT in					

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	learning and teaching, personal ICT competencies as well as new and emerging technologies and practices.					
	Range of development opportunities Most development activities for ICT are course-based. Some attempt is made to widen the range of development opportunities, but these are generally limited in scope, type and relevance. A range of development opportunities are provided that meet the needs of some, but not all, staff. A wide range of development opportunities are provided both within and out of school which meet the individual needs and styles of most staff. A wide range of innovative approaches to staff development are used that blend face-to-face, online and other forms of provision.					
6. Extending opportunities for Learning	**Understanding** Staff have no understanding of how ICT can support the extension of learning opportunities for pupils. Some staff are aware of ways in which ICT can support the extension of learning opportunities but this is not yet part of a whole-school understanding. Many staff understand the importance of ICT in extending learning opportunities and how this might be achieved.					

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	Most staff are committed to extending learning opportunities through the effective use of ICT and see this as a key element in raising standards. All, or nearly all, staff understand the innovative ways that the school seeks to extend learning through ICT as an integral part of its drive to raise standards.					
	Leadership for extending learning No one has any responsibility for promoting the extension of learning through ICT. Individuals have taken ad hoc responsibility for some developments to extend opportunities for learning through ICT, but these are unplanned and unco-ordinated. Some leaders have taken individual responsibility for developments in this area, and a whole-school approach is beginning to be developed which includes discussion with governors. There is a well planned whole-school approach to extending opportunities for learning with ICT with clear delegation of responsibility and accountability. Governors are actively involved in these activities. There is a whole-school approach to extending learning through ICT which includes school leaders, teachers at all					

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	levels, governors, pupils and parents/carers. This ensures effective co-ordination across the school. Extending opportunities for learning is integral to school planning for ICT.					
7. Resources	**Physical environments** Learning and teaching spaces have not been designed or adapted to reflect the contribution of ICT. Little or no consideration is given to how teaching and learning spaces can be adapted to reflect the place of ICT in the curriculum, for learning and teaching or meeting different learner needs. Where possible some learning and teaching spaces have been created or adapted to reflect the school's vision, strategy and learning and teaching approaches with ICT. Most learning and teaching spaces reflect the school's vision for ICT and meet most curriculum needs. They support a range of learning and teaching styles. Innovative designs and use of space create flexible work areas which enable alternative approaches to learning and teaching.					
	ICT supporting flexible working Access to both networked curriculum and administration resources is very limited or non-existent and there is no					

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appropriate connection to the Internet. There is some access to networked curriculum resources but access to administration resources is very limited. The school's connection to the Internet is inappropriate in terms of bandwidth and/or facilities. Access to curriculum and administration resources is reliable and can be obtained from a number of locations within the school, although access from outside of the school may be limited. There is an appropriate connection to the Internet in terms of bandwidth and facilities. School planning recognises the need to update this to meet future demands. Access to curriculum and administration resources is efficient and can be obtained from a number of locations both within and outside the school. This coupled with an appropriate connection to the Internet in terms of bandwidth and facilities has a clear impact on learning and teaching. Access to curriculum and administration resources is efficient and can be obtained from many locations both within and outside the school. This, coupled with an appropriate connection to the Internet in terms of bandwidth and facilities enables innovative practice to develop which has a significantly impact on the learning culture of the school.					
Procurement Procurement of ICT resources is					

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	impulsive, unplanned and only reactive to available funding. Limited planning for the procurement of ICT meets the learning and teaching needs in only some areas. ICT resources are procured efficiently to meet the current curriculum, learning, teaching, inclusion and organisational needs of the school. The school understands issues related to the total cost of ownership of ICT resources and value for money. Procurement is in line with the strategic plan for ICT. ICT resources are procured following best practice guidelines to meet the current and future needs of the school, as defined by the school's ICT strategy. Account is taken of the total cost of ownership for ICT equipment and services and value for money. ICT resources are procured following best practice guidelines. This is part of a systematic approach to providing sustainable resources and services to meet the school's vision, in line with the school's current and future needs and to provide value for money.				
8. Impact on pupil outcomes	**Year on year progress** Pupils make little or no year-on-year progress in their ICT capability. Pupils make some year-on-year progress in ICT, but a significant number make little progress in some aspects. Pupils make clear year-on-year progress				

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in ICT, but a few make uneven progress in some aspects Pupils make good year-on-year progress in all aspects of ICT capability. Pupils make outstanding year-on-year progress in all aspects of ICT capability.					
Breadth and range Limited and inconsistent use of ICT means that it does not impact on pupils' progress across curriculum areas. The narrow range of ICT use limits its impact on pupils' progress across curriculum areas. Many pupils use ICT to extend and improve their learning across a few curriculum areas and in a range of contexts. This improves their progress in some areas. Most pupils extend and improve much of their learning through a wide range of ICT experiences across many curriculum areas and contexts. ICT has a visible and frequent impact on the learning of all, or nearly all, pupils across most curriculum areas and in a wide range of contexts					
Attitudes to learning ICT has no discernible impact on pupils' attitudes to learning. The use of ICT has little impact on					

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pupils' attitudes to learning. They are becoming more interested in learning through ICT but ICT has not affected their self-esteem or their approaches to investigating, solving problems or learning from their mistakes. The use of ICT has some impact on pupils' attitudes to learning. For many pupils the use of ICT has improved their ability to investigate, solve problems, refine their work, learn from their mistakes and reflect critically. This has helped these pupils to develop their self-esteem. The use of ICT has clear impact on pupils' attitudes to learning, including their self-esteem. For most pupils the use of ICT has improved their ability to investigate, solve problems, refine their work, learn from their mistakes and reflect critically. They pay more attention to detail in their work. The use of ICT has significant impact on pupils' attitudes to learning. For all, or nearly all, pupils the use of ICT has had a major impact on their self-esteem, enthusiasm, engagement and approach to learning within, and beyond the school.					

Developing a Strategic Plan for Learning through Information Communication Technology

**A mashup of self review categories and questions from BECTA, and the New Zealand MOE against
"Where are we now? Where do we want to be? How will we get there?"**

Self review categories and questions [BECTA, MoE and …]		Where are we now?	Where do we want to be?	How will we get there?		
				How will we begin?	Where to next ..	Then where?
Resources	Is there sufficient, appropriate equipment in school to deliver the ICT curriculum and to use it across the curriculum? For example, is there internet access and multimedia capability to use resources effectively? Does the software you use meet the needs of the curriculum? Is the software legally licensed? Are there appropriate access devices for pupils with special needs? Does the school have sufficient equipment for control, monitoring and measuring? This might include floor robots, control interfaces, and datalogging and sensing equipment. Does the school have appropriate recording equipment? For example, microphones and headsets, digital cameras, scanners and videos.					

	Can the staff use the resources effectively, both as a productivity tool and to enhance teaching and learning? Are opportunities provided for staff development? Are sufficient, appropriate resources available for staff development?				
Hardware and peripherals - deployment and use	Computers Laptop Monitor PDA Digital camera Digital Video camera Digital microscope Mobile phone Headset earphones Card readers External DVD writer Pen drives Graphics tablet Graphics calculators Digital microphones Digital voice recorder Web cam Scanner Data projector Video conferencing Furniture Tripod Interactive white board Lighting for filming Printer Screen Robotics Dataloggers				
Software for learning	Software for visualising thinking Software for creating Software communicating. Learning Management System (Moodle/ KnowledgeNet)				

Student management Systems [SMS]	SMS chosen has Simple interface, consistency and therefore ease of use functionality – Able to be expanded as a user's confidence grows always available at school and at home or anywhere else Would not require technical skills to maintain the school's end low level technical specification for the computers at the school's end Security of data from any type of disaster					
Staff capability	Technical skills Pedagogical understanding Technical support					
Network capability	Cabling/power Switching Server Wireless Bluetooth Infrared Broadband Mail VoIP (Voice over internet protocol)					
Planning	Do long-term plans ensure that the full Technology Curriculum for ICT will be delivered? Do long-term plans ensure continuity and progression? Do subject plans include					

	appropriate ICT opportunities for pupils to apply their ICT skills, knowledge and understanding? How is the appropriateness of planning evaluated? Are evaluations used to inform provision?				
Delivery	Are planned ICT activities actually delivered? Are samples of work collected or stored from each module of work to provide evidence for monitoring and assessment purposes?				
Monitoring and assessment	Are effective strategies in place to enable the ICT co-ordinator, subject co-ordinators and senior managers to monitor and evaluate the use of ICT in school? Are levels of attainment in ICT assessed accurately? Are there opportunities for staff to develop their understanding of 'levelness' in terms of ICT? Are teachers able to identify where ICT might camouflage levels of attainment within a subject?				
Status of ICT – attitudes and perceptions	Is ICT viewed as a core subject? Is the use of ICT in subjects viewed as a key skill?				

	Is ICT viewed as a tool that can improve professional efficiency and effectiveness? Is the use of ICT 'institutionalised'?				
Funding and Budgeting	Is there a long-term strategic plan for the acquisition and replacement of equipment? Is ICT adequately funded? Is ICT part of the school development/improvement plan?				
Internet Safety Net safe: The Internet Safety Group	Does strategic leadership for cybersafety include key school personnel who have important roles: Boards of Trustees, the Principal, the Cybersafety Manager, the ICT Manager, Heads of Department/Syndicate leaders, Guidance Counsellors and the Librarian? Is there an infrastructure of policies, procedures and signed student and staff Use Agreements, which is actively enforced Is there an effective electronic security system Is there a comprehensive cybersafety education programme for the school community				
Network capabilities					

Access issues						
ICT Policy Procedures						