

E-Learning Maturity Model

Report on the E-Learning Maturity Model Version 2.3 Core Capability Assessment of The University of the South Pole

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15th November 2007



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eMM Version 2.3 Core 2007

This research is supported by the New Zealand Ministry of Education Tertiary E-Learning Research Fund.

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Marshall, S. (2007) Report on the E-Learning Maturity Model Version 2.3 Capability Assessment of University of the South Pole. Confidential Report.

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Glossary

ANTA	Australian National Training Authority
ADEC	American Distance Education Consortium
ADL	Advanced Distributed Learning
ALA	American Library Association
CanREG	Canadian Recommended E-learning Guidelines
Capability	Capability, in the context of this model, refers to the ability of an institution to ensure that e-learning design, development and deployment is meeting the needs of the students, staff and institution. As well, capability includes the ability of an institution to sustain e-learning support of teaching as demand grows and staff change
CITL	Centre for Innovation in Teaching and Learning, University of the South Pole
CMM	Capability Maturity Model
eMM	e-Learning Maturity Model
IHEP	The Institute for Higher Education Policy
LMS	Learning Management System
Practice	Activities undertaken by institutions, that contribute to capability in individual processes
Process	A high-level activity that has been found through research and evaluation of e-learning to positively contribute to institutional e-learning capability
Process area	A collection of individual processes that share related institutional capability outcomes
SCORM	Sharable Content Object Reference Model
SPICE	Software Process Improvement and Capability dEtermination
W3C	World Wide Web Consortium
WAI	W3C Web Accessibility Initiative
WCET	Western Cooperative for Educational Telecommunications
WWW	World Wide Web

Introduction

This report presents an overview of institutional e-learning performance framed in a methodology designed to assess process capability. The approach used is designed to be independent of technology and pedagogy decisions, focusing rather on the ability of an institution to deliver e-learning in a high-quality and sustainable way. The methods used are based on the theoretical work of Marshall and Mitchell (2002; 2003; 2004; 2005; 2006; 2007) and are outlined in detail in the *Methodology* section below.

The information presented in the body of this report includes an analysis of a number of other institutions. It should be noted that this research does not publicly identify any participating institution. The reports provided to participants are confidential to them.

Using the e-Learning Maturity Model (eMM) framework, the report provides a high level overview of e-learning capability across the institutions assessed. It is important to emphasize that the analysis presented is dependent on the materials provided by each institution. This material was supplemented by publicly available material such as websites, policies and enrolment packs, but the self-selecting nature of the projects selected for detailed examination (see the *Methodology* section for details) means that some bias may be present.

This work is not an attempt to rank institutions but rather to provide guidance both at an institutional and sector-wide level for improving the quality and sustainability of e-learning. Comparisons made in this report are done in order to identify potential mechanisms for performing processes more effectively. To that end, no attempt has been made to either order the results or assign numerical values to the overall performance. Instead, each section will note in general terms the characteristics observed both in practice and at a policy level that might be said to be exemplars nationally.

This study uses the eMM version 2.3 practices and processes outlined in Marshall (2007). Further information on the development of the eMM can be found in that document and the citations therein.

This report is divided up into three main sections. The first section, starting on page 8, provides an overview of the results for the institutions previously assessed and University of the South Pole that are based on the detailed analysis conducted. This includes observations of relative strengths and weaknesses as well as suggestions for improvement.

The second section, starting page 22 of the report, covers the methodology used in detail, including the underlying research and background to the project.

The final section, starting on page 28, contains detailed, process by process, results for the institutions obtained by this research. This includes the background rationale for each process, indicators of capability, exemplars of best practice as well as detailed comments on the assessed institutions and University of the South Pole capability in each process.

Ethics Approval

Full human ethics approval to conduct this research was obtained from the VUW Human Ethics Committee (Approval #73/2004).

1. Overview of results

This report includes assessments of e-learning capability made of eleven New Zealand tertiary education organisations using version 2.3 of the eMM (Marshall 2007). The institutions range from very large to small, including distance and rural institutions as well as urban providers, both universities and polytechnics.

Capability, in the context of the eMM, refers to the ability of an institution to ensure that e-learning design, development and deployment is meeting the needs of the students, staff and institution. Capability includes the ability of an institution to sustain e-learning support of teaching as demand grows and staff change.

Performance of each institution was assessed by the examination of up to three representative projects supplied by that institution against measures from the e-learning and pedagogical research literature. These were not selected as exemplars of best practice, but rather as examples of normal practice as the assessment is not of the quality of these examples, but rather the capability of the institution as a whole. Typically, the assessment of capability is made by identifying evidence of individual processes actually taking place within courses (more information on the methodology is provided in Section 2, page 22).

It is important to emphasise that, while the eMM is based on widely accepted indicators of e-learning capability, in many cases there is a lack of empirical evidence supporting their use. Assessments of individual institutional capability in particular areas should thus be used as a guide to further investigation and planning rather than absolute measures of performance. Detailed information on the individual processes and practices, along with supporting evidence is provided in Marshall (2007).

Examination of the summary view of results for the institutions assessed in Table 1 (page 10) illustrates that a range of capabilities for the participating institutions have been assessed, with no one institution uniformly stronger compared with the others. It is noteworthy that while the weakest overall capability was seen in one of the smallest institutions, much larger institutions are also assessed as lacking capability in many areas.

A number of observations can be made that appear to apply across the all of these institutions. Principally, there is a need for a greater self-awareness. In a number of cases very strong performance was seen in isolated projects and this is not being recognised by the institutions concerned and used as a basis for improving performance across the whole institution. Particularly within universities, it appears that many decisions within individual courses are made without an awareness of the work of other teachers in the same institution or of the wider scholarship surrounding teaching and learning.

Following on from this is the absence of a planned intentionality in the way many institutions are engaging in the use of e-learning. While all institutions are making use of learning management systems, many are not placing the use of these systems within a framework of strategy and guidance to teaching staff that will transform learning. There is a definite sense that existing approaches for teaching and learning are being converted to use technology without reflection and planning. A clear example of this is in the absence of linkages provided to students between the learning objectives of courses and the technologies and pedagogies they encounter. Similarly, there is little information provided to students across the institutions that prepares them for the use of e-learning within their courses.

Universities A, B, E, the University of the South Pole, and Polytechnics Z and Y are clearly more capable than the remaining institutions although with different relative strengths in *Support* (University A) and *Learning* (University B) apparent. The greater strength of the five institutions appears to be a consequence of having employed dedicated staff who have as their job both an operational and a strategic responsibility for e-learning. Not all of these six institutions are strong in the strategy and planning processes (O2, O5 and O9) nor in the *Definition* or *Optimisation* dimensions, but there is a clear pattern of planned capability (*Planning* dimension) throughout the process assessments.

Table 2 (page 11) presents the assessment results sorted by dimension so as to illustrate clearly the lack of capability observed in the higher dimensions. Only nine assessments of more than partially adequate in the *Planning* dimension are made for the other institutions (Universities C, D and G, Polytechnic X) and four of those are in process O8 which is strongly driven by traditional administrative systems. This compares to 90 assessments of largely or fully adequate capability in the planning dimension of the institutions with dedicated e-learning staff. Across all of the institutions there is very little evidence of capability in the *Management* and *Optimisation* dimensions. This reflects the general absence of evidence

collection informing a systematic and strategic engagement with e-learning. What evidence of capability that was seen for the *Management* and *Optimisation* dimensions was generally disconnected from the governance and leadership of institutions and there was no evidence of e-learning yet driving or responding to organisation changes.

Within the *Learning* area process L3 illustrates the gap in the empowerment of students as autonomous and independent e-learners, and this probably connected to the general use of passive, transmission based pedagogies rather than active engagement of students (Process L7) and the lack of flexibility in the range of assessments and activities commonly used in e-learning (Process L10). The weakness in the support of disabled students also reflects, in part, this lack of flexibility (Process D4) as well as the ad-hoc nature of the provision of e-learning materials.

Support for students and staff remains sharply disparate with University A and Polytechnic Y standing out well from the rest of the institutions. The one exception remains the institutional libraries who, more than any other internal group appear to understand the changing requirements of students and staff as electronic information use grows.

Professional development, training and support while of high quality, is generally optional and staff are not specifically encouraged and provided opportunities to improve their own skills. There was little evidence of rewards or other incentives for teaching staff to invest their time in developing and improving teaching, and thus student learning, in general, let alone investing the substantial time needed for e-learning.

Systems and infrastructure for e-learning are dominated by the use of traditional LMS facilities, with little evidence of the use of standards, formal planning or the systematic analysis and design of e-learning infrastructure driven by strategic goals. The absence of any formal risk analysis and planning is also a significant concern given the increasing, if largely unremarked, dependence of institutions on their e-learning infrastructure.

The absence of formal support for reuse and development of systems to store and manage e-learning resources (Process D7) is perhaps surprising given the high costs of developing resources and the prominence of learning objects in the e-learning research literature. This appears to reflect an ongoing ad-hoc approach to teaching design and development, with, particularly university staff seeing teaching as an independent activity undertaken in isolation by individual staff. This intuitive and informal approach is also apparent in the weak capability assessed for Process O5 across most of the institutions assessed.

Comparing the assessments in the *Evaluation* processes for student (Process E1) and staff (Process E2) aspects illustrates the systemic disregard of staff in current evaluation and feedback activities across the institutions assessed. Within the practice assessments there was little evidence of students or teaching staff being asked to provide their perspectives. The lack of evidence based practice and the use of guidelines, templates and case studies to support the work of teaching staff is also apparent in the weak capability assessed for dimension three. At the practice level there was almost no evidence of institutions capturing research-based evidence of successful e-learning technology or pedagogy use. The *Evaluation* area process capabilities convey clearly the lack of systematic incorporation of e-learning into institutional evaluation and review procedures.

The lack of impact of e-learning on the governance and operation of institutions is evident in the capabilities assessed for Processes O2 and O9. There is very little evidence of systematic updating of learning and teaching policy to reflect the differences and challenges consequent to the use of e-learning nor is there much evidence of business goals and strategies driving investment in e-learning infrastructure. The absence of information provided to students on how institutions use e-learning to support their learning (Processes O6 and O7) is clearly evident.

The following sections give a summary of the results for University of the South Pole followed by a detailed analysis of the capabilities assessed across the institutions assessed for each process and for University of the South Pole. These sections include a short description of the expectations for the individual processes. This is a summary only and interested readers should consult (Marshall 2007) for the full details of each process and the associated practices at each dimension.

Learning: Processes that directly impact on pedagogical aspects of e-learning										University A	University B	University C	University D	University E	University F	University G	Polytechnic Z	Polytechnic Y	Polytechnic X	Polytechnic W	USP Example
L1. Learning objectives guide the design and implementation of courses																					
L2. Students are provided with mechanisms for interaction with teaching staff and other students																					
L3. Students are provided with e-learning skill development																					
L4. Students are provided with expected staff response times to student communications																					
L5. Students receive feedback on their performance within courses																					
L6. Students are provided with support in developing research and information literacy skills																					
L7. Learning designs and activities actively engage students																					
L8. Assessment is designed to progressively build student competence																					
L9. Student work is subject to specified timeables and deadlines																					
L10. Courses are designed to support diverse learning styles and learner capabilities																					
Development: Processes surrounding the creation and maintenance of e-learning resources																					
D1. Teaching staff are provided with design and development support when engaging in e-learning																					
D2. Course development, design and delivery are guided by e-learning procedures and standards																					
D3. An explicit plan links e-learning technology, pedagogy and content used in courses																					
D4. Courses are designed to support disabled students																					
D5. All elements of the physical e-learning infrastructure are reliable, robust and sufficient																					
D6. All elements of the physical e-learning infrastructure are integrated using defined standards																					
D7. E-learning resources are designed and managed to maximise reuse																					
Support: Processes surrounding the support and management of e-learning																					
S1. Students are provided with technical assistance when engaging in e-learning																					
S2. Students are provided with library facilities when engaging in e-learning																					
S3. Student enquiries, questions and complaints are collected and managed formally																					
S4. Students are provided with personal and learning support services when engaging in e-learning																					
S5. Teaching staff are provided with e-learning pedagogical support and professional development																					
S6. Teaching staff are provided with technical support in using digital information created by students																					
Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle																					
E1. Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience																					
E2. Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience																					
E3. Regular reviews of the e-learning aspects of courses are conducted																					
Organisation: Processes associated with institutional planning and management																					
O1. Formal criteria guide the allocation of resources for e-learning design, development and delivery																					
O2. Institutional learning and teaching policy and strategy explicitly address e-learning																					
O3. E-learning technology decisions are guided by an explicit plan																					
O4. Digital information use is guided by an institutional information integrity plan																					
O5. E-learning initiatives are guided by explicit development plans																					
O6. Students are provided with information on e-learning technologies prior to starting courses																					
O7. Students are provided with information on e-learning pedagogies prior to starting courses																					
O8. Students are provided with administration information prior to starting courses																					
O9. E-learning initiatives are guided by institutional strategies and operational plans																					

	Not practised/not adequate
	Partially adequate
	Largely adequate
	Fully adequate
	Not assessed

Table 1: Comparison of eMM Institutional Capabilities (Marshall 2006)

Learning: Processes that directly impact on pedagogical aspects of e-learning									
L1. Learning objectives guide the design and implementation of courses									
L2. Students are provided with mechanisms for interaction with teaching staff and other students									
L3. Students are provided with e-learning skill development									
L4. Students are provided with expected staff response lines to student communications									
L5. Students receive feedback on their performance within courses									
L6. Students are provided with support in developing research and information literacy skills									
L7. Learning designs and activities actively engage students									
L8. Assessment is designed to progressively build student competence									
L9. Student work is subject to specified timetables and deadlines									
L10.Courses are designed to support diverse learning styles and learner capabilities									
Development: Processes surrounding the creation and maintenance of e-learning resources									
D1. Teaching staff are provided with design and development support when engaging in e-learning									
D2. Course development, design and delivery are guided by e-learning procedures and standards									
D3. An explicit plan links e-learning technology, pedagogy and content used in courses									
D4. Courses are designed to support disabled students									
D5. All elements of the physical e-learning infrastructure are reliable, robust and sufficient									
D6. All elements of the physical e-learning infrastructure are integrated using defined standards									
D7. E-learning resources are designed and managed to maximise reuse									
Support: Processes surrounding the support and management of e-learning									
S1. Students are provided with technical assistance when engaging in e-learning									
S2. Students are provided with library facilities when engaging in e-learning									
S3. Student enquiries, questions and complaints are collected and managed formally									
S4. Students are provided with personal and learning support services when engaging in e-learning									
S5. Teaching staff are provided with e-learning pedagogical support and professional development									
S6. Teaching staff are provided with technical support in using digital information created by students									
Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle									
E1. Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience									
E2. Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience									
E3. Regular reviews of the e-learning aspects of courses are conducted									
Organisation: Processes associated with institutional planning and management									
O1. Formal criteria guide the allocation of resources for e-learning design, development and delivery									
O2. Institutional learning and teaching policy and strategy explicitly address e-learning									
O3. E-learning technology decisions are guided by an explicit plan									
O4. Digital information use is guided by an institutional information integrity plan									
O5. E-learning initiatives are guided by explicit development plans									
O6. Students are provided with information on e-learning technologies prior to starting courses									
O7. Students are provided with information on e-learning pedagogies prior to starting courses									
O8. Students are provided with administration information prior to starting courses									
O9. E-learning initiatives are guided by institutional strategies and operational plans									
Dimension 1: Delivery									
Dimension 2: Planning									
Dimension 3: Definition									
Dimension 4: Management									
Dimension 5: Optimisation									
University A									
University B									
University C									
University D									
University E									
University F									
University G									
Polytechnic Z									
Polytechnic Y									
Polytechnic X									
USP									

Table 2: Comparison of eMM Institutional Capabilities by Dimension

1.1 Summary of results for University of the South Pole

The results obtained for The University of the South Pole in this analysis suggest that the University is being well served by the Centre for Innovation in Teaching and Learning (CITL). In the majority of process areas USP has very strong performance when compared with the other institutions assessed. The reasons for this strength are discussed in detail below but can be summarized as arising from the clearly documented development methodology used by CITL. The challenges that face the institution in further improving e-learning capability lie in ensuring the alignment of e-learning with wider strategy and building on the good work undertaken to date. A key aspect of further success is improved processes for evaluating and analysing the courses using e-learning technology and pedagogy so as to identify successful practices for reuse and support and to remediate any weaknesses. It is not sufficient that individual projects are successful, rather the successful elements need to be identified and adopted widely within the organisation.

When considering the relative performance of USP, comparatively strong practice is evident in the *Learning*, *Development*, and *Organisation* process areas. However, the results for the *Support* and *Evaluation* process areas are weaker when compared to other New Zealand institutions and it is recommended that the University focus its attention and resources on these areas.

The sections that follow provide a brief summary of the performance in each process area, with observations of the other institutions to place University of the South Pole's performance in context. Detailed comments on each of these process areas and individual processes along with recommendations for improving capability are below in the main body of the report (page 28).

Learning

This process area is concerned with the pedagogical aspects of e-learning, particularly those which communicate the underlying structure and logic of a course to students. The goal is ensuring the attainment of the highest quality learning outcomes possible for students in an e-learning context. The individual processes are directed at preserving and extending the essential aspects of an effective learning environment that apply regardless of the particular technology, pedagogy and discipline.

Across the institutions assessed there is clear evidence that pedagogical practice is dominated by the independence of the individual departments and teaching staff working on courses. The common thread is that good policies are provided without guidance or examples as to how to actually comply with them in practice. Similarly, good practice is not being codified as guidelines and templates for reuse so as to encourage the building of capability. This information typically remains the province of a limited number of specialists or is buried within a single group.

Learning objectives are poorly used by most institutions, with only two consistently providing course objectives in a clear, structured, statement prior to enrolment (process L1). When objectives are provided in a clear statement as part of the course materials, they are not linked throughout the course outline and used to assist students in their understanding the logic of the course. As well, the objectives stated are dominated by recall and comprehension rather than by analysis, synthesis and evaluation.

All of the institutions assessed need to consider better ways of sharing and promulgating solid solutions to standard problems as well as innovative and effective teaching practice. A number of examples of exceptional performance by individual teaching staff were observed in a number of processes in this and other areas. Sadly, comparison with the other courses from the same institutions makes it clear that this excellence is not being recognised and used to stimulate improvements in other courses. The sustainability of the results once the individuals involved leave must also be called into question. Institutions need to establish formal processes for sharing excellence and using it to support and training teaching staff.

University of the South Pole was assessed as having comparatively strong capability in the *Learning* processes reflecting the formal approach used by the staff of the CITL in the development of course materials. Weaknesses were apparent in the communication of staff response times to students (process L4), the use of learning objectives to explain the programme of assessment (process L8) and the support of a diversity of student learning styles and capabilities (process L10). The lack of clearly communicated policies and guidelines, as well as a weak programme of staff development in e-learning is evident in the weaker capability assessed for the *Definition* dimension.

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. Developing templates, guidelines and documented examples that transfer the expertise of the CITL to the wider USP academic audience without the need to engage in the full project methodology. Sections of existing projects could be usefully reused immediately by others within the University without significant cost of time or effort to CITL.
2. Building on the useful, if somewhat inconsistent, communication of student learning objectives already present (processes L1 and L7) by more explicit linking of the learning objectives through course materials and elements, particularly the assessment tasks.
3. Creating clear policies to convey the institutional expectations made of academics and students engaged in e-learning. These should be built upon the existing learning and teaching policies and link with the overall e-learning strategy.
4. Creating clear guidelines and templates, illustrated with examples and case studies from local courses, that assist academics with the implementation of the existing policies of the University. The existing project process supported by CITL is strong but needs to be complemented with strategies for disseminating good practice throughout all courses.

Table 3 illustrates the overall findings of the research for this process area. A more detailed discussion of this process area can be found on page 28.

Learning: Processes that directly impact on pedagogical aspects of e-learning					
	1	2	3	4	5
L1. Learning objectives guide the design and implementation of courses					
L2. Students are provided with mechanisms for interaction with teaching staff and other students					
L3. Students are provided with e-learning skill development					
L4. Students are provided with expected staff response times to student communications					
L5. Students receive feedback on their performance within courses					
L6. Students are provided with support in developing research and information literacy skills					
L7. Learning designs and activities actively engage students					
L8. Assessment is designed to progressively build student competence					
L9. Student work is subject to specified timetables and deadlines					
L10. Courses are designed to support diverse learning styles and learner capabilities					

<input type="checkbox"/>	Not practised/not adequate	<input type="checkbox"/>	Partially adequate	<input type="checkbox"/>	Largely adequate	<input type="checkbox"/>	Fully adequate	<input type="checkbox"/>	Not assessed
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Table 3: University of the South Pole *Learning* process area capability

Development

This process area is concerned with the management and technical aspects of e-learning design and development. The goal is efficient and effective use of resources in the creation and maintenance of e-learning resources. The individual processes are directed at informing the development of resources and ensuring that this is done in a way that sustainably builds capability based on experience and success of e-learning deployment in the institution.

Capability in this process area across the institutions assessed is particularly dependent on the existence of formal procedures and e-learning support within an institution. Institutions with dedicated e-learning staff working within a documented policy and management framework have stronger capability (Universities A, B and E, the University of the South Pole, Polytechnics W, Y and Z). Institutions that have no dedicated e-learning support staff or limited resources, operating in the absence of formal frameworks have been assessed as significantly weaker in this area (Universities C, D, F and G, Polytechnic X). It is important to note that capability in this area is not dependent on centralised e-learning support facilities. A largely devolved model of support, such as that used by University A, can work very well provided it is combined with comparatively strong policies and management oversight. Irrespective of how the resources are allocated, centralised or decentralised e-learning support facilities need to have some way of identifying and promulgating standards, guidelines and templates out to the wider institutional population, along with examples and case studies illustrating the benefits. The decentralised approach has the risk of pockets of excellence developing, while the centralised approach has the risk of building dependence on a limited number of specialists rather than building capability on a broader front.

A weakness prevalent in the institutions assessed is the lack of explicit linkage between the educational outcomes desired and the technologies deployed (process D3). Technology use, such as the facilities of the LMSs, is dominated by administrative and peripheral requirements rather than educational activities. Across the institutions there is very little evidence that teaching staff are being provided with training and support in how technology can enable more effective learning.

A major problem identified in the institutions is the poor support of accessibility (process D4). Ensuring that course materials and activities are able to be used by students with a range of disabilities is a legislative requirement. Many of the courses and projects examined had little or no formal accessibility strategy incorporated into their design and development.

USP's performance in this process area is generally very strong, reflecting the impact of the standard CITL design methodology. Despite the strong development process there is, however, a weakness in transferring successful elements of projects into wider use by the University. Related to this is the absence of a formalised evaluation and review process capable of generating empirical evidence of achievement of educational objectives and successful impact on student learning. The existing CITL final reports provide some information but the analysis is not independent and does not provide a mechanism for reuse of project outcomes beyond the individual projects. Other processes requiring attention include the support of disabled students (process D4), and the facilitation of reuse of e-learning content and expertise (process D7).

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. There is a need to have in place mechanisms that support the transfer of effective practice within the institution beyond the CITL projects. These include templates and case examples that demonstrate how to use the technology available at USP to effectively support student learning outcomes.
2. The ongoing use and development of e-learning systems and infrastructure needs to be supported with formalised and independent reviews and evaluations of current use, focusing on pedagogical aspects that are impacting on student learning. The results of these reviews should be used to find examples of the use of technology and associated pedagogy that improve learning outcomes with the intention of supporting transferral of practice throughout the University.
3. Systems for collecting and promoting the reuse of e-learning materials developed by CITL, created by individual staff, or licensed for use by the institution should be established and actively promoted.

Staff need to be encouraged to reuse the investment in existing materials wherever possible and contributions to the reuse of materials should be recognised and rewarded.

Table 4 illustrates the overall findings of the research for this process area. A more detailed discussion of this process area can be found on page 50.

Development: Processes surrounding the creation and maintenance of e-learning resources					
	1	2	3	4	5
D1. Teaching staff are provided with design and development support when engaging in e-learning					
D2. Course development, design and delivery are guided by e-learning procedures and standards					
D3. An explicit plan links e-learning technology, pedagogy and content used in courses					
D4. Courses are designed to support disabled students					
D5. All elements of the physical e-learning infrastructure are reliable, robust and sufficient					
D6. All elements of the physical e-learning infrastructure are integrated using defined standards					
D7. E-learning resources are designed and managed to maximise reuse					

<input type="checkbox"/>	Not practised/not adequate	<input type="checkbox"/>	Partially adequate	<input type="checkbox"/>	Largely adequate	<input type="checkbox"/>	Fully adequate	<input type="checkbox"/>	Not assessed
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Table 4: University of the South Pole *Development* process area capability

Support

This process area covers the day-to-day management and support of e-learning delivery, particularly as they impact on the ability of students to engage effectively with e-learning. The goal of these processes is ensuring the efficient and effective day to day management of e-learning delivery. This means students and teaching staff can focus on the educational aspects of the course rather than peripheral issues. The individual processes are aimed at ensuring students are placed in the best possible way to succeed in their studies using e-learning and are not hindered by lack of information, support or technology.

A consistent finding in this process area is that student support in e-learning courses is not as well developed or comprehensive as it needs to be if students are to move away from a face to face mode of learning (processes S1, S3 and S4). As with teaching staff, students need support tailored specifically to the e-learning approaches adopted by institutions if they are to learn efficiently and effectively. Some institutions have been able to extend student IT helpdesk services online, but there is room for significant improvement. Much of what was observed in the institutions is built on a presumption that students already have the skills and background necessary to take advantage of e-learning. What support is provided appears to be a consequence of existing face to face support mechanisms having sufficient flexibility to cope with e-learning, but this is by no means a given.

The libraries of the institutions reviewed appear to be addressing the needs of students somewhat more effectively than the rest of the student support services, increasingly providing a full range of services online with help and support information (process S2). What appears to be missing is resources aimed at helping teaching staff support students in acquiring information literacy and research skills effectively. The use of customised library support pages for all courses at University B appears very useful. Students are provided with a mix of resources pertinent to the course along with support information, and this encourages them to go beyond the material of the course by engaging in self-directed learning and research.

Performance in this process area was not as strong as in other areas for USP, possibly reflecting the dependence on aspects of the environment that cannot be directly influenced by CITL and the absence of specific policies (the gap in the *Planning* dimension) and review procedures (see the *Evaluation* process area). That said, performance was not worse than the sector as a whole, sharing areas of relative strength and weakness. The support facilities provided to students are strong and promoted actively however they are not promoted in other than generic ways within the course materials. The library support materials in particular are very useful (process S2) but could be more explicitly linked from course assessment activities. Support for staff (processes S5 and S6) was strong if they were engaged in CITL supported projects but otherwise was weak, particularly with regard to use of digital information by students and submission of digital materials for assessment.

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. Development and updating of policies to establish consistent and clear expectations of the type of high quality learning experience students should receive when engaging in all forms of learning and teaching, including e-learning.
2. Development of resources and support for staff on using digital information resources created by students and provided for assessment.
3. Creating clear guidelines and templates, illustrated with examples and case studies from local courses, that assist academics in supporting students engaged in e-learning.

Table 5 illustrates the overall findings of the research for this process area. An institutional comparison and more detailed discussion of this process area can be found on page 66.

Support: Processes surrounding the support and management of e-learning					
	1	2	3	4	5
S1. Students are provided with technical assistance when engaging in e-learning					
S2. Students are provided with library facilities when engaging in e-learning					
S3. Student enquiries, questions and complaints are collected and managed formally					
S4. Students are provided with personal and learning support services when engaging in e-learning					
S5. Teaching staff are provided with e-learning pedagogical support and professional development					
S6. Teaching staff are provided with technical support in using digital information created by students					

<input type="checkbox"/>	Not practised/not adequate	<input type="checkbox"/>	Partially adequate	<input type="checkbox"/>	Largely adequate	<input type="checkbox"/>	Fully adequate	<input type="checkbox"/>	Not assessed
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Table 5: University of the South Pole *Support* process area capability

Evaluation

This process area is focused on quality assurance and evaluation processes throughout the entire lifecycle of e-learning design, development and deployment. The goal is encouraging reflective practice informed by evidence from previous success and failure. The individual processes are directed at ensuring the evidence collected is robust and able to provide a reliable base of knowledge for future strategy and sustainable development both of infrastructure and staff skills.

Evaluation of courses is a requirement imposed on all institutions by the Government monitoring agencies and these formal processes have carried across into e-learning courses (processes E1 and E3). However, these are simply the same processes that are applied to traditional teaching. There is a need to develop evaluations that assess particular issues relating to the technology and pedagogies adopted for e-learning (process E1). This is apparent in the observation that the institutions show little capability in assessing the impact on student learning and staff workloads of technologies already in use.

A particular weakness of the institutions assessed is the absence of any attempt to formally assess teaching staff skills in e-learning delivery (process E2). The positive impact of assessment, particularly of a formative nature, on student learning is well established. The absence of it as a tool to support the development of teaching staff suggests that training and support is informal and not regarded seriously by the staff or institutions. All of the institutions offer workshops and support to teaching staff but performance by individual staff in these is not assessed and there appear to be few objective assessments of teaching staff skills in this area. The teaching qualifications offered by some institutions offer a potential opportunity for assessing performance and improving staff skills but these tend not to focus on e-learning and are in any case not required for all teaching staff.

USP has a strong evaluation and student satisfaction process consistent with the other institutions assessed. There are, however, no questions or elements that focus on specific e-learning and technology aspects of courses, which is a weakness. There also appears to be no process for using the results of e-learning projects to inform the pedagogies and technologies that are used to support students in attaining particular outcomes in other courses, other than through the staff of the CITL. As with all other institutions, there is little evidence of staff being able to provide detailed information on their experience of e-learning, except through the formal CITL quality assurance and review procedures.

Regular formal, independent review and evaluation of e-learning aspects of courses building on the existing strong foundation is likely to result in capability improvement in a variety of other processes, particularly if it is ongoing and linked to resourcing for infrastructural and staff development improvements and a detailed institutional e-learning strategy.

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. Incorporation of an explicit consideration of e-learning and technology aspects into the standard evaluation processes used to assess courses and teaching staff beyond the procedures used in CITL projects.
2. Introduction of a formal procedure by which staff can provide regular and formal feedback on their experience of e-learning at the University of the South Pole.
3. Expansion of existing CITL project review procedures to encompass regular formal reviews of all e-learning courses, with the information formally reported to the University leadership and used to explicitly drive strategic and operational planning for e-learning.

Table 6 illustrates the overall findings of the research for this process area. An institutional comparison and more detailed discussion of this process area can be found on page 80.

Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle					
	1	2	3	4	5
E1. Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience					
E2. Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience					
E3. Regular reviews of the e-learning aspects of courses are conducted					

☐ Not practised/not adequate
 ☐ Partially adequate
 ☐ Largely adequate
 ☐ Fully adequate
 ☐ Not assessed

Table 6: University of the South Pole *Evaluation* process area capability

Organisation

This process area is concerned with the institutional planning and management of e-learning. The goal is ensuring that e-learning usage is well managed and planned to deliver the strategic and operational outcomes required by the institution. The individual processes are directed at ensuring the administrative and organisational aspects of e-learning are high quality, efficient and effective, particularly as institutions move from face-to-face delivery.

Aspects of this process area are quite strong across the institutions as they build on pre-existing processes that apply for all courses irrespective of the use of e-learning technologies and pedagogies. In particular, the processes that relate to communicating essential course information are generally adequate, although inconsistently applied at times (processes O6, O7 and O8).

A notable weakness across the institutions is a systematic lack of information provided to students in advance regarding the use of technology in courses (processes O6 and O7). Only two of the institutions (Polytechnic Y and the University of the South Pole) provided specific information in their enrolment packs regarding the use of technology in particular courses, even when this went well beyond standard use of the LMS facilities. As noted in the *Learning* process area, much of the information that is provided to students in course outlines should be freely available before enrolment as it is vital for students. By hiding this information from students they are losing the opportunity to prepare for the courses and to plan for their own particular circumstances. Also apparent is vulnerability in the institutions as growth in LMS use continues. Much of the information in these systems is essential to business continuity and vulnerable to both intentional and unintentional loss or corruption. Management of student information created and supplied during e-learning coursework appears generally lacking in the institutions assessed (process O4). Similarly, few institutions could identify a formal technology plan that guided the choices made in the design and development of e-learning courses (processes O3 and O5).

The University of the South Pole was assessed as having comparatively strong capability in this process area, although weakness was noted in the use of operational plans for e-learning (process O3) and the absence of any digital information integrity planning (process O4). A particular strength was the clear information on e-learning technology use provided to students in advance of their studies (process O6) and the formal planning approach adopted by CITL both in terms of resource allocation (process O1) and development planning (process O5).

It is recommended that University of the South Pole focus its attention on the following aspects of this process area:

1. Defining standards and guidelines for quality of materials and the secure and reliable storage of all information generated and stored during the delivery of a course, either by staff or students (process O4). This should include investigation of the use of content or document management systems that can ensure that changes in information are tracked as well as access controlled and reporting facilitated.
2. Build on the already strong information on e-learning technology provided to students by including more detailed and specific information on how the technologies will be used within courses to support student learning.
3. Development of operational plans for achieving the objectives of the USP e-learning strategic plan, including an overall technology plan to guide CITL work and encourage wider adoption of standard technologies and systems for e-learning.

Table 7 illustrates the findings of the research for this process area. An institutional comparison and more detailed discussion of this process area can be found on page 88.

Organisation: Processes associated with institutional planning and management					
	1	2	3	4	5
O1. Formal criteria guide the allocation of resources for e-learning design, development and delivery					
O2. Institutional learning and teaching policy and strategy explicitly address e-learning					
O3. E-learning technology decisions are guided by an explicit plan					
O4. Digital information use is guided by an institutional information integrity plan					
O5. E-learning initiatives are guided by explicit development plans					
O6. Students are provided with information on e-learning technologies prior to starting courses					
O7. Students are provided with information on e-learning pedagogies prior to starting courses					
O8. Students are provided with administration information prior to starting courses					
O9. E-learning initiatives are guided by institutional strategies and operational plans					

<input type="checkbox"/>	Not practised/not adequate	<input type="checkbox"/>	Partially adequate	<input type="checkbox"/>	Largely adequate	<input type="checkbox"/>	Fully adequate	<input type="checkbox"/>	Not assessed
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Table 7: University of the South Pole *Organisation* process area capability

2. Methodology

The assessment of capability in a complex area such as e-learning is difficult and necessarily involves reducing large amounts of detail into a broader overview that supports management decision making and strategic planning. It is inevitable that this approach will fail to single out the subtle nuances and innovative work of individuals that motivate teaching staff to work on individual projects. Institutions and individuals will always have the ability to choose to invest time and other resources in innovative, unique opportunities. The focus of this study, and thus the form in which the data is presented, is aimed at a less lofty goal, that of changing organisational conditions so that e-learning is delivered in a sustainable and high quality fashion to as many students as possible. As noted by Fullan:

“The answer to large-scale reform is not to try to emulate the characteristics of the minority who are getting somewhere *under present conditions* ... Rather, we must change existing conditions so that it is normal and possible for a majority of people to move forward” (Fullan, 2001, page 268)

The framework used in this analysis is based on the Capability Maturity Model (CMM, Paulk *et al.*, 1993) and SPICE (Software Process Improvement and Capability dEtermination, El Emam *et al.*, 1998; SPICE, 2002). The underlying idea is that the ability of an institution to be effective in a particular area of work is dependent on their capability to engage in high quality processes that are reproducible and able to be sustained and built upon. The characteristics of an institution that enable high quality processes are to some extent able to be separated from the details of the actual work undertaken that will vary depending on particular circumstances. This separation means that the analysis can be done independently of the technologies selected and pedagogies applied, thus allowing for a meaningful comparison across the institutions.

Capability, in the context of this model, refers to the ability of an institution to ensure that e-learning design, development and deployment is meeting the needs of the students, staff and institution. Capability includes the ability of an institution to sustain e-learning support of teaching as demand grows and staff change.

Processes

Building on the SPICE model, the e-Learning Maturity Model (eMM) divides the capability of institutions to sustain and deliver e-learning up into five major categories or process areas (Table 8). The key difference from the original SPICE model is the introduction of the *Learning* area, which replaces the *Customer/Supplier* area used in software engineering.

Process category	Brief description
Learning	<i>Processes that directly impact on pedagogical aspects of e-learning</i>
Development	<i>Processes surrounding the creation and maintenance of e-learning resources</i>
Support	<i>Processes surrounding the support and operational management of e-learning</i>
Evaluation	<i>Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle.</i>
Organisation	<i>Processes associated with institutional planning and management</i>

Table 8: eMM process categories (Marshall, 2006a)

Within each of these areas are a number of processes, derived from the research literature on e-learning quality, which contribute to the overall ability of institutions to perform well in the given process area, and thus in e-learning overall. The advantage of this approach is that it breaks down a complex area of institutional work into related sections that can be assessed independently and presented in a comparatively simple overview without losing the underlying detail.

An obvious requirement of this model is that the processes chosen are based on empirical evidence and represent ‘common truths’ about e-learning capability:

“are there common practices or ways of creating e-learning resources and learning environments that are accepted, useful and able to be described in a way that others can adopt them and improve their own e-learning capability?” (Marshall and Mitchell, 2003, page 4)

The processes used in this research were initially developed from the ‘Seven Principles’ of Chickering and Ehrmann (1996) and ‘Quality on the Line’ benchmarks (IHEP 2000) as outlined in Marshall and Mitchell (2004). These were unlikely to be the best possible set of processes for ensuring e-learning capability development but they had the advantage of being widely accepted as guidelines or benchmarks for e-learning delivery (Sherry, 2003). Subsequently, this process set was refined to produce the current version 2.3 set as described in Marshall (2006).

Dimensions

A key development that arose from the evaluation of the first version of the eMM is that the concept of levels used was unhelpful (Marshall and Mitchell, 2006). The use of levels implies a hierarchical model where capability is assessed and built in a sequential manner. The key idea underlying the dimension concept in contrast, is holistic capability. Rather than the model measuring progressive levels, it describes the capability of a process from synergistic perspectives. An organization that has developed capability on all dimensions for all processes will be more capable than one that has not. Capability at the higher dimensions that is not supported by capability at the lower dimensions will not deliver the desired outcomes; capability at the lower dimensions that is not supported by capability in the higher dimensions will be ad-hoc, unsustainable and unresponsive to changing organizational and learner needs.

In thinking about the relationship between the dimensions it is helpful to consider them arranged as in Figure 1 below. The matrix of boxes used on the left to display capabilities is helpful when performing comparisons but it can imply a hierarchical relationship that is misleading when interpreting results.

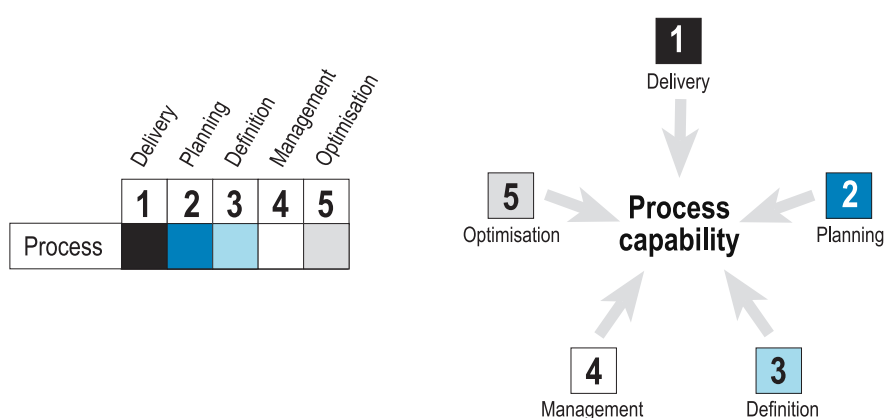


Figure 1: eMM Process Dimensions

Delivery is concerned with the creation and delivery of process outcomes. Assessments of this dimension are aimed at determining the extent to which the process is seen to operate within the institution. It is important to emphasise that institutions can have extremely effective processes operating within this dimension, but in the absence of capability in other dimensions there is risk of failure or unsustainable delivery and wasting resources through needless duplication.

Planning assesses the use of predefined objectives and plans in conducting the work of the process. The use of predefined plans potentially makes process outcomes more able to be managed effectively and reproduced if successful.

Definition covers the use of institutionally defined and documented standards, guidelines, templates and policies during the process implementation. An institution operating effectively within this dimension has clearly defined how a given process should be performed. This does not mean that the staff of the institution follows this guidance.

Management is concerned with how the institution manages the process implementation and ensures the quality of the outcomes. Capability within this dimension reflects the extent of measurement and control of the outcomes and the way in which the practices of the process are performed by the staff of the institution.

Optimisation captures the extent an institution is using formal approaches to improve capability measured within the other dimensions of this process. Capability of this dimension reflects a culture of continuous improvement.

Practices

Each process is further broken down within each dimension into practices that are either essential (listed in bold type) or just useful (listed in plain type) in achieving the outcomes of the particular process from the perspective of that dimension. These practices are intended to capture the key essences of the process as a series of items that can be assessed easily in a given institutional context. The practices are intended to be sufficiently generic that they can reflect the use of different pedagogies, technologies and organisational cultures. The eMM is aimed at assessing the quality of the processes - not at promoting particular approaches.

The use of these detailed lists of practices provides a way of making explicit the essential aspects of the eMM processes which can then be used to develop action plans and strategies addressing aspects of particular weakness or opportunity for a sector or institution. They are also essential in enabling self-assessments as set out in Marshall (2006b).

Along with the practice statements each process description (Marshall 2007) includes exemplars of practice performance (Figure 2). These exemplars are designed to assist the assessment process by providing examples of capability performance. It is important to emphasise that there are many alternative ways of demonstrating capability and the experience and judgment of the assessor should always take priority. The intention in supplying the exemplar statements is to reduce any potential ambiguity that might arise from the phrasing of the practice statement.

Process L1. Learning objectives guide the design and implementation of courses		
Assessment	Practices	
1 <div> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div>	Course documentation includes a clear statement of learning objectives. <div> <input type="checkbox"/> No formally stated learning objectives apparent in the course information supplied to students. </div> <div> <input type="checkbox"/> Formally stated learning objectives provided to a limited extent, either as narrative descriptions of the course outcomes or only in documentation provided after enrolment. </div> <div> <input checked="" type="checkbox"/> Formally stated learning objectives normally provided in course documentation available prior to enrolment but are missing in some cases or inconsistently provided in the range of course documents. </div> <div> <input checked="" type="checkbox"/> Formal statement of course learning objectives clearly and consistently provided in course documents, including those available prior to enrolment, individual objectives clearly distinguished from general course description and information. </div>	
	<div> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div> <div> See also: L8 (1), D3 (2) & O7(1) </div> Learning objectives are linked explicitly throughout learning and assessment activities using consistent language. <div> <input type="checkbox"/> No use of learning objectives apparent in the course information supplied to students beyond a formal statement or description. </div> <div> <input type="checkbox"/> Assessments and learning activities contain implicit, incomplete and inconsistent linkages to course learning objectives. </div> <div> <input checked="" type="checkbox"/> Most, but not all, assessments and learning activities contain explicit linkages to course learning objectives or restate learning objectives using different wording. </div> <div> <input checked="" type="checkbox"/> Formal statement of course learning objectives clearly and explicitly linked in all assessments and learning activities using consistent language. </div>	

Figure 2: eMM Capability Assessment Practices and Exemplars

Linked Processes

In Figure 2 the second practice shown from Process L1 is also found in other processes, as indicated by the “see also” comments on the left side. These provide links to the other processes where similar or identical practices may also be found and are provided as an aid to more efficient completion of an assessment. It is likely that similar or identical capability assessments will apply to these linked practices, although there may be some variation due to the process context. These linkages convey the connectedness of capability and indicate where improvements in particular processes will likely drive benefits in capability in other processes.

Conduct of Institutional Assessments

When conducting a self-assessment each practice is rated, with reference to the exemplars, for performance from ‘not adequate’ to ‘fully adequate’ (Figure 3). The ratings at each dimension are done on the basis of the evidence collected from the institution and are a combination of whether or not the practice is performed, how well it appears to be functioning, and how prevalent it appears to be.

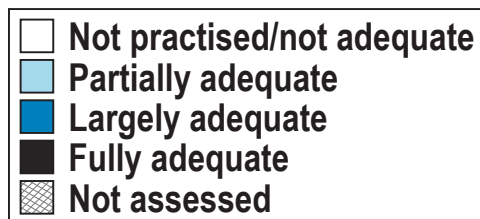


Figure 3: eMM capability level ratings (based on Marshall and Mitchell, 2003)

In this manner, capability of the institution in performing each of the processes that make up the eMM (Table 9, page 26) was assessed by the collection of information on up to three e-learning projects or courses from the participating institutions. This project information was combined with material from institutional web sites and enrolment packs to ensure a comprehensive understanding of how e-learning was being undertaken. The ratings provided for each process were checked and the quality of evidence compared between each participating institution to ensure a consistent rating scale had been used. A proportion of the final results were checked with institutions to confirm the interpretation of the material was correct and complete. A limitation of the current research is that only a single rater has been used and there is no ability to provide external measures of validity. This is an inevitable consequence of the stage of development of the model and the intention is to encourage wider adoption and replication of the current work in order to address these limitations. The original SPICE research was supported by extensive trials over a period of some years (El Emam *et al.* 1998) and the intention is to support a similar undertaking in the area of tertiary e-learning.

Each process was reviewed a second time and best practice elements of performance, policy and guidelines were identified. This material was aggregated into an institutional report that combined a sector comparison with a detailed review of the institutional capability determined. A draft of the institutional report was then provided to seven of the eleven institutions (four universities and three polytechnics) for comment and feedback on any errors or misinterpretations.

It should be noted that experience of applying this type of assessment in the field of software engineering suggests that most, if not all, institutions initially assessed will show a low level of capability for the processes selected (SEI, 2004). This is not surprising as one of the drivers for the model in the first place is the widely held perception that e-learning could be implemented more effectively and efficiently in most institutions.

Learning: Processes that directly impact on pedagogical aspects of e-learning	
L1.	Learning objectives guide the design and implementation of courses
L2.	Students are provided with mechanisms for interaction with teaching staff and other students
L3.	Students are provided with e-learning skill development
L4.	Students are provided with expected staff response times to student communications
L5.	Students receive feedback on their performance within courses
L6.	Students are provided with support in developing research and information literacy skills
L7.	Learning designs and activities actively engage students
L8.	Assessment is designed to progressively build student competence
L9.	Student work is subject to specified timetables and deadlines
L10.	Courses are designed to support diverse learning styles and learner capabilities
Development: Processes surrounding the creation and maintenance of e-learning resources	
D1.	Teaching staff are provided with design and development support when engaging in e-learning
D2.	Course development, design and delivery are guided by e-learning procedures and standards
D3.	An explicit plan links e-learning technology, pedagogy and content used in courses
D4.	Courses are designed to support disabled students
D5.	All elements of the physical e-learning infrastructure are reliable, robust and sufficient
D6.	All elements of the physical e-learning infrastructure are integrated using defined standards
D7.	E-learning resources are designed and managed to maximise reuse
Support: Processes surrounding the support and operational management of e-learning	
S1.	Students are provided with technical assistance when engaging in e-learning
S2.	Students are provided with library facilities when engaging in e-learning
S3.	Student enquiries, questions and complaints are collected and managed formally
S4.	Students are provided with personal and learning support services when engaging in e-learning
S5.	Teaching staff are provided with e-learning pedagogical support and professional development
S6.	Teaching staff are provided with technical support in using digital information created by students
Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle	
E1.	Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience
E2.	Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience
E3.	Regular reviews of the e-learning aspects of courses are conducted
Organisation: Processes associated with institutional planning and management	
O1.	Formal criteria guide the allocation of resources for e-learning design, development and delivery
O2.	Institutional learning and teaching policy and strategy explicitly address e-learning
O3.	E-learning technology decisions are guided by an explicit plan
O4.	Digital information use is guided by an institutional information integrity plan
O5.	E-learning initiatives are guided by explicit development plans
O6.	Students are provided with information on e-learning technologies prior to starting courses
O7.	Students are provided with information on e-learning pedagogies prior to starting courses
O8.	Students are provided with administration information prior to starting courses
O9.	E-learning initiatives are guided by institutional strategies and operational plans

Table 9: E-Learning Maturity Model Version 2.3 Processes (Marshall 2007)

Interpretation of results

The detail sections that follow present each process in a table similar to that below (Figure 4). In this example there are five institutions that have different capabilities for the particular process.

Process description					
	Delivery	Planning	Definition	Management	Optimisation
Institution A	Partially adequate	Not practised/not adequate	Not practised/not adequate	Not practised/not adequate	Not practised/not adequate
Institution B	Largely adequate	Largely adequate	Not practised/not adequate	Not practised/not adequate	Not practised/not adequate
Institution C	Partially adequate	Partially adequate	Largely adequate	Not practised/not adequate	Not practised/not adequate
Institution D	Fully adequate	Largely adequate	Partially adequate	Not practised/not adequate	Not practised/not adequate
Institution E	Fully adequate	Fully adequate	Largely adequate	Partially adequate	Not practised/not adequate

☐ Not practised/not adequate
☐ Partially adequate
☐ Largely adequate
☐ Fully adequate
☐ Not assessed

Figure 4: Example practice result comparing five institutions

Institution A is not performing the process well, with only evidence of some ad-hoc attempts shown by the partially adequate rating supplied for the *Delivery* dimension and the absence of any capability in the other dimensions.

Institution B is significantly more capable in the process than either A or C with evidence that the process is mostly performed well (the largely adequate rating for the *Delivery* dimension) and in a planned fashion (the largely adequate rating of the *Planning* dimension). Note that despite there being evidence from the *Planning* dimension, this appears to be done without any attempt for consistency within the institution as no capability is shown for the *Definition* dimension.

Institution C on the other hand, while not as capable as B, shows evidence of having defined standards or guidelines for performing the process (*Definition* dimension). However, these do not appear to be having an impact on actual e-learning projects as shown by the lower ratings for the *Delivery* and *Planning* dimensions.

Institution D shows a pattern of very good performance of the process (fully adequate rating for the *Delivery* dimension), supported by largely adequate planning (*Planning* dimension) and an initial set of standards or guidelines (partially adequate rating for the *Definition* dimension). This is perhaps the expected pattern of capability development, building from a base of ad-hoc behaviours that are becoming more standardised as the institution has more experience in e-learning.

Finally, institution E performs the process very well (fully adequate rating for the *Delivery* dimension) supported by effective planning (fully adequate rating for the *Planning* dimension), largely adequate standards and guidelines (*Definition* dimension) and an initial programme of evaluation and measurement of process performance (*Management* dimension).

Further analysis of the results in this example suggests that institutions C and E will provide potential examples of useful standards, guidelines and policies, while institutions D and E (and to some extent B) will provide individual examples of how to perform the process well. A more in-depth analysis can then be undertaken if necessary, dropping down to the level of individual practices to determine shared or complementary areas of strength or weakness.

Comparison across groups of processes provides an institution with the ability to identify aspects of related weakness that can be addressed strategically. Priorities can be easily identified by either comparison with the wider sector, or by comparing process ratings within an institution. Action plans can then be developed with reference to the practices within each of the process dimensions.

3. Detailed process results

This final section of the report presents a detailed examination of each process area and the individual processes. This includes a description of the justification for the individual process and the underlying research supporting its inclusion. An overview of capability in the processes is discussed from all of the institutions, including the best performance at the individual levels and successful practices identified.

This section also includes a detailed consideration of University of the South Pole's performance and capability. Recommendations for improving capability are made for each process and process area.

Learning: Processes that directly impact on pedagogical aspects of e-learning

This process area has as its goal the attainment of the highest quality learning outcomes possible for students. The individual processes are directed at preserving the essential aspects of an effective learning environment that apply regardless of the technology, pedagogy and discipline.

The individual processes are listed below, followed by an overview of institutional performance and then a detailed consideration of each process in turn.

Learning: Processes that directly impact on pedagogical aspects of e-learning	
L1.	Learning objectives guide the design and implementation of courses
L2.	Students are provided with mechanisms for interaction with teaching staff and other students
L3.	Students are provided with e-learning skill development
L4.	Students are provided with expected staff response times to student communications
L5.	Students receive feedback on their performance within courses
L6.	Students are provided with support in developing research and information literacy skills
L7.	Learning designs and activities actively engage students
L8.	Assessment is designed to progressively build student competence
L9.	Student work is subject to specified timetables and deadlines
L10.	Courses are designed to support diverse learning styles and learner capabilities

Table 12: *Learning processes*

Overview of Assessed Performance

The clear message from the institutions analysed is that pedagogical practice is dominated by the independence of the individual departments and teaching staff working on courses. This was particularly evident in University A, where exemplary practice in one project was not replicated in others. ber of processes in this and other areas. Sadly, comparison with the other courses from the same institutions makes it clear that this excellence is not being recognised and used to stimulate improvements in other courses. The sustainability of the results once the individuals involved leave must also be called into question. Institutions need to establish formal processes for sharing excellence and using it to support and training teaching staff.

Many of these processes can be significantly improved with standard solutions that apply in many courses, perhaps with some customisation. This approach is apparent at University B where the use of a defined process combined with the reuse of existing materials has greatly strengthened the results. Many of these processes can be effectively addressed once, or in a common way, in an institution and then energies can be devoted to material needed within particular courses rather than re-inventing and re-stating common information.

A common thread is that good policies are provided without guidance or examples as to how to actually comply with them in practice. Similarly, good practice is not being codified as guidelines and templates for reuse to encourage the building of capability. This information typically remains the province of a limited number of specialists or is buried within a single group. All of the institutions assessed need to consider better ways of sharing and promulgating solid solutions to standard problems as well as innovative and effective teaching practice.

Learning objectives are poorly used by most institutions, with only two consistently providing course objectives in a clear, structured, statement prior to enrolment (process L1). When objectives are provided in a clear statement as part of the course materials, they are not linked throughout the course outline and used to assist students in their understanding the logic of the course. As well, the objectives stated are dominated by recall and comprehension rather than by analysis, synthesis and evaluation.

More detailed discussion of institutional capability for each of the processes in this process area is found below in the discussion for each of the processes.

University of the South Pole Performance Overview

University of the South Pole was assessed as having comparatively strong capability in the *Learning* processes reflecting the formal approach used by the staff of the CITL in the development of course materials. Weaknesses were apparent in the communication of staff response times to students (process L4), the use of learning objectives to explain the programme of assessment (process L8) and the support of a diversity of student learning styles and capabilities (process L10). The lack of clearly communicated policies and guidelines, as well as a weak programme of staff development in e-learning is evident in the weaker capability assessed for the *Definition* dimension.

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. Developing templates, guidelines and documented examples that transfer the expertise of the CITL to the wider USP academic audience without the need to engage in the full project methodology. Sections of existing projects could be usefully reused immediately by others within the University without significant cost of time or effort to CITL.
2. Building on the useful, if somewhat inconsistent, communication of student learning objectives already present (processes L1 and L7) by more explicit linking of the learning objectives through course materials and elements, particularly the assessment tasks.
3. Creating clear policies to convey the institutional expectations made of academics and students engaged in e-learning. These should be built upon the existing learning and teaching policies and link with the overall e-learning strategy.
4. Creating clear guidelines and templates, illustrated with examples and case studies from local courses, that assist academics with the implementation of the existing policies of the University. The existing project process supported by CITL is strong but needs to be complemented with strategies for disseminating good practice throughout all courses.

More discussion of possible directions for improvement is supplied in the process discussions that follow.

Learning: Processes that directly impact on pedagogical aspects of e-learning					
	1	2	3	4	5
L1. Learning objectives guide the design and implementation of courses	Fully adequate	Largely adequate	Partially adequate		
L2. Students are provided with mechanisms for interaction with teaching staff and other students	Not practised/not adequate	Partially adequate			
L3. Students are provided with e-learning skill development	Partially adequate	Largely adequate			
L4. Students are provided with expected staff response times to student communications	Partially adequate	Largely adequate			
L5. Students receive feedback on their performance within courses	Not practised/not adequate	Partially adequate			
L6. Students are provided with support in developing research and information literacy skills	Not practised/not adequate	Largely adequate			
L7. Learning designs and activities actively engage students	Not practised/not adequate	Largely adequate	Partially adequate		
L8. Assessment is designed to progressively build student competence	Not practised/not adequate	Largely adequate			
L9. Student work is subject to specified timetables and deadlines	Not practised/not adequate	Partially adequate			
L10. Courses are designed to support diverse learning styles and learner capabilities	Partially adequate	Not practised/not adequate	Partially adequate		

<input type="checkbox"/> Not practised/not adequate	<input type="checkbox"/> Partially adequate	<input type="checkbox"/> Largely adequate	<input type="checkbox"/> Fully adequate	<input type="checkbox"/> Not assessed
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Table 13: University of the South Pole *Learning* process area capability

Process L1.

Learning objectives guide the design and implementation of courses

Process Description

Learning outcomes are results of learning that mainly derive from educational intentions or learning objectives, which clearly describe the learning content, the actions to be taken or performed, and how these will be assessed (Laurillard, 2002). Quality learning objectives clearly and explicitly specify both pedagogical approach and content, are accompanied by a flexible and responsive teaching attitude to diverse learning processes and styles, and assess authentic practice, which engages learner ownership (Harden, 2002). High-quality learning outcome achievement accompanies a more transferable and higher level of understanding of a subject (Prosser and Trigwell, 1999).

Good documentation of learning objectives is explicit about pedagogical strategies, ideals, and values, looks for learning processes rather than testing for content knowledge, accepts interdisciplinary work and diverse outcomes, and considers team as well as individual achievement (Salmon, 2000). Clear, explicit specification of personal, transferable subject outcomes is commensurate with quality of learning experience and learner success (Allan, 1996). The writing of learning outcomes must relate generically and specifically to the level of the programme or course, and achievement is assessed to be either complete, or not, but grades may provide feedback on the quality of work. Outcome statements constitute an active verb and its object in a contextual or conditional phrase and describe either declarative knowledge, or performative skill/knowledge synthesis capability, which are categorised as 'knowledge and understanding' or 'skills and other attributes' (Holmes, 2004, p. 14). Finally, detailed planning for learning outcomes can benefit from revisions of Bloom's (1956) cognitive taxonomy that afford access to more current, complex and complete knowledge of learning processes (Anderson *et al.*, 2001; Dettmer, 2006; Tomei, 2005).

Overview of Assessed Capability

Dimension 1: Delivery

A range of capabilities were found. Institutions that had clear, well structured statements of learning objectives tended to also have a wider range of cognitive outcomes identified, other institutions tended to have learning objectives that were stated in general and inconsistent language. There was very little evidence of learning objectives being formally linked to assessment and learning tasks even when a clear statement was provided with only four of the institutions showing partially adequate capability for that particular practice. In general the learning objectives were not available until students had enrolled and started courses.

Dimension 2: Planning

Learning objectives appear to be used as a tool for structured guidance of e-learning design only in the context of formal development support, when this is not present there is no evidence that the teaching staff use learning objectives to guide their work. Institutionally this is also reflected by the absence of any use of graduate or course learning objectives to guide review processes assessing the effectiveness of e-learning courses. The requirement that learning objectives be included in course outlines is common but essentially appears to be being treated as a bureaucratic requirement, and not a tool for enhancing learning.

Dimension 3: Definition

Most institutions have a policy requirement that learning objectives be provided in course outlines but generally little formal guidance provided on what this should constitute. The guidance provided in course outline templates provided is generally focused on formatting issues rather than content and linkage through to other aspects of the design or communication process. Training in creating and using learning objectives is commonly provided but is normally optional and there is no evidence of any exemplars or case studies being provided for staff to model their e-learning design and development activities on.

Dimension 4: Management

There is little evidence across the institutions of formal review processes considering the impact of learning objectives and associated structured design approaches on student learning.

Dimension 5: Optimisation

No evidence of capability, consistent with the absence of any sense that learning objectives are seen as other than bureaucratic requirements.

L1: Learning objectives guide the design and implementation of courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L1-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

This process was well performed but with room for improvement. The course objectives were clearly expressed in the designs and the courses themselves but were then not made explicit throughout the course materials and elements in a way that would support student learning. An additional problem was the inconsistent language used to express the objectives during the design process, and as part of the assessment descriptions. Limited training and support in the development of effective learning objective statements is provided for the optional use of teaching staff but this does not appear to specifically address the use of e-learning technologies and pedagogies.

Process L2.

Students are provided with mechanisms for interaction with teaching staff and other students

Process Description

Evidence of the use of a variety of communication modes or channels and encouragement for students to engage with peers and teaching staff is used to determine capability in this process. It is not sufficient that tools be provided, there must also be activities designed to encourage their use and support of effective engagement such as set out by Salmon (2000). Students should be provided with information on how to access and use different communication channels or modes. They should be given a clear explanation as to why the channels or modes have been included within the course and how they will assist in achieving the learning objectives of the course.

As with a traditional face-to-face class, it is the responsibility of the teaching staff to set the 'ground rules' and expectations for the communication undertaken in a particular course (Ramsden, 2003). Particularly, while many students are unfamiliar with e-learning, it is necessary for them to get clear information on how to use the communication channels effectively and appropriately (Palloff and Pratt, 2001; Harasim *et al.*, 1995). Communicating expectations early is also essential if staff workloads are to be managed (Waterhouse and Rogers, 2004).

Overview of Assessed Capability

Dimension 1: Delivery

Generally students were provided with clear information on accessing LMS communication tools and email contact information for teaching staff. Less helpful was the provision of information on how to learn with the supplied tools. Much of what was supplied focused on technical aspects of the LMS facilities and often was simply the commercially supplied documentation. University B provided clear guidance to students on how to use tools for learning. The information was structured around how the different forms of communication could assist with the course objectives and student learning and also included guidance during the course linked to individual assessment exercises and encouraging effective use of the supplied communication facilities.

Dimension 2: Planning

Formal communication of the available communication channels was best in those institutions with formal design and development support teams, although this generally only related to communication of the technical aspects of the LMS tools. There was little evidence of structured interaction designs guiding the selection of tools and their integration into course activities. Polytechnic Y had very clear guidebook on learning online that assisted students in getting started with the online communication tools which helped provide a consistent set of expectations to staff and students.

Dimension 3: Definition

Despite the investment in LMS facilities here is very little evidence that institutions have formally defined an expectation to staff that they engage with students through online communication channels. There also appears to be no connection between policy statements describing expectations for quality learning and teaching and formal processes conveying the implications of these expectations to teaching staff. LMS use has resulted in the availability of a standard set of communication tools but there is little evidence that this has resulted in a formal consideration of how these tools should be used to enhance student learning.

Dimension 4: Management

No real evidence of capability other than at Polytechnic Y where the formal e-learning design and development process has some impact with the use of feedback and review phases. The impact of LMS communication tools does not appear to yet be an activity attracting systematic and regular review and evaluation.

Dimension 5: Optimisation

No evidence of capability.

L2: Students are provided with mechanisms for interaction with teaching staff and other students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L2-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was relatively strong. Standard communication channels such as the Blackboard forums and email were used consistently and the necessary teaching staff contact information supplied clearly to students in course outlines. While generic documentation outlining the features of the Blackboard communication tools were included in course documents no attempt was made to contextualise this information to the particular course. Limited training and support in effective communication and interaction techniques is provided for the optional use of teaching staff but this does not appear to specifically address the use of e-learning technologies and pedagogies.

Process L3

Students are provided with e-learning skill development

Process Description

Students' capability for effective e-learning is a combination of their skills as learners and their abilities to make effective use of the various information sources and technologies provided by institutions generally, and specifically in particular courses and programmes. Some degree of technical aptitude and experience can now be generally assumed although this does not mean that students are effective online learners (Hrabe *et al.*, 2005). Care must be taken when designing the pedagogical elements of e-learning to ensure that students are provided with clear and explicit guidance of how the technologies should be used to support their learning. A strong constructive alignment of learning outcomes, technologies and pedagogies must be clear in the design and delivery of e-learning courses and programmes (Kirkwood and Price, 2005). Communication tools are a key aspect of engaging students provided that their use is focused in a way that generates shared experiences and effective connections between the students, the teaching staff and the course or programme domain (Visser and Visser, 2005).

Evidence of capability in this process is shown by clear communication to students of the pedagogical strategy of courses and programmes. The contribution of technological tools in assisting students in attaining the learning objectives of the course or programme should be clear. Students should be supported in understanding what is expected from them as learners and in gaining the necessary generic and specific learning skills, including attaining competency with the associated technologies. Teaching staff should be supported in developing their own skills as learning facilitators able to engage the students in effective learning built on a foundation of practice, demonstrated competency and guided reflection.

Overview of Assessed Capability

Dimension 1: Delivery

The learning designs of the courses assessed generally were clear and appropriate however a consistent weakness was the absence of opportunities for students to practice tasks and activities before engaging in them for assessment purposes. Consequently capabilities are assessed as weaker than might be expected. As with process L7 it appears that courses are not being designed with the goal of encouraging independent autonomous learners.

Dimension 2: Planning

Student support services aimed at improving the students' learning skills are uniformly available across the institutions and clear information is provided to students on how to access this, although it is unclear how actively students are encouraged to use this support. The approach taken is passive, with no evidence across the institutions that student skills for learning are formally assessed and this information used to guide teachers responses. The use of staged assessment tasks to build student skills as learners was also not evident (see also Process L8).

Dimension 3: Definition

Institutional policy support of incremental development of student skills for learning was generally poor, what stronger capability that was noted occurred in the context of a specific emphasis on learning and teaching at the policy level being generally apparent. There was little evidence of strong encouragement to teaching staff that they design assessment programmes aimed at building student's learning competencies. The training and support that was provided was normally optional and attendance not encouraged.

Dimension 4: Management

No significant evidence of capability across the institutions. What little was seen was based on limited evaluations and assessments of courses developed with the assistance of specialist e-learning design and development staff rather than a specific institutional engagement with understanding the learning skills of students.

Dimension 5: Optimisation

No evidence of capability.

L3: Students are provided with e-learning skill development					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L3-1: Comparison of process capability across the assessed institutions**University of the South Pole Capability**

Performance in this process was comparatively strong. The University of the South Pole provides a variety of useful materials and support aimed at ensuring students are able to make effective use of the e-learning pedagogies and technologies used in courses, however this information is not explicitly referenced in the course activities and is provided in a generic fashion. Useful was a short skills assessment that allowed students to see if they possessed the minimum skills required and made suggestions on what to do to improve skills prior to enrolment. Limited training and support in effective assessment techniques is provided for the optional use of teaching staff but this does not appear to specifically address the use of e-learning technologies and pedagogies.

Process L4

Students are provided with expected staff response times to student communications

Process Description

Responsive and timely teacher-learner communications significantly effect positive learning experiences and outcomes (Blignault and Trollip, 2003; Bolliger and Martindale, 2004). Effective interactive communication requires careful planning and thoughtful management to ensure responses meet student expectations and are unambiguous (Busch and Johnson, 2005). To this end, a taxonomy of response types (Blignault and Trollip (2003) is useful for engaging with the complex needs of the e-learning environment. Training in the use of communication tools and strong technical support are also necessary (Ortiz-Rodriguez *et al.*, 2005). Furthermore, concise policy statements, setting out what is expected of learners and what they expect of teachers, improves course management (Waterhouse and Rogers, 2004). And, Dennen (2005) reports teacher modelling of appropriate online responses and discussions is another method of communicating effective practices that has the additional benefit of demonstrating the communications process.

Evidence of capability in this process is shown by clear commitments to provide feedback and responses within a designated time period. This may include formal processes for how the different channels are used and a description of how teaching staff will respond on these channels (if at all). A clear design is apparent in the selection of the range of channels and the integration with course activities and the information provided to students on type and timeliness of responses is consistent with that design. Performance is monitored in order to ensure that the commitments being made are adhered to and resourced appropriately.

Overview of Assessed Capability

Dimension 1: Delivery

Generally students were provided with very little information on what they should expect from teaching staff in the way of responses to communication, either in terms of timeliness or in terms of explicit guidance as to how the different channels would be used. When stronger capability was seen it was a consequence of a formal consideration of staff and student interaction during the process of course design and development. University B stood out with the use of standard set of materials conveying how the channels were intended to be used both by students and by staff.

Dimension 2: Planning

Planning for effective communication and feedback was strong in University B and Polytechnic Y reflecting the use of a formal design and development methodology that explicitly considered interaction between teaching staff and students, including the expectations for timeliness and the associated staff and student workloads. In all other institutions this dimension was weak, reflecting a general passivity and informal approach in the use of the communication tools provided through the institutional LMS facilities.

Dimension 3: Definition

Policies governing conduct and legal aspects were generally strong but there was little evidence of engagement with the implications for student learning. In particular there was little evidence of the use of examples of effective communication and feedback strategies as a tool to guide the performance of teaching staff. There was also little evidence of support materials being created for students to use when receiving feedback from teaching staff.

Dimension 4: Management

No evidence of capability consistent with the generally passive use of LMS communication facilities.

Dimension 5: Optimisation

No evidence of capability.

L4: Students are provided with expected staff response times to student communications					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L4-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process was compromised by the absence of specific information on when students could expect a response from staff. Particularly in the context of online courses it is important to set student and staff expectations early as to the tempo and timeliness of communication. The institutional expectations and guidelines for staff need to be provided to students so they know what to expect in the way of responses to their communications. Limited training and support in effective communication and interaction techniques is provided for the optional use of teaching staff but this does not appear to specifically address the use of e-learning technologies and pedagogies.

Process L5.

Students receive feedback on their performance within courses

Process Description

Evidence of capability in this process is seen through the use of informal feedback through various communication channels complemented by formal assessment feedback processes such as marking rubrics. Policy should require prompt and useful feedback aimed at improving student capability in related tasks rather than just the immediate goal and teaching staff should be provided with guidelines and assistance in the provision of more effective feedback.

Feedback that learners' receive from teachers and from other students enables comparison of actual performance with expectations (Mory, 2004). Timely, constructive feedback affects students' participation, performance, and engagement on a course, and learning outcomes (Laurillard, 2002). Optimal feedback looks for balance between student needs and teaching management (Dennen, 2005), and must enhance understanding rather than just indicating correctness (Garrison, 1989). Feedback links knowledge and skills for understanding (Duhon *et al.*, 2006). It involves numerous models that centre on a 'feedback triad' (Kulhavy and Wagner, 1993) of motivation, reinforcement, and information (Mory, 2004). Because feedback and action link to productive learning, extrinsic and intrinsic feedback is crucial for learners (Laurillard, 2002). A learning goal, or outcome, also prefigures unity between action, feedback and integration (Laurillard, 2002). Substantive and timely feedback improves online learning participation (Dennen, 2005). However, feedback also involves complex effects including: 'candlepower' (Hudson, 2002), which characterises the subtle intimacy that arises in online dialogue and concerns effects of critical dialogue; and 'feedback specificity'. Although more specific feedback benefits learning responses in those who perform well, it is detrimental to learning responses in those who perform poorly (Goodman and Wood, 2004). *Kiasu* (a predominantly Asian attitude to diligent academic performance) has both positive (diligence to outperform others) and negative (diligence to prevent/hinder others outperforming) forms that impact on e-learning feedback practices (Hwang and Arbaugh, 2006).

Overview of Assessed Capability

Dimension 1: Delivery

The feedback approaches adopted were generally strong if dominated by assessment feedback. University A in one course demonstrated a very clear and effective use of marking rubrics that included a feedback structure that clearly indicated the type of feedback students could expect and which encouraged the staff marking to provide detailed information in response to student work rather than just individual marks, sadly this was clearly not a standard approach, reflecting rather the work of a single teacher. Across the institutions there is little evidence of teaching staff using a variety of feedback channels to provide more informal formative feedback to students during non-assessed activities.

Dimension 2: Planning

The use of structured interaction designs providing a range of feedback to students was seen when formal design and development support was provided to teaching staff. Despite this assistance there was little evidence across the institutions of the use of staged assessment tasks designed to build student skills incrementally, although formal policies commonly noted the need for such an approach. The absence of designed opportunities for students to practice tasks and gain informal feedback from teachers and peers is consistent with the poor results for process L3. This result seems to reflect the lack of teaching staff engagement in training and support for assessment design as the capability that was seen followed from formal design and development approaches being used and supported by experts.

Dimension 3: Definition

The poor evidence of capability here reflects the disconnect between the policy requirements that staff provide effective feedback, which was generally strong, and the support provided to enable teaching staff in providing that feedback. Training and other support was normally available but was optional

and with little evidence of systematic encouragement from institutional management. Across the institutions there was little evidence of examples of effective feedback techniques derived from local experience being used to assist and guide teaching staff.

Dimension 4: Management

No significant evidence of capability. Student satisfaction with feedback is commonly assessed by teaching evaluations but there appears to be little systematic and operationalised assessment of the impact of e-learning on feedback quality.

Dimension 5: Optimisation

No evidence of capability.

L5: Students receive feedback on their performance within courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L5-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was strong. Structured feedback approaches building on formally stated marking rubrics were clearly evident both in the design documentation and in the materials provided to students. The interaction strategy undertaken as part of the design process was helpful as was the use of staged assessment tasks although it was unclear how staff helped students make the links between tasks. Training and support on feedback use were provided to both staff and students although these were somewhat compromised by being generic and optional. Formal linkages to this support were also lacking in the design documentation and course materials.

Process L6.

Students are provided with support in developing research and information literacy skills

Process Description

Evidence of capability in this process is seen through the provision of resources on conducting research, resources on finding content and other information via links to suitable databases, instructions on where to find suitable books and support materials provided by groups such as libraries on information literacy skills. Development of skills in identifying useful materials and more general research skills should also be reflected in the assessment tasks of a course and the associated marking and feedback rubrics. Information literacy and research skill development should be reflected in the learning objectives either implicitly or explicitly. Teaching staff are provided with templates, examples, training and support in using the range of information resources available to support student learning. Explicit guidance and support should be provided to staff and students with policies and examples on intellectual property aspects, particularly copyright and plagiarism.

Overview of Assessed Capability

Dimension 1: Delivery

The renewed focus on research encouraged by the PBRF does not appear to have yet resulted in the explicit development of student information literacy and research skills during courses. Basic information on available resources was generally provided although in many cases this was little more than a link to the library webpages, more detailed information on using the resources for learning was, however, usually absent or limited in scope. An exception was University B which provided a page in each course containing a customised set of starting points for further research and investigation by students along with direct links to support resources and library staff who could assist the students either on-line or in person.

Dimension 2: Planning

There was little evidence of the use of formal tutorials or sessions on information literacy with the exception of University F which required that all students attend a library tutorial. The importance of research was not commonly reflected in the assessment task marking criteria and rubrics used in the institutions, although the need to properly cite material and avoid plagiarism was generally strongly conveyed.

Dimension 3: Definition

Research skill development by students as a formal policy objective was not apparent. It was disappointing to note that most institutions fail to provide important information such as bibliography and citation formats clearly and consistently to students.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

L6: Students are provided with support in developing research and information literacy skills					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L6-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was comparatively strong reflecting the well-designed library resource pages provided. They clearly set out a range of facilities for conducting research in the individual courses combined with support information and links to help and documentation. The acknowledgement of research aspects of learning in course marking criteria was also clear. A weakness was the absence of clear information on citation formats and also the absence of clear policy guidance and support for staff in developing the information literacy and research skills of students.

Process L7.

Learning designs and activities actively engage students

Process Description

Student learning success is significantly affected by the creation of an e-learning environment that provides active engagement in experiential contexts. This requires teachers to clearly understand programme outcomes, teaching approach, students' motivation and learning styles, all of which depends on diligent planning. Also, students need to be able to link their learning to their life experiences. Technology plays a significant role in this and requires that the online teaching/learning environment undergo a reconstruction of student and teacher roles, relationships and strategies – students need to become active players in their own learning in regard to learning approach and intellectual challenges (Grabinger and Dunlap, 2000). Teachers need to be conversant with current research and theory and familiar with the complexities of human interactions with ICT, so that as users they are not detached from students. Teachers and learners need to be cognisant of their embodiment in technology relations that integrates knowing acting and being. Such embodied knowing opens understandings of the mind-body/machine nexus (Dall'Alba and Barnacle, 2005).

Evidence of capability in this process is seen through course and programme designs that provide students with authentic and personally relevant contexts for their learning. E-learning technologies and pedagogies should be flexibly designed so as to allow incorporation of student experience and knowledge. Analysis and reflection should be encouraged and practised rather than recall and information retrieval. Teaching staff should be supported in developing the skills needed to facilitate e-learning approaches that build engagement through active learning pedagogies rather than replicating passive, traditional learning environments.

Overview of Assessed Capability

Dimension 1: Delivery

Consistent with the observations in processes L1 and L8 the formal provision of assistance in course design to teaching staff clearly results in both a better use of staged activities and assessment tasks and a clearer overall communication to students of how the course is designed to support their learning. It was notable that the majority of courses made limited attempts to explicitly connect assessment tasks with other course activities.

Dimension 2: Planning

There were very few examples of any attempt to explain to students how the activities and the course design were assisting them in achieving the goals and objectives of the courses. The use of a formal e-learning design and development methodology clearly helped, with University B in particular clearly communicating to students the underlying learning design rationale used to guide the selection and development of the course resources and activities.

Dimension 3: Definition

Weak capability evident across the institutions as a consequence of optional training and support for teaching staff combined with little in the way of incentives, support or encouragement to invest the necessary time and effort. There was also little evidence of policy guidance and strong direction that courses actively engage students. University E had the best policy in this area but there was little evidence of systematic actions being taken to support the implementation of that policy.

Dimension 4: Management

No evidence of systematic measurement of the ability of e-learning to engage students was evident in the institutions.

Dimension 5: Optimisation

No evidence of capability.

L7: Learning designs and activities actively engage students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L7-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was comparatively strong reflecting the formal approach taken in the design and development of course materials. The learning activities included in the course were clearly designed to encourage analysis and skill development. A weakness was the absence of materials for students explicitly outlining the pedagogical approach adopted in the course. Limited training and support in techniques to engage students actively in their learning is provided for the optional use of teaching staff, but this does not appear to specifically address the use of e-learning technologies and pedagogies.

Process L8

Assessment is designed to progressively build student competence

Process Description

To be effective, assessment needs to be integrated throughout the teaching-learning process in visible but seamless ways. That is, effective assessment will communicate ongoing high expectations through affirming competencies and capabilities, as well as technical and specific knowledge using a variety of approaches, such as 1. traditional, 2. activity oriented, 3. group, and 4. self-reflective and readily accessible practices, such as online quizzes, surveys, gradebooks and e-portfolios. Whatever methods are utilised, students need a rigorous understanding of qualitative and quantitative aspects of their assessment to ensure e-learning success.

Evidence of capability in this process is seen through the use of assessment programmes designed to support students in achieving the learning objectives and which learner build capability progressively with opportunities for feedback and reflection. Policy and guidelines should encourage the use of a mix of assessment techniques throughout the course and encourage the use of challenging tasks to motivate performance and learning.

Overview of Assessed Capability

Dimension 1: Delivery

There was very little evidence of the use of structured assessment tasks designed to build student capability progressively. In general, assessment tasks used throughout the institutions were limited in type and isolated from other tasks and the activities of the course. There were few examples of innovative assessment tasks building on the technologies available. Students were normally provided with timely formal feedback on assessment outcomes, however support for their practicing the tasks first and getting informal feedback from other students and teaching staff before attempting assessment was much less evident.

Dimension 2: Planning

The communication of assessment tasks and their requirements was strong as would be expected, however little information was provided to students on the linkages between assessment tasks and with the other course activities and objectives. The notable exceptions were when a formal e-learning design and development methodology was used. The use of automatic plagiarism detection systems in most institutions was apparent.

Dimension 3: Definition

As with process L7 weak capability evident across the institutions following from limited use of incentives, support or encouragement for teaching staff to engage in the optional training and support provided. There was very little evidence of policy guidance and systematic direction from institutions ensuring that courses have clearly structured and staged assessment designs.

Dimension 4: Management

Little evidence of capability with no evidence of systematic collection of feedback from teaching staff or evaluation of the impact of particular assessment strategies on student learning.

Dimension 5: Optimisation

No evidence of capability.

L8: Assessment is designed to progressively build student competence					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L8-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process was compromised by the lack of clear and consistent linkages between the course learning objectives and the objectives for the individual pieces of assessment. While staged assessment tasks were apparent, there was no formal encouragement or opportunity for students to practice tasks prior to their being assessed. A systematic and structured plan building on students' previous familiarity with specific technologies was apparent in the courses and the associated design and development documentation, although this could have benefited from more explicit encouragement of student use of tools such as the guest course provided. Limited training and support in effective assessment techniques are provided for the optional use of teaching staff, but this support does not appear to specifically address the use of e-learning technologies and pedagogies.

Process L9

Student work is subject to specified timetables and deadlines

Process Description

E-learning provides a time flexible environment that demands attention to the management of timeliness in the conduct of teaching and learning on courses (Laurillard, 2002; Salmon, 2000). Negotiated agreements, between teachers and learners, concerning the ordering and timing of course elements must be clearly communicated in course timetables and assignment deadlines. Furthermore, explicit expectations and guidelines encourage and motivate learners to make the most effective use of time and enable teachers to facilitate effective time management (Clarke, 2004). As the e-learning environment imposes more self-regulated learning responsibilities on the student than they may have previously experienced, there is need for personal learning structures that ensure productivity and reduce stress (Clarke, 2004).

Evidence of capability in this process is seen by the provision of a clear timetable that relates all of the elements of a course together and communicates the logic underlying the design of the various activities. Particularly in online courses, there should be frequent pointers and reminders to students as to where they should be focusing their energies and the upcoming deadlines that they should be aware of. During the design of materials, explicit consideration should be given to student and staff workload expectations and the impact that this has on the timing of elements of the course.

Overview of Assessed Capability

Dimension 1: Delivery

Some form of standard timetable and description of the workload associated with a particular course is routinely supplied by every institution. The clarity and availability of this information varied dramatically however and detailed timetables were not normally available until after enrolment. Timetable information was normally supplied in conjunction with assessment deadlines but was often not conveyed in a way that communicated the relationship between tasks and activities. In many cases the information was not repeated in multiple locations to remind students.

Dimension 2: Planning

Clear timetables using a common template were normally apparent in course outlines, however it was often not clear how the workloads for the timetabled tasks were being determined or how students could negotiate variances to assessment deadlines. The structured relationships between the timing of different elements of the courses was not conveyed well to students in many cases. There was no evidence of students being encouraged to plan their own workloads and prepare in advance for periods of intensive work prior to particular deadlines and little evidence of their being encouraged to seek support and training in effective time management strategies..

Dimension 3: Definition

While the use of timetables is commonly a standard requirement in policy and course templates there is little evidence of formal assessment of student workloads or the coordination of workloads across courses and programmes. While most institutions had a standard means of relating expected workload to courses this was not normally conveyed to students explicitly. Little use of examples of effective course workload planning and communication strategies as tools for teaching staff development and support was apparent.

Dimension 4: Management

There was no evidence of systematic measurement of student workloads and the impact of different e-learning technologies and pedagogies on student and staff work patterns.

Dimension 5: Optimisation

No evidence of capability.

L9: Student work is subject to specified timetables and deadlines					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L9-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was strong reflecting the use of a clear course calendar summarizing the key dates and relationships between course activities and assessment tasks. Timing and workload information was repeated throughout course information whenever tasks or activities were presented in order to remind students of upcoming deadlines. A weakness was the absence of more explicit consideration of student workload in policies and clear communication of standard expectations to staff and students. Specific support and training on student workload issues was not evident, being incorporated only as part of more general support for assessment or course design optionally provided for staff.

Process L10

Courses are designed to support diverse learning styles and learner capabilities

Process Description

Inclusion of diversity is the coherent and consistent theme throughout the research literature, regarding both accessibility and learning preferences. Inclusivity underpins the argument that efforts to improve accessibility and ways of learning for some benefit all. Being inclusive requires respecting capabilities, disabilities, and styles of learning (Ragan, 1999; Salmon, 2000). As well, it requires respecting values, orientations, language factors, cultural and ethnic traditions, and the special requirements of learners (Reeves, 1997). Inclusivity involves issues of gender (Kramarae, 2003) and age (Witt and McDermott, 2004). Overall, the consideration of inclusive design benefits all learners (Kinash *et al.*, 2004; Witt and McDermott, 2004).

Evidence of capability in this area is seen through course design and implementation practices that use a variety of complementary pedagogical approaches to support student learning, including a variety of media, assessment types and communication channels. Teaching staff should be enabled and supported in being open to flexible teaching and learning methods and should support and encourage students negotiating or using alternative learning approaches that are better suited to their personal circumstances. Policies and guidelines for courses should explicitly incorporate an expectation of diversity in learning styles and learner capabilities being supported proactively, rather than being reacted to in response to student complaints.

Overview of Assessed Capability

Dimension 1: Delivery

It was notable that the avoidance of bias and stereotypes was generally strong but that the use of a variety of media and learning tasks was not as strong. Very little evidence of intentional practice as reflected by little formal communication of diversity support to students. The formal e-learning design and development methodology used by University B had a clear impact following from the explicitly flexible pedagogical design used and communicated to students, however in general there was very little evidence that courses were receptive to students adopting alternative learning approaches.

Dimension 2: Planning

Generally poor support across the institutions for students with a diversity of learning needs falling outside of mainstream expectations. Little information is formally supplied to students on how courses are designed to support a range of learning styles and approaches reflecting the essentially rigid and reactive designs implemented. There was no evidence that the available technologies were being used creatively and flexibly, rather a passive adoption of standard LMS features was the norm.

Dimension 3: Definition

Policy statements requiring the support of diversity and the absence of bias were clearly apparent as are the expectation that courses and teachers support a range of student capabilities to learn. There was, however, little evidence of structured approaches being adopted to support teaching staff in developing the necessary skills or of examples or templates being used to assist teaching staff in so doing. Polytechnic Y demonstrated best practice in the policy area with a formal requirement that all courses provide materials in a wide range of formats and very clear instructions provided to students on how they could get access to alternative materials and assistance with their learning.

Dimension 4: Management

Very little evidence of capability, students can provide feedback on this area but it is generally not collected or used in a structured way.

Dimension 5: Optimisation

No evidence of capability, only one institution showed any evidence of using diversity requirements when selecting technologies for use.

L10: Courses are designed to support diverse learning styles and learner capabilities					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure L10-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The relatively poor performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions. There appeared to be little or no formal consideration of diverse student learning styles and capabilities in the materials assessed. There was little evidence of encouragement of the development of autonomous student skills for e-learning and the need to support a range of student learning preferences was not explicit in the course design documentation. Limited training and support in techniques to engage students actively in their learning is provided for the optional use of teaching staff, but this does not appear to specifically address the use of e-learning technologies and pedagogies or the ways technology can provide students with greater flexibility and control over their learning.

Development: Processes surrounding the creation and maintenance of e-learning resources

The goal of this process area is efficient and effective use of resources in the creation and maintenance of e-learning materials and courses. The individual processes are directed at informing the development of resources and ensuring that this is done in a way that builds capability based on experience and success of e-learning deployment in the institution.

The individual processes are listed below, followed by an overview of institutional performance and then a detailed consideration of each process in turn.

Development: <i>Processes surrounding the creation and maintenance of e-learning resources</i>	
D1.	Teaching staff are provided with design and development support when engaging in e-learning
D2.	Course development, design and delivery are guided by e-learning procedures and standards
D3.	An explicit plan links e-learning technology, pedagogy and content used in courses
D4.	Courses are designed to support disabled students
D5.	All elements of the physical e-learning infrastructure are reliable, robust and sufficient
D6.	All elements of the physical e-learning infrastructure are integrated using defined standards
D7.	E-learning resources are designed and managed to maximise reuse

Table 14: *Development processes*

Overview of Assessed Performance

Capability in this process area is particularly dependent on the existence of formal procedures and support within an institution. Universities A, B and E, the University of the South Pole, and Polytechnics W, Y and Z, all have staff appointed explicitly to support e-learning development and not unexpectedly they have much stronger capability in the area of development. Universities C, D and G, and Polytechnic X on the other hand have comparatively little invested in supporting e-learning development and consequently show a weaker, ad-hoc, capability. Within the polytechnics there are clearly fewer resources available and a thus a greater dependence on the skills of the teaching staff. This is somewhat offset by a more standardised approach within the institutions.

It is important to note that investment in e-learning development does not 3. imply a centralised team, University A is pursuing a largely devolved model of support that is working well with comparatively strong policies and management oversight. University B on the other hand is using a centralised model and has very strong development processes combined with a clear process for how projects are accepted and supported. In order to build on these strong foundations, both approaches need to have some way of identifying and promulgating standards, guidelines and templates out to the wider institutional population. The decentralised approach has the risk of pockets of excellence developing, while the centralised approach has the risk of building dependence on a limited number of specialists rather than building capability on a broader front.

A weakness prevalent in the institutions is the lack of explicit linkage between the educational outcomes desired and the technologies deployed (process D3). Technology use, such as the facilities of the LMSs, is dominated by administrative and peripheral requirements rather than educational activities. Across the institutions there is very little evidence that teaching staff are being provided with training and support in how technology can enable more effective learning.

A major problem identified in the institutions is the poor support of accessibility (process D4). Ensuring that course materials and activities are able to be used by students with a range of disabilities is a legislative requirement. Many of the courses and projects examined had little or no formal accessibility strategy incorporated into their design and development.

More detailed discussion of institutional capability for each of the processes in this process area is found below in the discussion for each of the processes.

University of the South Pole Performance Overview

USP's performance in this process area is generally very strong, reflecting the impact of the standard CITL design methodology. Despite the strong development process there is, however, a weakness in transferring successful elements of projects into wider use by the University. Related to this is the absence of a formalised evaluation and review process capable of generating empirical evidence of achievement of educational objectives and successful impact on student learning. The existing CITL final reports provide some information but the analysis is not independent and does not provide a mechanism for reuse of project outcomes beyond the individual projects. Other processes requiring attention include the support of disabled students (process D4), and the facilitation of reuse of e-learning content and expertise (process D7).

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. There is a need to have in place mechanisms that support the transfer of effective practice within the institution beyond the CITL projects. These include templates and case examples that demonstrate how to use the technology available at USP to effectively support student learning outcomes.
2. The ongoing use and development of e-learning systems and infrastructure needs to be supported with formalised and independent reviews and evaluations of current use, focusing on pedagogical aspects that are impacting on student learning. The results of these reviews should be used to find examples of the use of technology and associated pedagogy that improve learning outcomes with the intention of supporting transferral of practice throughout the University.
3. Systems for collecting and promoting the reuse of e-learning materials developed by CITL, created by individual staff, or licensed for use by the institution should be established and actively promoted. Staff need to be encouraged to reuse the investment in existing materials wherever possible and contributions to the reuse of materials should be recognised and rewarded.

More discussion of possible directions for improvement is supplied in the process discussions that follow.

Development: Processes surrounding the creation and maintenance of e-learning resources					
	1	2	3	4	5
D1. Teaching staff are provided with design and development support when engaging in e-learning					
D2. Course development, design and delivery are guided by e-learning procedures and standards					
D3. An explicit plan links e-learning technology, pedagogy and content used in courses					
D4. Courses are designed to support disabled students					
D5. All elements of the physical e-learning infrastructure are reliable, robust and sufficient					
D6. All elements of the physical e-learning infrastructure are integrated using defined standards					
D7. E-learning resources are designed and managed to maximise reuse					

<input type="checkbox"/>	Not practised/not adequate	<input type="checkbox"/>	Partially adequate	<input type="checkbox"/>	Largely adequate	<input type="checkbox"/>	Fully adequate	<input type="checkbox"/>	Not assessed
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Table 15: University of the South Pole *Development* process area capability

Process D1.

Teaching staff are provided with design and development support when engaging in e-learning

Process Description

Support provided to teaching staff in effective learning design is vital if courses are to develop pedagogical approaches that reflect the state of current understanding, as opposed to traditional approaches (Ragan, 1999). By working with pedagogical experts, teaching staff can be encouraged to consider pedagogies that may make more effective use of available technology or, alternatively, technologies that enable particularly effective pedagogical approaches that they may not have considered (Wingard, 2004). Staff must not only be trained and supported to develop strong computer, information literacy and management skills, but must also acquire relevant and appropriate pedagogical knowledge and skills to apply an informed critical perspective to using the knowledge and skills (Weaver, 2006). Policy issues that require attention include intellectual property use and ownership as well as decisions about the infrastructure and support (Picciano, 2006).

Evidence of capability in this process is seen in the availability of technical assistance and staff development for the full range of technologies that are provided as standard in the institution, along with expert assistance in the design of the pedagogical approaches for courses. Access to this support is managed to ensure efficient and equitable use of time and the achievement of strategic goals as well as short term requirements. Effective approaches in the institutional context are communicated through examples, case studies, standards and guidelines customized for the institution, as well as during training for teaching staff.

Overview of Assessed Capability

Dimension 1: Delivery

Capability at this dimension essentially depended on whether or not the institution had invested in a formal e-learning design and development support team. Most of those who did (Universities A, B and E, Polytechnic Y) had the resources to provide support to teaching staff designing and developing e-learning courses and projects, otherwise very little support was possible.

Dimension 2: Planning

As with dimension one, capability on this dimension depended on whether or not an investment in a formal e-learning design and development support team had been made. Interestingly, there was no evidence of specifically contracted staff being used on a course by course basis to compensate for the lack of internal investment. Irrespective of any investment in formal design and development support there was little evidence of risk assessments being undertaken as part of the design and development of e-learning initiatives.

Dimension 3: Definition

There was little evidence in the institutions of teaching staff being provided with the tools to effectively run e-learning design and development projects themselves. Very little training was provided and there was little evidence of formally developed standards, guidelines and templates being used to support teaching staff. There is some evidence of the use of formal standards in those institutions with some type of formalised design and development support but this was limited to their use by expert staff rather than as a tool for promulgating good practice more widely within the institution.

Dimension 4: Management

Little evidence of capability. Universities B and E, and Polytechnic Z have some evidence of quality assurance and the use of feedback from teaching staff regarding the effectiveness of the support provided but this is very informally collected and not particularly strongly followed through with planning and resourcing activities.

Dimension 5: Optimisation

No evidence of capability.

D1: Teaching staff are provided with design and development support when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D1-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was comparatively strong but with room for improvement. A strength was the formal design and development approach used for the CITL courses, however this was not complemented with materials aimed at providing teaching staff with the skills to undertake this work independently. There was also no evidence that teaching staff were rewarded for innovative use of technology or provided with resources to further improve their teaching other than through the formal CITL process. A weakness was the absence of any formal feedback and review of the effectiveness of the support provided from the perspective of staff.

Process D2.

Course development, design and delivery are guided by e-learning procedures and standards

Process Description

There is general agreement that institution-wide successful implementation of effective e-learning depends on explicit institutional procedures and standards. Standards and guidelines can support more effective practice (Marshall, 2004) and their use can result in cheaper, more useful materials to support student learning. Schauer *et al.* (2005) note that teachers cannot develop new skills and redesign courses without financial and organizational support from administration. But neither can administrators develop and maintain effective policy without input and feedback from teachers willing to engage with the pedagogical and technical issues (de Freitas and Oliver, 2005).

Evidence of capability in this area is seen through the use of consistent, documented practice that reuses previous experience within the institution to build capability. Formal standards are used where available to inform and guide practice and ensure quality and reusability of materials. These standards and guidelines are communicated widely within the institution to encourage wider adoption by teaching staff.

Overview of Assessed Capability

Dimension 1: Delivery

Very weak capability noted across the institutions with little investment in developing materials for the independent use of teaching staff in e-learning design and development as noted in process D1. University B stood out as having a clearly defined and described design and development methodology which was provided and supported in a fashion intended to promote its adoption by teaching staff. There was no evidence of formally defined external e-learning standards or guidelines being used to inform e-learning design and development outside of the dedicated e-learning design and development teams employed by Universities A, B and C, and Polytechnics Y and Z.

Dimension 2: Planning

Capability tracked with the investment by institutions in formal design and development support (Universities A, B and C, and Polytechnics Y and Z). There was little evidence across the institutions of any systematic programme of rewards and incentives to encourage teaching staff engagement with formal e-learning design and development.

Dimension 3: Definition

As with dimension two, capability tracked with investment in formal design and development support. Procedures and standards were used somewhat by the dedicated e-learning staff and there was a limited amount of optional training and support provided to teaching staff, although it was notable that very little in the way of quality assurance support was provided to teaching staff. Generally expertise in e-learning design and development, including project management and quality assurance, is residing with experts rather than being communicated in a structured way to teaching staff to use themselves.

Dimension 4: Management

Very little evidence of capability other than at University E which had some relatively informal feedback and quality assurance activities which do not appear to have generated any significant institutional strategic response (note the absence of capability at dimension five). There was very little evidence that the costs and benefits of e-learning development were being systematically assessed even in those institutions with a formal investment in design and development support.

Dimension 5: Optimisation

No evidence of capability.

D2: Course development, design and delivery are guided by e-learning procedures and standards					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D2-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Aspects of this process were strong reflecting the formal development procedures of CITL which are clearly documented and available to staff. A problem, shared with the sector generally, was the absence of formally defined standards or specifications as a tool for supporting the work of teaching or support staff. Standards were provided for technical aspects, but not for pedagogical aspects of e-learning, and these were not formally linked with the design and development process. No encouragement or support for teaching staff to engage with the standards provided was evident.

Process D3.

An explicit plan links e-learning technology, pedagogy and content used in courses

Process Description

Effective e-learning requires the complex links between pedagogical approach, course content, and use of technologies to be constructively aligned to defined learning objectives and outcomes (Laurillard, 2002; Ragan, 1999). Learning objectives are the foundation for an educational event that forms a contract between teacher and learner and helps to ensure the selection of instructional strategies for content presentation that successfully delivers defined outcomes. Interactions are the ways teachers and learners interact as geographically distant members of a learning community. Assessment also serves both teacher's and learner's purposes by monitoring progress that enables the teacher to supply formative feedback information to the learner, and, for the learner to provide feedback on the course design to the teacher (Ragan, 1999). The distance and time constraints of e-learning require pedagogical practices and technology selection be pre-planned as there is less flexibility for teaching staff to make spontaneous changes to e-learning activities (Herrington *et al.*, 2005).

Evidence of capability in this area is seen with the use of explicit design processes and plans that link technology decisions with defined student learning outcomes and graduate attributes. This should also include making the underlying design rationale and pedagogy apparent to students when they are introduced to how the technology will be used in the particular course. Teaching staff are provided with templates, examples, training and support in using the range of technologies available to support student learning in a range of contexts and disciplines.

Overview of Assessed Capability

Dimension 1: Delivery

Capability in this process was very weak, reflecting the relatively limited use of structured and formalised design and development methodologies even in those institutions with a dedicated e-learning support team. Only University B clearly conveyed to students how the elements of the course and the supporting technologies were integrated and designed to support their learning. In most cases there was little or no evidence of formal design playing a part in the creation of e-learning courses.

Dimension 2: Planning

There was almost no evidence of planning in the implementation of learning designs, other than in the two institutions with dedicated e-learning design and development support teams. Consistent with the observations made in process L1 there was little evidence of learning objectives being used to guide the selection and development of e-learning technologies and pedagogies. There was also no evidence of students being involved in the planning of e-learning projects and initiatives.

Dimension 3: Definition

Very little evidence of formal engagement by institutions in the structured design of learning. Tools such as learning objectives or formal design plans are not being used to guide technical and pedagogical decisions and while limited training is provided by some institutions, it is optional and not supported by encouragement, opportunities or incentives for teaching staff to invest their time.

Dimension 4: Management

Very little evidence that the institutions are formally reviewing the linkages between the use of e-learning technologies and pedagogies and the impact on student learning outcomes.

Dimension 5: Optimisation

No evidence of capability.

D3: An explicit plan links e-learning technology, pedagogy and content used in courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D3-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions and reflects the inconsistent use of learning objectives throughout the design and development activities. While the design and development support provided by CITL is strong, it would benefit from more structured use of learning objectives and this approach should be explicitly communicated to all teaching staff for use more generally. A weakness was the absence of materials explicitly conveying to students the design rationale underlying the use of particular technologies and pedagogies.

Process D4.

Courses are designed to support disabled students

Process Description

Ensuring that materials are accessible to students with disabilities requires careful design and consideration of accessibility issues throughout the creation of materials, as well as the use of development tools to support student use of assistive technologies (Witt and McDermott, 2004). Although assistive technologies are readily available to enable ICT access for those with disabilities, they often only help overcome the first of many barriers that need to be addressed with effective learning design.

Differences that affect accessibility extend beyond vision, hearing, and motor impediments to include learning disabilities. Whilst there is a general lack of research-based resources for diverse learners, new technology offers potential for greater accessibility and flexibility, and there is a common view that implementing accessibility protocols and features for disabled learners inevitably benefits all online learners (Edmonds, 2004).

Evidence of capability in this area is seen through design and implementation practices that use a variety of complementary approaches to support student learning, including a variety of media. Accessibility should be explicitly considered during the design process and standards such as those provided by the W3C (<http://www.w3c.org/WAI/>) used to ensure compliance. Formal and regular reviews involving students as key stakeholders should be conducted both of courses and the supporting standards, templates and staff development materials.

Overview of Assessed Capability

Dimension 1: Delivery

Despite the legislative requirement that all courses be accessible to disabled students, capability was disappointingly weak. The use of alternative media and learning activities is somewhat apparent but it is clear that little consideration is given formally to the needs of disabled students when courses are being designed and developed. What little support that is provided appears to be a consequence of other decisions, such as use of a particular LMS, rather than a planned decision to meet the full range of potential student requirements. Very little communication to students is evident regarding what steps have been taken to ensure accessibility.

Dimension 2: Planning

A noticeable feature of this process is the gap in capability arising at dimension two compared with dimensions one and three. This reflects the existence of reasonable policies and teaching approaches with little formal or systematic planning to ensure that delivery is sustainable and fully effective. There was very little evidence that disability access is planned or that courses are tested with students to identify potential issues prior to delivery. All institutions had a means for students to self identify if they had a disability but this appears to result simply in a post-facto remediation approach being adopted, something that would be very problematic with some designs. This also fails to address the issue of students being reluctant to identify themselves as disabled, a problem aggravated by the poor communication of the contents and expectations of courses prior to commencement (processes O6 and O7).

Dimension 3: Definition

Generally institutions provide a support service for disabled students and institutional policies require that this be provided and that disabled students are accordingly able to participate equally in most if not all courses. Across the institutions this is not complemented by detailed information for students on the range of support options available in particular courses or by assistance to teaching staff in ensuring that their courses are accessible to disabled students. The approach taken by institutions supporting disabled students can be characterised as reactive, rather than proactive, responding only when students complain of problems.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

D4: Courses are designed to support disabled students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D4-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was mixed, although very strong capability was seen in the formal planning and testing of materials for accessibility, the communication of options to students was limited and formal rather than aimed at ensuring they made the best possible use of the alternatives available to them. In addition, there was little evidence of support and guidance for staff on the necessity of supporting disabled students and effective approaches for teaching such students. The focus was predominantly technical and failed to address wider pedagogical concerns.

Process D5.

All elements of the physical e-learning infrastructure are reliable, robust and sufficient

Process Description

The physical infrastructure used to provide and sustain e-learning delivery must be as reliable and robust as the personnel infrastructure that depends on it. Technology that is unreliable will rapidly destroy the confidence of students, will disrupt the process of building effective engagement and act as a significant barrier to the use of technology by staff (Butler and Sellborn, 2002). In this context 'physical' includes the hardware, software and other facilities needed to deploy e-learning such as teaching rooms, cameras, servers etc. The highly interdependent complexity of elements in the e-learning infrastructure implies the consequent need for policies and agreements to establish and maintain reliability.

Evidence of capability in this process is seen through the creation and use of an integrated infrastructure with hardware, software and teaching facilities able to be easily accessed by staff and student, design processes that include explicit consideration of reliability aspects when choosing technology and the basing of this decision on evidence of reliability collected in the institutional context whenever possible. Course designs include consideration of alternatives to be used by teaching staff when technology fails and ensuring there are support procedures in place to deal with potential failures. Standards and guidelines are used to communicate which technologies have been proven reliable and regular monitoring and reporting is used to prove and sustain reliability. The selection of new technologies is done with reference to formal standards and the ability for them to be integrated within the existing infrastructure.

Overview of Assessed Capability

Dimension 1: Delivery

Capability in this process was generally strong, dominated by the dependence on the standard services provided by central IS groups in the different institutions. As well as maintenance of the central LMS this also included related systems and facilities such as networks, specialist servers for video and similar technology. Exceptions were Universities B and F where a single LMS did not dominate delivery and the alternatives used were not formally managed.

Dimension 2: Planning

The growth in dependence on LMS facilities has been rapid across the institutions and there is a now a need for explicit consideration of issues of redundancy and reliability as substantial amounts of student and course information are now stored in these systems. The varied results here suggest that there is room for improvement in a number of institutions. Those with a stronger capability were using either a formal outsourcing arrangement or had a dedicated e-learning design and development support team ensuring that the core systems were robust and reliable, there was however little evidence of formal risk assessments guiding decisions, other than at University B.

Dimension 3: Definition

Performance was generally poor reflecting the relatively rare use of service level agreements as tools to manage internal IT service provision. There was also little evidence of a research base or the use of formally defined external standards informing the selection, use and maintenance of e-learning technologies.

Dimension 4: Management

Very little capability was seen, consistent with the observations in dimension two, other than in the context of a formal outsourcing agreement. Despite the dependence of many institutions on e-learning as core business there was little evidence of systematic and formal reporting and monitoring of the performance, reliability and robustness of e-learning systems and infrastructure.

Dimension 5: Optimisation

No evidence of capability.

D5: All elements of the physical e-learning infrastructure are reliable, robust and sufficient					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D5-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process is comparatively weak. A clear presumption was that the LMS was well-managed and capable of handling unexpected events. There appeared to be an expectation of professional management of the IT infrastructure. High level summary reports of LMS usage exist but these do not provide the type of detailed information needed to assess the extent to which students are being supported in their learning. Weaknesses included the absence of regular formal testing and auditing of systems and backups to ensure that these were working as expected, and the absence of formal service level agreements for key infrastructure such as the Blackboard LMS.

Process D6.

All elements of the physical e-learning infrastructure are integrated using defined standards

Process Description

Standards and guidelines can support more effective practice (Marshall, 2004) and their use can result in cheaper, more useful materials to support student learning. The physical e-learning infrastructure, as discussed in process D5, is a complex environment in which various media facilitate a multitude of connections and interactions through highly interdependent technical elements (Gunawardena and McIsaac, 2004). The Joint Information Systems Committee identifies two challenges for e-learning infrastructures: one cultural – involving institution-wide collaboration for change in pedagogical concepts; the other technical – concerning systems integration. They comment that “[f]ull integration...is most likely to come from a standards or specifications based approach... that requires the close collaboration of the entire community of colleges, support agencies and suppliers” (2003, p. 1). Hirumi (2005) notes that the conversations occurring in the quest for quality e-learning may be as, or even more, helpful than the standards they seek to determine.

Evidence of capability in this area is seen through the use of consistent, documented practice that reuses previous experience within the institution to build capability. Formal standards are used where available to inform and guide practice and ensure quality and reusability of materials. These standards and guidelines are communicated widely within the institution to encourage wider adoption by teaching staff.

Overview of Assessed Capability

Dimension 1: Delivery

The very weak capability identified at dimension one of this process is a consequence of the need for LMS facilities and other e-learning infrastructure to interoperate with existing systems for student administration and general IT services. There is otherwise, essentially no evidence that external standards are having any impact on e-learning design and development decisions across the institutions.

Dimension 2: Planning

No evidence of capability.

Dimension 3: Definition

No evidence of capability.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

D6: All elements of the physical e-learning infrastructure are integrated using defined standards					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D6-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was stronger than most other institutions but with significant scope for improvement. Technical standards were identified for use but these were not apparent in the management of the systems infrastructure. There was no communication to staff of the use of standards or any evidence of a formal requirement that standards be used to guide the selection of technologies. There was also no evidence of standards being used during design and development activities of their being formally linked to decisions about technology or pedagogy.

Process D7.

E-learning resources are designed and managed to maximise reuse

Process Description

It is argued that a major economic and efficiency advantage of e-learning is its potential for sharing and reusing learning materials (Jochems *et al.*, 2004; Weller, 2004; Wiley, 2000). The reuse and sharing of learning materials relies on the ability to store and retrieve them effectively. To achieve this, the material's description – metadata – and packaging must be accurately documented and standardised for an institution. Beyond this, staff need to be enabled and encouraged to reuse e-learning resources and be provided with training, opportunities and incentives to create reusable resources themselves.

Evidence of capability in this process is seen through the creation and use of metadata standards and templates along with repositories for storing and accessing course resources for reuse. Teaching staff should be provided with training and support in the creation and reuse of resources as well as incentives to both create reusable resources in the first place as well as enable reuse. Intellectual property aspects of resource creation and use should be addressed explicitly at a policy and employment level and all staff involved in the design, (re)development and delivery of courses must be trained and supported in understanding the implications of intellectual property in their work. Ongoing design and development of the physical e-learning infrastructure should be done with an awareness of reuse as well as an appreciation of the rapid pace of change and development in this area.

Overview of Assessed Capability

Dimension 1: Delivery

Evidence of capability in this process was only seen in those institutions that employed dedicated staff for e-learning design and development. In those institutions it was clear that the intention was to ensure that this investment was maximised through reuse, although it was notable that reuse was generally limited to reuse by expert staff rather than general use by the teaching staff of the institution.

Dimension 2: Planning

There was little evidence of institutional strategies or initiatives supporting or encouraging reuse of e-learning resources, including rewards or incentives to staff reusing or creating reusable materials. The capability observed was the consequence of dedicated design and development support staff ensuring their work was maintainable, reusable and cost-effective although no specific learning object repositories had been established to support wider access to the resources created.

Dimension 3: Definition

No evidence of was seen across the institutions of institutional policies regarding archiving and long term storage of course information and e-learning resources for reuse. There was also no evidence of the use of content management systems or repositories across the institutions, LMS facilities are fulfilling aspects of this function by default but not in a managed or sustainable way. The very weak process capability noted is a consequence of employment contracts defining default positions for intellectual property ownership in those institutions with dedicated e-learning development staff and in the polytechnics, the situation was more ambiguous in the universities where academics commonly retain ownership of traditional teaching materials. There was little evidence that institutions are formally considering intellectual property issues in the context of e-learning design and development, raising the risk of either incorrect use of copyright materials or unclear ownership of resources created.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

D7: E-learning resources are designed and managed to maximise reuse					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure D7-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The weak performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions. There is no evidence of formal consideration of any aspect of reuse with resources stored in the LMS for use on a course-by-course basis and without the use of any formal repository or metadata to facilitate reuse. Recognition of staff attempts to promote reuse in any form is not apparent, nor was there evidence of any attempt to analyse existing materials to extract reusable content. A strength was the clear policies and contracts relating to intellectual property and ownership of materials created for courses, but in the absence of any systematic use of that content this is of limited value.

Support: Processes surrounding the support and operational management of e-learning

The goal of this process area is ensuring the efficient and effective day to day management of e-learning delivery so that students and teaching staff can focus on the educational aspects of the course rather than peripheral issues. The individual processes are aimed at ensuring that students are best placed to succeed in their studies using e-learning and are not hindered by lack of information, support or technology.

The individual processes are listed below, followed by an overview of institutional performance and then a detailed consideration of each process in turn.

Support: <i>Processes surrounding the support and operational management of e-learning</i>	
S1.	Students are provided with technical assistance when engaging in e-learning
S2.	Students are provided with library facilities when engaging in e-learning
S3.	Student enquiries, questions and complaints are collected and managed formally
S4.	Students are provided with personal and learning support services when engaging in e-learning
S5.	Teaching staff are provided with e-learning pedagogical support and professional development
S6.	Teaching staff are provided with technical support in using digital information created by students

Table 16: *Support processes*

Overview of Assessed Performance

A consistent finding in this process area is that student support in e-learning courses is not as well developed or comprehensive as it needs to be if students are to move away from a face to face mode of learning (processes S1, S3 and S4). As with teaching staff, students need support tailored specifically to the e-learning approaches adopted by institutions if they are to learn efficiently and effectively. Some institutions have been able to extend student IT helpdesk services online, but there is room for significant improvement. Much of what was observed in the institutions is built on a presumption that students already have the skills and background necessary to take advantage of e-learning. What support is provided appears to be a consequence of existing face to face support mechanisms having sufficient flexibility to cope with e-learning, but this is by no means a given.

The libraries of the institutions reviewed appear to be addressing the needs of students somewhat more effectively than the rest of the student support services, increasingly providing a full range of services online with help and support information (process S2). What appears to be missing is resources aimed at helping teaching staff support students in acquiring information literacy and research skills effectively. The use of customised library support pages for all courses at University B and the University of the South Pole appears very useful. Students are provided with a mix of resources pertinent to the course along with support information, and this encourages them to go beyond the material of the course by engaging in self-directed learning and research.

More discussion of institutional capability is found below in the discussion for each of the processes.

University of the South Pole Performance Overview

Performance in this process area was not as strong as in other areas for USP, possibly reflecting the dependence on aspects of the environment that cannot be directly influenced by CITL and the absence of specific policies (the gap in the *Planning* dimension) and review procedures (see the *Evaluation* process area). That said, performance was not worse than the sector as a whole, sharing areas of relative strength and weakness. The support facilities provided to students are strong and promoted actively however they are not promoted in other than generic ways within the course materials. The library support materials in particular are very useful (process S2) but could be more explicitly linked from course assessment activities. Support for staff (processes S5 and S6) was strong if they were engaged in CITL supported projects but otherwise was weak, particularly with regard to use of digital information by students and submission of digital materials for assessment.

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. Development and updating of policies to establish consistent and clear expectations of the type of high quality learning experience students should receive when engaging in all forms of learning and teaching, including e-learning.
2. Development of resources and support for staff on using digital information resources created by students and provided for assessment.
3. Creating clear guidelines and templates, illustrated with examples and case studies from local courses, that assist academics in supporting students engaged in e-learning.

More discussion of possible directions for improvement is supplied in the process discussions that follow.

Support: Processes surrounding the support and management of e-learning					
	1	2	3	4	5
S1. Students are provided with technical assistance when engaging in e-learning					
S2. Students are provided with library facilities when engaging in e-learning					
S3. Student enquiries, questions and complaints are collected and managed formally					
S4. Students are provided with personal and learning support services when engaging in e-learning					
S5. Teaching staff are provided with e-learning pedagogical support and professional development					
S6. Teaching staff are provided with technical support in using digital information created by students					

<input type="checkbox"/>	Not practised/not adequate	<input type="checkbox"/>	Partially adequate	<input type="checkbox"/>	Largely adequate	<input type="checkbox"/>	Fully adequate	<input type="checkbox"/>	Not assessed
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Table 17: University of the South Pole *Support* process area capability

Process S1.

Students are provided with technical assistance when engaging in e-learning

Process Description

The dependence of e-learning on technology means that students must be able to receive support to ensure they can make effective use of that technology whenever they choose to study (Ragan, 1999; Salmon, 2000; Laurillard, 2002). Access to support facilities has been shown to correlate with improved learning outcomes (Fredericksen *et al.*, 1999) but this is obviously predicated on students getting a professional and timely service. Recent research shows that student's need for technical assistance is no longer seen as a significant barrier to e-learning for younger students (Muilenburg and Berge, 2005), however, older students report the need for greater assistance (Kvavik and Caruso, 2005, p. 9). Clyde and Delohery (2005) recommend, as do others (for example, Vonderwell and Zacharia, 2005), a preemptive approach to technical problems that assesses student's technical capabilities to ensure that appropriate levels of institutional or specific training and support are made available as needed before they impact negatively on student learning.

Evidence of capability in this process is seen in the provision of information on how to get assistance with technology. This should consist of contact information for both telephone and email support as well as self-help facilities such as web pages and documentation. It should convey how student requests will be treated and the timeframe within which they can expect assistance. Course specific information should be supplied when technologies are used other than those formally and normally required and supported by the institution. Policies and guidelines should communicate the extent of support available and the timeframes within which support is provided. Support staff are provided with templates, examples, training and support in using the range of resources available to assist students.

Overview of Assessed Capability

Dimension 1: Delivery

Capability was generally poor throughout the institutions and dependent primarily on the teaching staff delivering courses and on the support provided for LMS facilities through web pages. Substantive support for students appears to be built upon services designed to support on-campus facilities such as computing laboratories, rather than being designed specifically to meet the needs of students engaged in e-learning. Little information and support was provided to students through online communication channels other than email, although one institution provided a limited synchronous chat facility during business hours. It was clearly apparent that in most cases student technical support was designed around a model of face-to-face delivery rather than a planned support of e-learning from off-campus.

Dimension 2: Planning

There is little evidence in most institutions of a systematic attempt to address the e-learning technical support needs of students. In most cases support was limited to a set of web pages of varied quality and usefulness and a help desk available via email and telephone during normal business hours. Polytechnic Y and University A were exceptions with clear instructions provided in the enrolment materials and online and a service available over extended hours.

Dimension 3: Definition

Capability was essentially absent across the institutions with only Polytechnic Y clearly and formally defining standards and procedures for student support.

Dimension 4: Management

Polytechnic Y and University A made use of regular reporting and monitoring of support activities but there was little evidence of capability elsewhere.

Dimension 5: Optimisation

No evidence of capability.

S1: Students are provided with technical assistance when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure S1-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was comparatively strong. Students are provided with a clearly communicated single point of contact through email, telephone and face to face for the extended hours that students are using to study. This student support service handles any question that the student might have, not just those regarding technology, providing clarity of service to students and simplifying the process of communicating to the students where to find help. There was, however, no evidence that e-learning design and development activities considered the impact of technology and e-learning pedagogies on student support requirements or mechanisms which could compromise the quality of service normally provided. A further weakness was the absence of clear policies or standards for student support provided in all courses irrespective of the mode of delivery.

Process S2.

Students are provided with library facilities when engaging in e-learning

Process Description

One of the significant benefits of campus-based learning is access to library and research facilities. Regardless of the mode of delivery, if students are to achieve the full benefit of their courses they need similar access (Lebowitz, 1997), particularly if they are to engage in research (process L6). The American Library Association guidelines for distance learning clearly state “Access to adequate library services and resources is essential for the attainment of superior academic skills in post-secondary education” (ALA, 2004). E-learning introduces a new way of understanding students’ access to, and use of, library facilities, resources, and services. It involves three issues: the students’ own capabilities for access; the organisation and management of the materials to be accessed; and the organisation and management of the services and facilities used for access. The literature also emphasises the need for collaborative relationships between all stakeholders to engender ownership of a ‘new partnership’ to make the best possible services and support available to students (Stubley, 2005).

Evidence of capability in this process is seen through the provision of a full range of library facilities and associated support and training information to assist students with their use. Information on using these services is provided both through the central library website as well as directly within courses where it is customized to reflect the needs of the particular discipline and learning outcomes.

Overview of Assessed Capability

Dimension 1: Delivery

Generally, the services provided by institutional libraries are comprehensive and include help and support designed for students. The weakness apparent in the institutions is that individual courses are not guiding and assisting students in making use of the library services, normally students are simply provided with a link to the library from the LMS, rather than the individual courses. As noted in process L6, the services provided by the libraries are generally strong but there is little encouragement provided from within courses to assist the students in learning how to make effective use of the library. There is a presumption that students know how to access the library and will know when to do so.

Dimension 2: Planning

The institutional libraries generally provided a range of services and support that were designed to meet the needs of students engaged in e-learning. There is little evidence of these being acknowledged and explicitly linked from individual courses. The expectation appears to be that students will use a general library link and find the information and services for themselves. A notable exception was University B, where students were provided with a very useful set of pages through their library for each course. These pages contain a customized set of starting points for further research and investigation by students along with direct links to support resources and library staff who could assist the students either on-line or in person.

Dimension 3: Definition

Very weak, with little evidence in general that institutions are defining minimum standards for access to library services irrespective of the mode of delivery.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

S2: Students are provided with library facilities when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure S2-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process was in line with the sector as a whole with a comparatively strong library service. The library resources provided for courses are useful and include a range of materials including distance delivery of books and other media as required. A weakness was the lack of involvement of library staff in the design and development activities and the formal consideration of information resources for student use as part of the formal procedures.

Process S3.

Student enquiries, questions and complaints are collected and managed formally

Process Description

The isolation of many students in e-learning situations calls for closer academic and administrative attention to all enquiries, questions, and complaints (Curry, 2003). While all institutions will have formal processes for student grievances, there are many other day-to-day concerns that need to be resolved quickly and professionally if they are to not to impair learning outcomes for students. Prompt, attentive responses to student enquiry communications ensure that motivation for learning is not compromised and lessens the potential for student noncompletions (Moody, 2004).

Evidence of capability in this process is seen in the provision of instructions to students in all courses on where to communicate any concerns they might have about any aspect of their learning. This should either be a single student help desk or a clear list that provides alternatives and indicates how these are to be used, such as particular contacts for technical issues and others for learning concerns or complaints. Policy should require the provision of this information in some standard way and guidelines should be provided on how student communications are to be handled, including timeframes and record-keeping. Teaching and support staff are provided with templates, examples, training and support in handling student complaints.

Overview of Assessed Capability

Dimension 1: Delivery

Capability in this process was weak, reflecting the use of pre-existing formal disputes procedures without consideration of the impact that the move to e-learning is having on systems and procedures. Most institutions did not provide students with information on who to contact in regard to specific issues, and there appears to be a lack of awareness that students might have the need to raise issues with the staff or the institution that require formal treatment and tracking. The existing formal grievance procedures are generally adequate but in day to day use would normally be excessive or inappropriate and they do not usually consider the implications of e-learning approaches, particularly the possibility that the students might never attend the physical campus. It was also notable that generally teaching staff are not provided with support or resources in handling student concerns appropriately or effectively.

Dimension 2: Planning

There was very little evidence of formal and systematic planning to manage student issues in most institutions, with the notable exception of University A and Polytechnic Y who both provided clear and formal contact points, resolution procedures and managed the collection of student concerns. There was no evidence of formal risk assessments concerning the handling of student issues and concerns being conducted within the institutions.

Dimension 3: Definition

University A and Polytechnic Y were the only institutions having any evidence of formal management and standards for addressing concerns and issues raised by students engaged in e-learning. There was a limited amount of information provided to teaching staff on effective feedback, but this was clearly insufficient.

Dimension 4: Management

Only University A showed any evidence of regular monitoring and reporting of student issues and concerns resulting from e-learning.

Dimension 5: Optimisation

No evidence of capability.

S3: Student enquiries, questions and complaints are collected and managed formally					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure S3-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The relatively poor performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions and is a consequence of a focus on formal grievance and complaints procedures. Other than the formal student grievance process, no other formal process for students to complain about aspects of courses was apparent. Obviously students can complain to teaching staff or through the technical helpdesk, but this is not entirely satisfactory for all issues and has the disadvantage that records are not kept for analysis and systematic improvement. An additional weakness was the absence of any detailed information on how complaints or concerns are handled, and there was little formal support or guidance for staff on how to handle student complaints appropriately.

Process S4.

Students are provided with personal and learning support services when engaging in e-learning

Process Description

The use of e-learning to remove the constraint that students attend courses face-to-face does not remove the need for institutions to provide as full a range of support services as possible (Sewart, 1993). As well as technical support for e-learning students need support with personal and learning issues. It is important for the student to be welcomed and made sufficiently comfortable with the e-learning environment so that they are able to express and explain their need for and what they require from support.

Evidence of capability in the process is seen in clear documentation, complying with a consistent institutional template, setting out the information necessary for accessing all available student services. Policy should require that this information be accurate, regularly reviewed and provided to students in advance of enrolment. Templates should be provided to ensure a consistent organisation and content. Elements that are standard to all courses should use wording prescribed by policy.

Overview of Assessed Capability

Dimension 1: Delivery

Information on the range of student support services provided by institutions is generally clear and available from enrolment materials, websites and course outlines in a consistent fashion. This information is, however, usually separated from the rest of the course outline into its own section and there is no evidence of courses linking relevant support directly to individual activities and assessment tasks. An additional limitation is that in most cases personal and learning support is either not available to students engaged in e-learning or that it fails to address e-learning specific aspects of student learning.

Dimension 2: Planning

Course outlines generally include a set of standard information on the available personal and learning support services using a clear and consistent language and providing explicit information on how to access the services. While the services seem very useful there is little evidence that the support queries are managed and tracked formally and there is almost no evidence that support aspects are being considered when e-learning projects are being designed and developed.

Dimension 3: Definition

Generally institutions define a range of personal and learning support services for students which are communicated in the enrolment materials, websites and course outlines but these are not usually adapted for support of e-learning. There is no evidence of this support being subject to formally defined service level agreements. It is also notable that teaching staff are not formally involved in mediating student access to support and there is very little evidence of encouragement to link courses to student support facilities other than through general statements.

Dimension 4: Management

Little evidence of capability, University A has some monitoring and regular reporting arising from their support systems.

Dimension 5: Optimisation

No evidence of capability.

S4: Students are provided with personal and learning support services when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure S4-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was reasonable but with room for improvement. Students are provided with a clearly communicated single point of contact through email, telephone and face to face for the extended hours that students are using to study. This student support service handles any question that the student might have providing clarity of service to students and simplifying the process of communicating to the students where to find help. There was, however, no evidence that e-learning design and development activities considered the impact of technology and e-learning pedagogies on student support requirements or mechanisms which could compromise the quality of service normally provided. A further weakness was the absence of clear policies or standards for student support provided in all courses irrespective of the mode of delivery.

Process S5.

Teaching staff are provided with e-learning pedagogical support and professional development

Process Description

Teaching staff need training and support if they are to be effective with new technologies and the associated pedagogies. This is a complex area and teaching staff need to be able to access a range of professional support as they encounter issues during their work (Harasim *et al.* 1995). E-learning is not just a technological add-on that teachers need to learn how to use; it is a new educational system involving new pedagogical and professional procedures and processes that require support and professional development. Khan (2005) notes that many academic and administrative staff may have not experienced e-learning themselves. He recommends that they should undertake a course using the medium in order to better understand the learner's position (p. 35). Another problematic issue that Khan raises is teaching staff workload, which, particularly in the early stages of e-learning implementation, is very demanding because of the additional preparation and communication requirements.

Evidence of capability in this process is seen through the use of formal staff capability assessments during training and as part of the design and development process for courses and projects. Evidence from these assessments should be used to determine additional support and training allocations. Design and development plans should include formal processes for ongoing support of teaching staff and courses. Policy and guidelines should mandate staff capability assessments and require their use in ongoing staff development. Regular overview reports of capability should inform strategies for ongoing resourcing and development of e-learning.

Overview of Assessed Capability

Dimension 1: Delivery

Capability in this process was very weak. While most institutions provide some form of professional development and training for teaching staff this is generally optional and not explicitly linked with the use of particular e-learning technologies or pedagogies. It was also noted that little consideration is given to enabling teaching staff in their supporting students using e-learning pedagogies and technologies effectively.

Dimension 2: Planning

There was very little evidence of formally planned support in e-learning pedagogies being provided when teaching staff are involved with e-learning courses. What structured support that was available was generally limited to technical aspects of major systems such as LMS facilities and there was little evidence of support being based on an examination of the needs arising from technology use in particular courses. There was little evidence of rewards or incentives being used to encourage staff engaging in innovative e-learning projects or initiatives. Nor was there evidence of the use of research into local e-learning initiatives as a tool for improving e-learning design, delivery and support..

Dimension 3: Definition

Very little evidence of capability, in particular there is little evidence that the abilities of teaching staff to engage in e-learning are formally assessed and responded to in a systematic way. Much of the training and support provided is optional and teaching staff are not provided with incentives or rewards for engaging with it. Even in the institutions that provided formal e-learning design and development there was little evidence of examples, templates and case studies being used to assist teaching staff in being more effective

Dimension 4: Management

Very little evidence of capability, University C has collected information on the support needs of teaching staff but there is little evidence that this is influencing investment or planning for support.

Dimension 5: Optimisation

No evidence of capability.

S5: Teaching staff are provided with e-learning pedagogical support and professional development					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure S5-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The weak performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions and resulted primarily from the inability to provide detailed one-on-one training or more than generic advice to teaching staff. The institution provided useful training and support on e-learning pedagogies but this was weakened by the informal and optional nature of the training, which was only offered by workshops at specific time. Many of the general workshops provided also appeared to focus on face to face delivery and support for e-learning aspects appeared limited. While assistance was provided to teaching staff involved in the CITL projects, this was not available automatically to all staff, and there was no requirement for a formal assessment of staff abilities prior to the use of e-learning technologies or pedagogies.

Process S6.

Teaching staff are provided with technical support in using digital information created by students

Process Description

E-learning involves a dynamic and complex information and communications environment that necessitates technical support for teaching staff to ensure students are able make best use of facilities and resources. The creation and use of electronic information resources by students is particularly challenging as Internet sources, in particular, are simultaneously easier to search and access while also generally being less reliable. The handling and storage of documents created by students also presents challenges ranging from the technical ones of format, through concerns arising from viruses. Backup and authorised access to student work also needs careful attention.

Evidence of capability in this process is seen with the provision of facilities and support during the design and development of projects, including documentation and training for staff as well as templates and other materials for use with students. Policy and guidelines should require and support this. Student attainment of skills in this area should be part of the overall learning objectives in line with their acquisition of research and information literacy skills.

Overview of Assessed Capability

Dimension 1: Delivery

The generally poor capability seen across the institutions is consistent with the absence of formal and systematic response to the use of e-learning. Most institutional systems and support appears to be designed and maintained unchanged from traditional paper-based information handling despite the widespread use of electronic document creation and delivery tools by staff and students. Most institutions and staff are struggling with the implications of students submitting assessed work electronically and responses are normally limited to the use of standard LMS facilities to collect material which is then commonly printed out and returned in hard copy to students.

Dimension 2: Planning

The capability observed here is essentially a consequence of the use of systems such as LMSs and plagiarism detection services rather than explicit or formal consideration of information use by students. There is little evidence in most institutions of e-learning design and development activities systematically addressing the creation and use of electronic materials by students. Worryingly, despite the large amount of student information being stored in LMS facilities there was little evidence of formal and systematic auditing and risk assessments being undertaken to ensure that the information was securely and appropriately stored.

Dimension 3: Definition

There was very little evidence of a formal consideration of the needs of teaching staff supporting information use by students. Some training is usually available, usually from libraries, but its use is generally optional and not encouraged by institutional policies or strategies. The use of electronic delivery is growing but there are significant issues with the statutory copyright licenses and electronic delivery that are not evident in institutional policy and strategy and which are likely to cause significant disruption in the future.

Dimension 4: Management

No evidence of any systematic attempt to identify the operational impact of increased electronic information use by institutions.

Dimension 5: Optimisation

No evidence of capability.

S6: Teaching staff are provided with technical support in using digital information created by students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure S6-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process is comparatively weak reflecting the lack of explicit support provided to staff handling student materials submitted electronically. A range of support is available from library staff on issues relating to information literacy and student use of electronic materials and this is complemented by desktop support of computer and software use by teaching staff. All of this assistance is, however, ad-hoc and no formal planning was evident in ensuring that teaching staff are effectively and efficiently supported. There is a presumption that staff will be able to handle the range of electronic materials produced by students as a matter of course and that common formats such as Word or Powerpoint will be used by students. Design and development procedures fail to address the possible impact of students providing material for assessment in a range of formats, both by providing clear guidance in assessment planning and in the analysis of the support implications and infrastructure requirements implied by multiple formats.

Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle

This process area has as its goal the encouragement of reflection and the building of capability to deliver e-learning informed by evidence from previous success and failure. The individual processes are directed at ensuring the evidence collected is robust and able to provide a reliable base of knowledge for future strategy and development.

The individual processes are listed below, followed by an overview of institutional performance and then a detailed consideration of each process in turn.

Evaluation: <i>Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle.</i>	
E1.	Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience
E2.	Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience
E3.	Regular reviews of the e-learning aspects of courses are conducted

Table 18: *Evaluation processes*

Overview of Assessed Performance

Evaluation of courses is a requirement imposed on all institutions by the Government monitoring agencies and these formal processes have carried across into e-learning courses (processes E1 and E3). However, these are simply the same processes that are applied to traditional teaching. There is a need to develop evaluations that assess particular issues relating to the technology and pedagogies adopted for e-learning (process E1). This is apparent in the observation that the institutions show little capability in assessing the impact on student learning and staff workloads of technologies already in use.

A particular weakness seen across all institutions is the absence of any attempt to formally assess teaching staff skills in e-learning delivery (process E2). The positive impact of assessment, particularly of a formative nature, on student learning is well established. The absence of it as a tool to support the development of teaching staff suggests that training and support is informal and not regarded seriously by the staff or institutions. All of the institutions offer workshops and support to teaching staff but performance by individual staff in these is not assessed and there appear to be few objective assessments of teaching staff skills in this area. The teaching qualifications offered by some institutions offer a potential opportunity for assessing performance and improving staff skills but these tend not to focus on e-learning and are in any case not required for all teaching staff.

More discussion of institutional capability is found below in the discussion for each of the processes.

University of the South Pole Performance Overview

USP has a strong evaluation and student satisfaction process consistent with the other institutions assessed. There are, however, no questions or elements that focus on specific e-learning and technology aspects of courses, which is a weakness. There also appears to be no process for using the results of e-learning projects to inform the pedagogies and technologies that are used to support students in attaining particular outcomes in other courses, other than through the staff of the CITL. As with all other institutions, there is little evidence of staff being able to provide detailed information on their experience of e-learning, except through the formal CITL quality assurance and review procedures.

Regular formal, independent review and evaluation of e-learning aspects of courses building on the existing strong foundation is likely to result in capability improvement in a variety of other processes, particularly if it is ongoing and linked to resourcing for infrastructural and staff development improvements and a detailed institutional e-learning strategy.

It is recommended that University of the South Pole focus on the following aspects of this process area:

1. Incorporation of an explicit consideration of e-learning and technology aspects into the standard evaluation processes used to assess courses and teaching staff beyond the procedures used in CITL projects.
2. Introduction of a formal procedure by which staff can provide regular and formal feedback on their experience of e-learning at the University of the South Pole.
3. Expansion of existing CITL project review procedures to encompass regular formal reviews of all e-learning courses, with the information formally reported to the University leadership and used to explicitly drive strategic and operational planning for e-learning.

More discussion of possible directions for improvement is supplied in the process discussions that follow.

Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle					
	1	2	3	4	5
E1. Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience					
E2. Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience					
E3. Regular reviews of the e-learning aspects of courses are conducted					

<input type="checkbox"/> Not practised/not adequate	<input type="checkbox"/> Partially adequate	<input type="checkbox"/> Largely adequate	<input type="checkbox"/> Fully adequate	<input type="checkbox"/> Not assessed
---	---	---	---	---------------------------------------

Table 19: University of the South Pole *Evaluation* process area capability

Process E1.

Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience

Process Description

The need for institutions and teachers to solicit and analyse student feedback that is formative, summative, and based on multiple independent and standard evaluations is well acknowledged (Kirkpatrick, 1977; Forsyth *et al.*, 1999; Arrelola, 2000; Sherry, 2003; Thompson and Irele, 2003; Brennan and Williams, 2004). Student feedback is a reliable and important measure of teaching and learning quality that can be used to inform action for improvements; it is also informative for prospective students (Brennan *et al.*, 2003; Richardson, 2005a, 2005b). However, for feedback to be of use for improving teaching and learning it must be understood and acted upon (Kember *et al.*, 2002). Richardson (2005a) identifies some obvious but key issues for obtaining reliable and useful information: “Feedback should be sought at the level at which one is endeavouring to monitor quality...the focus should be on students’ perceptions of key aspects of teaching or on key aspects of the quality of their programmes...feedback should be collected as soon as possible after the relevant educational activity” (p. 409-10).

Evidence of capability in this process is seen in the inclusion of a formal student evaluation plan in the design and development of projects and courses. This plan should include conducting multiple formal evaluations, both summative and formative, in a standard way that allows for comparison of results between projects and over time. Information on how the evaluation results are being used to improve the quality and effectiveness of their learning should be provided to students. Policy and guidelines should require that student evaluations to be independently conducted and provide standard forms that they should take. The results of the evaluations should be used to inform ongoing and new development, and to support resources and strategy. Teaching staff are provided with templates, examples, training and support in using the range of evaluation resources available to support student learning.

Overview of Assessed Capability

Dimension 1: Delivery

Performance in this process can be characterised as the use of traditional evaluation procedures applied without consideration of the use of e-learning technologies or pedagogies. The evaluation methodologies are essentially sound but are struggling to address the requirements of e-learning delivery, particularly the issue of students not attending on-campus sessions and poor response rates from postal or online surveys. A particular challenge is found when conducting formative evaluations with students engaged in e-learning at a distance and it is likely that institutional evaluation and review processes will need to be modified to take advantage of e-learning approaches themselves if they are to be representative of the student population.

Dimension 2: Planning

Very weak capability was observed across the institutions. Those institutions with formal e-learning design and development methodologies benefited from the quality assurance and review procedures adopted. A consistent weakness was that the information collected is normally kept confidential to individual courses and projects, there was little evidence of systematic comparisons within an institution or any reporting back to students. There was also almost no evidence that student requirements for e-learning are formally collected before engaging in most e-learning design and development initiatives.

Dimension 3: Definition

Institutions are required to evaluate their teaching regularly and this is apparent with respect to traditional delivery. Planning and systematic consideration of the impact of e-learning is essentially non-existent. The facilities and support for individual staff evaluating e-learning initiatives generally exists but the outcomes are disconnected from institutional strategy and planning activities.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

E1: Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure E1-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process was compromised by the lack of explicit consideration of e-learning and technology aspects in the generally applied formal evaluation and feedback procedures other than as part of the formal CITL project methodology. Policies reflect a traditional approach to the collection and use of feedback information from students without any recognition of the constraints and opportunities provided by e-learning. There appears to be no mechanism for using the results of using e-learning in courses to inform the pedagogies and technologies that are used to support students in attaining particular outcomes in other courses. Support to teaching staff on obtaining and using feedback from students to improve teaching is available but provided on an ad-hoc basis in response to requests from individual staff. The focus of institutional feedback and evaluation mechanisms is on compliance with external quality assurance rather than on continuous improvement of the teaching environment experienced by students. No mechanism apparent for formally and systematically informing students of the impact evaluation responses are having on institutional activities.

Process E2.

Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience

Process Description

The e-learning environment presents many new and/or different teaching and learning challenges that can benefit from valid, reliable, and informative feedback from teachers. Laurillard (2002) recommends the establishment of a forum for teachers to “discuss their experience of learning technologies, and the academic issues surrounding the balance of learning methods”(p. 227). Scrimshaw (2004) refers to professional development approaches “fall[ing] along a spectrum from informal mutual support to the use of formal training courses” (p. 21). He discusses several approaches and concludes that the question is “less which specific approach is best, but which combination of methods are needed to suit the level of progress staff individually and as a whole have already reached” (p. 22).

Evidence of capability in this process is seen in the inclusion of a formal staff evaluation plan in the design and development of projects and courses. This plan should include conducting multiple formal evaluations, both summative and formative, in a standard way that allows for comparison of results between projects and over time. Information on how the evaluation results are being used to improve the quality and effectiveness of their work should be provided to teaching staff. Policy and guidelines should require that staff evaluations to be independently conducted and provide standard forms that they should take. The results of the evaluations should be used to inform ongoing and new development, and to support resources and strategy.

Overview of Assessed Capability

Dimension 1: Delivery

There is almost no evidence across the institutions of systematic and regular feedback being collected from teaching staff engaged in e-learning initiatives. The little that is being done is essentially isolated and often not reported in a way that allows for systematic analysis.

Dimension 2: Planning

Consistent with dimension one there was very little evidence of capability, with only Polytechnic Y having a process of formal testing and evaluation involving staff. There was also no evidence of teaching staff being rewarded and encouraged in their adoption of e-learning pedagogies and technologies.

Dimension 3: Definition

Almost no evidence of teaching staff being formally invited to provide regular feedback information on their experiences of e-learning. There was also little support for teaching staff researching and reflecting on their own experiences of e-learning.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

E2: Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure E2-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

As with all other institutions assessed, this process was essentially non-existent except as part of the CITL project procedures. The presumption appears to be that staff will raise any concerns they might have with e-learning on an individual basis through existing management channels. Institutional policies on evaluation and review are silent on the benefits of staff perspectives on their experience of e-learning technologies and pedagogies. This is consistent with the other institutions assessed.

Process E3.

Regular reviews of the e-learning aspects of courses are conducted

Process Description

The dependence of e-learning on the use of an appropriate pedagogy and well-designed technology means that when assessing the success of courses and projects it is very important to ensure that the effectiveness of the technology is also formally measured. Evidence of success or limitations in the local context is an important factor in ensuring the efficient design and development of existing and new courses and projects.

Evidence of capability in this process is seen through the use of formal data collection processes that are incorporated into design and development and which allow for regular reporting and analysis of the effectiveness of the technologies used. These processes should be standards based and designed to support comparisons over time and between courses and projects. Policy should require the collection and reporting of this information and the results used to inform ongoing and new development and support resources and strategy. Formal content and materials review plans should be used during the design and development of projects and courses. Policy and guidelines should require these reviews be conducted formally and provide guidance on what aspects require checking

An important factor to be conscious of in this area is that the impact of technology on student satisfaction and student learning need to be separately evaluated as they are linked but distinct. Similarly, staff satisfaction may not be related to the effectiveness of the technologies or innovations deployed.

Overview of Assessed Capability

Dimension 1: Delivery

The prevalence of informal measures and anecdotes in measuring the effectiveness of e-learning and the absence of detailed analysis is clearly apparent in the capability assessed for this process across the institutions. There is very little evidence of the systematic use of readily available summative data from the central LMS facilities and similar tools in formally assessing the effectiveness of e-learning projects and courses.

Dimension 2: Planning

Little evidence was seen of planned reviews during e-learning design and development reflecting the generally ad-hoc approach taken. Generally reviews, if any, are informal and anecdotal rather than empirical in design and independently conducted. Some institutions made use of self reports from teaching staff involved in particular e-learning initiatives but these had little value as strategic planning documents as they were not validated or evidence based.

Dimension 3: Definition

Little evidence of systematic reviews of e-learning being undertaken regularly across the institutions. The review approaches in use were clearly based on traditional delivery and have yet to explicitly address the use of e-learning technologies and pedagogies.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

E3: Regular reviews of the e-learning aspects of courses are conducted					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure E3-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The weak performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions with the absence of regular formal review processes that focus on specific e-learning and technology aspects of courses other than as part of the CITL project methodology. There appears to be no mechanism for using the results of using e-learning in courses to inform the pedagogies and technologies that are used to support students in attaining particular outcomes in other courses. The monitoring of Blackboard is generating some information on e-learning use but generally there is very little information available that relates specifically to the use of technology and e-learning delivery approaches within individual courses and across the institution as a whole.

Organisation: Processes associated with institutional planning and management

This process area has as its goal the maintenance of organisational processes that ensure e-learning is well managed and planned to deliver the strategic and operational outcomes required by the institution. The individual processes are directed at ensuring the administrative and organisational aspects of e-learning are high quality, efficient and effective as they transition from face-to-face processes.

The individual processes are listed below, followed by an overview of institutional performance and then a detailed consideration of each process in turn.

Organisation: <i>Processes associated with institutional planning and management</i>	
O1.	Formal criteria guide the allocation of resources for e-learning design, development and delivery
O2.	Institutional learning and teaching policy and strategy explicitly address e-learning
O3.	E-learning technology decisions are guided by an explicit plan
O4.	Digital information use is guided by an institutional information integrity plan
O5.	E-learning initiatives are guided by explicit development plans
O6.	Students are provided with information on e-learning technologies prior to starting courses
O7.	Students are provided with information on e-learning pedagogies prior to starting courses
O8.	Students are provided with administration information prior to starting courses
O9.	E-learning initiatives are guided by institutional strategies and operational plans

Table 20: *Organisation processes*

Overview of Assessed Performance

Aspects of this process area are quite strong across the institutions as they build on pre-existing processes that apply for all courses irrespective of the use of e-learning technologies and pedagogies. In particular, the processes that relate to communicating essential course information are generally adequate, although inconsistently applied at times (processes O6, O7 and O8).

A notable weakness across the institutions is a systematic lack of information provided to students in advance regarding the use of technology in courses (processes O6 and O7). Only two of the institutions (University E and the University of the South Pole) provided specific information in their enrolment packs regarding the use of technology in particular courses, even when this went well beyond standard use of the LMS facilities. As noted in the *Learning* process area, much of the information that is provided to students in course outlines should be freely available before enrolment as it is vital for students. By hiding this information from students they are losing the opportunity to prepare for the courses and to plan for their own particular circumstances. Also apparent is vulnerability in the institutions as growth in LMS use continues. Much of the information in these systems is essential to business continuity and vulnerable to both intentional and unintentional loss or corruption. Management of student information created and supplied during e-learning coursework appears generally lacking in the institutions (process O4). Similarly, few institutions could identify a formal technology plan that guided the choices made in the design and development of e-learning courses (processes O3 and O5).

Polytechnic Y and the University of the South Pole easily had the best communication of e-learning requirements to students seen in the institutions with clear statements on technology use and requirements in a consistent format that was available through their websites prior to enrolment. Similar information was provided in the enrolment materials along with minimum requirements for access to computers and specifications for equipment when appropriate. Also useful were short skills assessments that guided students in whether they possessed the minimum skills required and suggestions for what to do to improve skills prior to enrolment.

The high cost of e-learning development and the need to sustain delivery at a qualification level rather than just course level means that managers as well as tutors need to understand how to effectively and efficiently incorporate technology in their offerings, rather than technology remaining an area of isolated and disconnected innovation. A more explicit consideration of ways of reusing existing e-learning work and linking the existing e-learning infrastructural facilities more explicitly is critical.

University of the South Pole Performance Overview

The University of the South Pole was assessed as having comparatively strong capability in this process area, although weakness was noted in the use of operational plans for e-learning (process O3) and the absence of any digital information integrity planning (process O4). A particular strength was the clear information on e-learning technology use provided to students in advance of their studies (process O6) and the formal planning approach adopted by CITL both in terms of resource allocation (process O1) and development planning (process O5).

It is recommended that University of the South Pole focus its attention on the following aspects of this process area:

1. Defining standards and guidelines for quality of materials and the secure and reliable storage of all information generated and stored during the delivery of a course, either by staff or students (process O4). This should include investigation of the use of content or document management systems that can ensure that changes in information are tracked as well as access controlled and reporting facilitated.
2. Build on the already strong information on e-learning technology provided to students by including more detailed and specific information on how the technologies will be used within courses to support student learning.
3. Development of operational plans for achieving the objectives of the USP e-learning strategic plan, including an overall technology plan to guide CITL work and encourage wider adoption of standard technologies and systems for e-learning.

More discussion of possible directions for improvement is supplied in the process discussions that follow.

Organisation: Processes associated with institutional planning and management					
	1	2	3	4	5
O1. Formal criteria guide the allocation of resources for e-learning design, development and delivery					
O2. Institutional learning and teaching policy and strategy explicitly address e-learning					
O3. E-learning technology decisions are guided by an explicit plan					
O4. Digital information use is guided by an institutional information integrity plan					
O5. E-learning initiatives are guided by explicit development plans					
O6. Students are provided with information on e-learning technologies prior to starting courses					
O7. Students are provided with information on e-learning pedagogies prior to starting courses					
O8. Students are provided with administration information prior to starting courses					
O9. E-learning initiatives are guided by institutional strategies and operational plans					

<input type="checkbox"/> Not practised/not adequate	<input type="checkbox"/> Partially adequate	<input type="checkbox"/> Largely adequate	<input type="checkbox"/> Fully adequate	<input type="checkbox"/> Not assessed
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Table 21: University of the South Pole *Organisation* process area capability

Process O1

Formal criteria guide the allocation of resources for e-learning design, development and delivery

Process Description

Provision of expert technical and pedagogical assistance is vital if institutions are to move away from ad-hoc developments in e-learning. Like any other scarce resource, expertise in e-learning development within an institution must be managed in a way that ensures efficient and effective use. Formal criteria which align the use of these resources with defined outcomes for the institution are essential in this process (Hagner, 2000).

Evidence of capability in this process is seen in the provision of formal funding and resourcing criteria and guidelines, mandated by policy, which provide consistency and clarity in the allocation of resources. Access to support is managed by these criteria to ensure efficient and equitable use of time and the achievement of strategic goals as well as short term requirements. Effective approaches in the local context are communicated through examples, case studies, standards and guidelines, customised for the institution, that demonstrates the benefits of the criteria used.

Overview of Assessed Capability

Dimension 1: Delivery

The formal design and development approach adopted by University B was the strongest in this process. Access to support and development resources were controlled through a competitive process that involved clear criteria, independent assessment of proposals and an overall strategic focus. The design process used was outlined along with standard questions for consideration when developing projects. University E was also strong but provided less information and guidance to staff on the criteria used and there was less explicit consideration of department and faculty strategies in the selection process. In the absence of an investment in dedicated e-learning support facilities, capability in this process was essentially non-existent.

Dimension 2: Planning

As with dimension one, capability in this process correlated with the investment in dedicated e-learning support staff who clearly positioned their work to ensure that it integrated well with the e-learning infrastructure of the institution and was able to be maintained.

Dimension 3: Definition

Those institutions with formal design and development support generally had criteria defined for how this was accessed, usually involving a formal application process and project selection criteria linked to strategic outcomes at the programme and institution level. There was, however, little support provided for staff in making these applications and no evidence of applications being stored and made available for reuse when projects were successful or being analysed when projects failed.

Dimension 4: Management

Those institutions with formal design and development support demonstrated some evidence of reviews and quality assurance but these were usually informal rather than part of a systematic and formal consideration of effectiveness of e-learning.

Dimension 5: Optimisation

University B was notable in showing one of the few examples of using evidence from e-learning project outcomes to explicitly inform strategic decision making and investment, otherwise there was no evidence that e-learning has impacted on institutional governance activities across the institutions.

O1: Formal criteria guide the allocation of resources for e-learning design, development and delivery					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O1-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Capability in this process was very strong reflecting the clear and formal procedures used by CITL to allocate support for projects. Clear selection criteria are provided and an appropriately formal decision making procedure is used to allocate the available resources. The criteria prioritise projects on the basis of strategic impact and teaching staff are supported in their creation of proposals. A weakness is the lack of a similarly formal and detailed procedure for reporting on the success or failure of projects and an analysis of projects for factors that might contribute to future successes.

Process O2.

Institutional learning and teaching policy and strategy explicitly address e-learning

Process Description

Jamieson (2004) notes that e-learning brings pedagogical, technological, and operational challenges to teaching practice (p. 22). E-learning involves a 'major realignment of the institutions organizational identity' (p. 26) that calls for intensive, strategic professional development activity. Garrison and Anderson (2003) identify ten topics that should be considered for strategic planning and policy: 1. Vision; 2. Needs and risk assessment; 3. Description of educational principles and outcomes; 4. Implementation initiatives and strategy; 5. Infrastructure; 6. Infostructure; 7. Support services; 8. Budget and resources; 9. Research and development; 10. Benchmarking (p. 108). They also comment that sustainable innovation emerges through middle-level leadership rather top down or bottom up management approaches. Turoff, Discenza, and Howard (2004) note that the e-learning environment "will make the quality of teaching more visible to the public and prospective students" (p. 18), thus making learning and teaching policy and strategy more imperative.

Evidence of capability in this process is seen in the provision of a complete and redeveloped set of institutional strategies and policies incorporating a thoughtful and strategic assessment of the contribution e-learning can make to the institution, disciplines, staff and students. Staff involved in e-learning design and (re)development projects and initiatives need support and guidance in effectively applying the revised policies and strategies and ideally they, along with students, should be involved in the (re)development of the policies and strategies.

Overview of Assessed Capability

Dimension 1: Delivery

The evidence of capability in this process was very weak, there appears to be a significant disconnect across the institutions between learning and teaching policy generally and the consideration of e-learning, which appears to be dominated by technology aspects rather than pedagogical concerns. Even when there was a consideration of e-learning to achieving the learning and teaching goals of the institution there was little communication of this to staff and students, further reducing the likelihood of any systematic and sustained benefit arising from e-learning projects and initiatives.

Dimension 2: Planning

Linkages between e-learning and learning and teaching strategy correlated with the existence of dedicated e-learning design and development support staff. It is unclear whether the existence of this investment was a result of strategic focus on e-learning or if it was a consequence of having staff who can engage effectively with the issues and influence policy. There was no evidence across the institutions that students are actively and formally involved in ensuring their needs are being met through strategic consideration of e-learning.

Dimension 3: Definition

No evidence of capability.

Dimension 4: Management

University B demonstrated some evidence of staff and student feedback being used to guide strategy development, but this was informal rather than part of a systematic and formal consideration of the contribution of e-learning to the institutions learning and teaching goals.

Dimension 5: Optimisation

University B was notable in showing one of the few examples of using evidence from e-learning project outcomes to explicitly inform strategic decision making and investment, otherwise there was no evidence that e-learning has impacted on institutional governance activities across the institutions.

O2: Institutional learning and teaching policy and strategy explicitly address e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O2-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was reasonable but with room for improvement. The existing strategy documentation clearly addresses e-learning and has the explicit support of the institutional leadership, however, there is no evidence of wider consultation and engagement of staff and students in ensuring that the strategies are aligned with their needs as well as those of the institution as a whole. There is also no formal guidance or support in ensuring that the e-learning strategies are reflected in other policy and planning work undertaken.

Process O3.

E-learning technology decisions are guided by an explicit plan

Process Description

A technology plan combines a strategic focus on the selection of technology with practical experience based on previous work in the institution to ensure that technological resources are chosen in ways that build capability rather than dilute it. A systemic approach to developing a coherent and timely technology implementation plan is advocated by Garrison and Anderson (2003). They refer to an infostructure, which includes the design of institutional connectivity, creation of a knowledge management system, provision of digital content, and creation of standards (p. 108). Technology planning must be embedded in a wider institutional strategy that generatively encompasses all teaching and learning, and servicing aspects (Elloumi, 2004).

Evidence of capability in this process is seen in the use of a formally documented technology plan that is used to guide the selection of technologies appropriate to the local context. Formal institutional standards are used where available to inform and guide the plan. This should include existing technologies that are defined as standard by the institution and for which there is clear evidence of effectiveness and ability to be supported. The plan, along with the associated standards and guidelines, is communicated widely to encourage wider adoption and compliance throughout the institution. Policy should mandate compliance with the technology plan and explicit reference to it should be made in processes for the resourcing and development of e-learning resources.

Overview of Assessed Capability

Dimension 1: Delivery

The absence of documented technology plans informing e-learning projects and initiatives is clearly apparent across the institutions. Only Polytechnic Y identified a technology plan aimed at supporting e-learning and ensuring that delivery standards were maintained. At best, other institutions had a defined set of standard technologies, such as an LMS, that were used by a central group to support e-learning development but the processes used to select, develop and maintain these technologies were not documented.

Dimension 2: Planning

In general e-learning technology decisions are being made as a consequence of the LMS facility and the requirements of interoperability with other systems such as student records and core IT. The rationale and constraints linking these decisions are not normally formally documented, instead depending on the knowledge and skills of the IT staff involved.

Dimension 3: Definition

There is little evidence across the institutions of formal integration between IT planning and the learning and teaching goals of the institution. There is no evidence that teaching staff and students are actively and systematically involved in ensuring the systems meet their learning and teaching needs and also no evidence of decisions being informed by a researched evidence base or risk assessment.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

O3: E-learning technology decisions are guided by an explicit plan					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O3-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process is very weak. There is an absence of detailed technology plans informing the ongoing development of aspects of the e-learning projects and infrastructure. This is not to say that the choices are poor, but rather that the overall technical rationale is not explicitly communicated and used as a tool to inform the design and development processes. The formal approach used by CITL is strong but focuses on individual initiatives without formal reference to a unifying plan.

Process O4.

Digital information use is guided by an institutional information integrity plan

Process Description

In addition to being reliable and failsafe, the technology infrastructure used to support e-learning should also ensure that, as much as possible, the information within systems is protected from corruption and loss. A technology plan considering aspects of information integrity can combine a strategic view of institutional e-learning directions with practical consideration of risks and the integration with other systems within the institution.

Evidence of capability in this process is seen in the use of a formally documented technology plan considering information integrity and reliability. This should include assessments of the security of information from intentional and unintentional loss, protection of privacy and student information, versioning and consistency with other systems such as student records or enrolments. Information provided by the institution, teaching staff and students should be included, as well as explicit consideration of copyright implications, including the rights of students, and the reporting required by licences. There should be policy and procedures in place to deal with potential failures or compromises. Standards and guidelines should be used to communicate which technologies have been proven reliable, and regular monitoring and reporting used to prove reliability and identify potential problems. Teaching staff are provided with templates, examples, training and support in maintaining course information to ensure its validity and reliability.

Overview of Assessed Capability

Dimension 1: Delivery

Despite the adoption and investment in LMS facilities and the substantial growth in the amount of student and course information stored in these systems there appears to be no formal and systematic consideration of the integrity of information storage and retrieval. Much of the information in these systems is essential to the business and vulnerable to both intentional and unintentional loss or corruption but there appears to be no evidence of formal testing or validation being undertaken. It is important to note that institutional LMS facilities are managed in line with other institutional systems but in many cases growth in usage appears to have overtaken risk management systems. There is also the issue that many individual e-learning initiatives use systems that are not formally managed and this is a substantial business risk in those institutions.

Dimension 2: Planning

Capability was very weak across the institutions with a clear dependence on LMS authentication and backup facilities without formal assessment of risks or consideration of strategies to cope with failures. Individual e-learning initiatives showed no evidence of systematic consideration of the issues.

Dimension 3: Definition

Very weak across the institutions reflecting the dependence on the feature sets of LMSs without formal consideration of information integrity and validity issues. No evidence of auditing or the use of content management and reporting systems.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

O4: Digital information use is guided by an institutional information integrity plan					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O4-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process is very weak. There was no evidence that the integrity and validity of stored information had been formally and systematically addressed. The presence of the Blackboard LMS is not sufficient by itself to ensure the integrity and validity of stored information, as many users are able to add and modify content within individual courses. There is also an absence of detailed information integrity plans informing the ongoing development of aspects of the e-learning projects and infrastructure. Formal plans would make the strategic and operational utility of tools such as content management systems more apparent than when only single projects are considered.

Process O5.

E-learning initiatives are guided by explicit development plans

Process Description

Learning is consistently placed first in the literature when considering educational technology. Many studies and synopses of e-learning principles commence with a review of pedagogical concepts. Bates and Poole (2003), for example, state that “choice and use of technology are absolutely dependent on beliefs and assumptions about the nature of knowledge, how our subject discipline should be taught, and how students learn” (p. 25). Many different pedagogical models have been proposed to guide the design and delivery of effective e-learning, the key aspect however is the need to have a clear intent to guide the selection of technologies and pedagogies.

Evidence of capability in this process is seen in definition and use of an explicit course or programme e-learning development plan. This plan should be formally developed and endorsed by the institutional leadership. Alignment with institutional strategies and plans is essential as is the consideration of business issues such as risk assessments and quality assurance. Teaching staff should be supported in both the development of plans and their application in specific contexts.

Overview of Assessed Capability

Dimension 1: Delivery

Other than at University B and E, there is no evidence that the selection of technologies to support e-learning design, development and delivery is being driven in a coherent and planned way. Decisions seem to be made on an ad-hoc basis reflecting the personal preferences and experience of teaching staff rather than on the basis of a programme or institutional plan.

Dimension 2: Planning

While Universities B and E had some evidence of systematic planning, across the institutions there was no evidence of student involvement in planning for their needs or of institutional leadership providing oversight and approval of e-learning technology choices.

Dimension 3: Definition

No evidence of capability.

Dimension 4: Management

Very little evidence of formal planning for e-learning evident across the institutions other than a limited amount of review and quality assurance being undertaken by Universities B and E.

Dimension 5: Optimisation

No evidence of capability.

O5: E-learning initiatives are guided by explicit development plans					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O5-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process was compromised by the absence of formal policy guidance or support in ensuring that the e-learning initiatives are aligned with each other and an overall institutional plan. The formal approach used by CITL is strong but focuses on individual initiatives without formal reference to a unifying plan. The absence of student involvement in the planning of e-learning initiatives other than CITL projects was also a weakness.

Process O6.

Students are provided with information on e-learning technologies prior to starting courses

Process Description

The use of e-learning is sufficiently unfamiliar to many students, and the range of possibilities so diverse, that it is important to warn students and provide them with opportunities to familiarise themselves with what to expect (Hillesheim, 1998). Many students will need to make particular arrangements so they get the most benefit from e-learning. Supplying them with the information in advance ensures that they will not be forced to withdraw at a later date, or struggle to raise their technology skills while trying to learn the course content (Fredericksen *et al.*, 1999; Waterhouse and Rogers, 2004, Ragan, 1999). It cannot, however, be assumed that students will adopt new technologies without the availability of comprehensive training based on systematic planning that recognises required skill levels: “Students need to learn how to learn with the new technologies [and] Institutions should...articulate concrete IT learner competencies and literacy for students” (Kvavik and Caruso, 2005, p. 19).

Evidence of capability in this process is seen with the publishing of clear statements describing the use of various media and technologies and the requirements this will impose on students. This description should also provide access to any support information or documentation. All of this information should be provided for students in public course listings or catalogues prior to enrolment and also in enrolment packs. Policy should require that this information be provided and maintained. Institutional guidelines should set in place how teaching and administrative staff communicate standard technologies and media used in courses. Instructions for use, minimum requirements, and support of standard technologies should be provided and maintained through a central repository linked to the course requirements statement.

Overview of Assessed Capability

Dimension 1: Delivery

Performance of this process was very poor. Students are provided with very little information in advance on technology and other requirements e-learning course. What little information that is provided is generally limited to basic information about LMS facilities and requirements without any specific linkages to the activities undertaken in particular courses. Polytechnic Y easily demonstrated the best practice in the institutions with a clear statement in a consistent format on technology use and requirements that was available through their website to all interested students prior to enrolment. Similar information was provided in the enrolment materials along with minimum requirements for access to computers and specifications for equipment when appropriate. Also useful was a short skills assessment that guided students in whether they possessed the minimum skills required and provided suggestions for what to do to improve skills prior to enrolment, an aspect that was absent elsewhere in the institutions.

Dimension 2: Planning

Other than from Polytechnic Y, detailed information was provided to students on technology use but only after they have enrolled in courses and can access the course outlines. Despite this, there was little evidence of students being provided with organised opportunities to prepare themselves to use technology effectively as part of courses.

Dimension 3: Definition

Only Polytechnic Y had a formal plan and processes for ensuring that students were informed of technology requirements prior to enrolment. Beyond this there was little evidence of structure in the information provided. One problem was the use of compliance reporting criteria on technology use, such as ‘web supported’ or ‘web enhanced’ which have little meaning to students and do not provide them with enough detail to prepare themselves with.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

O6: Students are provided with information on e-learning technologies prior to starting courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O6-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance of this process was compromised by the generic nature of much of the information provided. A clear statement in a consistent format on technology use and requirements was available through the website to all interested students prior to enrolment along with useful information on learning online. Also useful was a short skills assessment that allowed students to see if they possessed the minimum skills required and made suggestions on what to do to improve skills prior to enrolment. A weakness, however, was the lack of formal and systematic reference to much of this information in the course materials as well as encouragement and support for students in developing the necessary skills.

Process O7.

Students are provided with information on e-learning pedagogies prior to starting courses

Process Description

The term ‘e-learning’ encompasses a wide range of applications and activities, making confusion a real possibility (Clarke, 2004). Because e-learning includes many different, and often new, technical and conceptual approaches, students need to be fully informed about why and how e-learning is being implemented and applied to their study programme, and what consequential benefits are available (Hillesheim, 1998). Students’ approaches to learning and their perception of learning contexts are interconnected (Ramsden, 1998); it is therefore crucial to provide access to all relevant information about learning approaches and technologies to “[e]nsure that the logistics of the academic context allow students to study effectively and efficiently” (Laurillard, 2002, p. 208).

Such information should be made available at the earliest opportunity to ensure students are able to understand the competency and technical requirements of a programme before enrolling. Many students will need to make particular arrangements to ensure that they get the most benefit from e-learning, and supplying them with the information in advance ensures that they are not forced to withdraw at a later date or to struggle to raise their skills (Waterhouse and Rogers, 2004).

Evidence of capability in this process is seen in the incorporation of clear statements describing the use of various media and technologies and the requirements that this will impose on students. This description should also provide access to any support information or documentation. All of this should be provided publicly for students prior to enrolment and preferably also in enrolment packs. Policy should require that this information be provided and maintained along with guidelines that demonstrate how to communicate information on the standard technologies and media used in courses. Instructions for the use and support of standard technologies should be provided and maintained through a central repository.

Overview of Assessed Capability

Dimension 1: Delivery

Consistent with the limited use of learning objectives (process L1), there was little evidence across the institutions of explicit communication of the pedagogical designs and rationales underpinning individual courses. University B and Polytechnic Y provided clear pedagogical rationales, otherwise at most it was implied but not clearly expressed to students. Only Polytechnic Y communicated this information in advance to students.

Dimension 2: Planning

Limited information on pedagogical rationales was provided in most course outlines once students enrolled but otherwise there was little capability evident. There was little evidence other than at University B and Polytechnic Y of systematic attempts to convey the linkages between technologies and pedagogies.

Dimension 3: Definition

Other than at Polytechnic Y there was very little systematic consideration evident of how and why technology was being used in courses and programmes. Across the institutions there was little strategic or policy guidance ensuring that the linkages with the pedagogical approach and learning outcomes were explicitly communicated to students.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

O7: Students are provided with information on e-learning pedagogies prior to starting courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O7-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

The weak performance in this process at the University of the South Pole is consistent with the poor result seen in many institutions. While some information was provided to students regarding the use of e-learning, it was primarily generic in nature and focused on technical aspects rather than explicitly describing the pedagogical aspects of the course. Opportunities for students to practice and prepare themselves were provided but were not explicitly linked from the course materials and there was no evidence that students were actively encouraged to use these materials either before the course commenced or at a early stage.

Process O8.

Students are provided with administration information prior to starting courses

Process Description

The expanding integration of the institutional systems environment is increasing the pedagogical and operational complexity of e-learning. But it is also enabling the provision of accurate, consistent, complete, and timely administrative information for students. Levy and Ramim (2004) discuss the importance of institutional support for students that extends beyond online learning to include: “registration, financial aid, the library, the bookstore, advisors, student organizations and virtual communities” (p. 285). Consistent, clear information on the administrative aspects of courses ensures that staff are able to focus on teaching aspects rather than details of enrolment, and also ensures that students are clear on the focus and can ensure that they are properly prepared for study (Waterhouse and Rogers, 2004).

Evidence of capability in the process is seen in clear documentation, complying with a consistent institutional template, setting out the course and institution administrative information. Policy should require that this information be accurate, regularly reviewed and provided to students in advance of enrolment. Templates should be provided to ensure a consistent organisation and content. Elements that are standard to all courses should use wording prescribed by policy.

Overview of Assessed Capability

Dimension 1: Delivery

The uniformly strong result found across the institutions for this process reflects the use of standard enrolment processes and information packs for all courses. Information was provided clearly and consistently via websites, enrolment materials and course documentation.

Dimension 2: Planning

Capability was uniformly strong building on existing administrative processes but with no evidence of consideration of the impact e-learning is having or of any risks to the institution that may arise from the use of technology. Pre-enrolment listings for courses should provide much more information than they currently do about the technology expectations that will be placed on students and how the pedagogical approach adopted may differ significantly from what they might otherwise expect.

Dimension 3: Definition

Generally administrative information is well supplied via websites, enrolment materials and course documentation, these are normally supplied via defined templates and use relatively consistent language. There is however, little evidence that teaching staff are provided with formal assistance in ensuring they can support students with administrative issues or of systematic consideration of changes in procedures that are necessary once courses are delivered using e-learning technologies and pedagogies.

Dimension 4: Management

No evidence of capability.

Dimension 5: Optimisation

No evidence of capability.

O8: Students are provided with administration information prior to starting courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O8-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was strong reflecting the use of established administrative procedures for all courses regardless of the use of technology.

Process O9.

E-learning initiatives are guided by institutional strategies and operational plans

Process Description

E-learning is an educational evolution, rather than an add-on. It requires a complementary approach to the integration of its manifold, complex, and dynamic elements and processes into institutional strategies and plans. The influence of information and communication technology (ICT) on the reconceptualisation of higher education organisation, administration, and teaching and learning, has been apparent for some time (Anderson and Elloumi, 2004; Bates, 1988, 1997; Duderstadt *et al.*, 2003; Dutton and Loader, 2002; Laurillard, 2002; Ramsden, 2003). De Freitas and Oliver (2005) conclude that e-learning policy significantly affects institutional change beginning with “organizational redevelopment (whether formally through staffing structures or informally through locally negotiated changes in staff roles)” (p. 94). They add, however, that this process is dynamic and complex and needs to be subject to negotiation between all parties. Duderstadt *et al.* (2003) note that, to be sustainable, strategic e-learning decisions need to involve collaborative partnerships; within the institution, and beyond, to include commercial, government, and global relationships.

Evidence of capability in the process is seen through the alignment of e-learning investments with institutionally developed and endorsed e-learning strategies and technology plans. Important elements include a formal business development plan along with a detailed risk assessment and mitigation strategy. All staff involved in the design, (re)development and delivery of e-learning projects and initiatives need to be involved in the development of these plans and strategies and fully aware of the implications for their own work. The plans and strategies need to be dynamic documents building on a growing evidence base of locally relevant initiatives and projects linked with formal reviews, evaluations and quality assurance outcomes.

Overview of Assessed Capability

Dimension 1: Delivery

The business impact and engagement of the institutional leadership in how e-learning is changing learning and teaching is not very strong. Universities A, B and E, and Polytechnics Y and Z show evidence of engagement by senior managers but in the other institutions it is clear that e-learning is not yet seen as a key aspect of the institutions business direction. This is a critical determinant of capability across the entire process set, particularly at dimension three and in the provision of resources for dedicated e-learning design and development support.

Dimension 2: Planning

Linkages between e-learning and learning and teaching strategy correlated with the existence of dedicated e-learning design and development support staff. It is unclear whether the existence of this investment was a result of strategic and business focus on e-learning or if it was a consequence of having staff who can engage effectively with the issues and influence policy and business planning activities. There was no evidence across the institutions that students are actively and formally involved in ensuring their needs are being met through the use of e-learning.

Dimension 3: Definition

Generally weak capability seen with little evidence of e-learning having an impact on governance and business planning activities or incorporation of e-learning into formal planning and reviews.

Dimension 4: Management

University A provided some evidence of reporting on the financial and operational impact of e-learning investment but there was little to suggest the institutions were engaging in a systematic collection of evidence to inform investment in e-learning.

Dimension 5: Optimisation

No evidence of capability.

O9: E-learning initiatives are guided by institutional strategies and operational plans					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

Figure O9-1: Comparison of process capability across the assessed institutions

University of the South Pole Capability

Performance in this process was comparatively strong although with substantial scope for improvement. The University of the South Pole has a clearly expressed strategic plan for e-learning and allocation of resources is clearly driven by strategic outcomes. A weakness is the absence of stakeholder engagement with the strategies, with little evidence of staff or student participation in their ongoing development. There is also a need for operational plans detailing how the strategic objectives will be achieved.

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Appendix A: University of the South Pole Practice Assessments

L1: Learning objectives guide the design and implementation of courses
Delivery
Course documentation includes a clear statement of learning objectives. <p> <input checked="" type="checkbox"/> Formal statement of course learning objectives clearly and consistently provided in course documents in the course objectives and skills section (p12), including those available prior to enrolment through the course web page (p73) and online course catalogue (p82), individual objectives clearly distinguished from general course description and information. </p>
Learning objectives are linked explicitly throughout learning and assessment activities using consistent language. <p>See also: L8(1), D3(2) & O7(1)</p> <p> <input type="checkbox"/> Assessments and learning activities contain objectives that are similar but inconsistent with the overall course learning objectives (pp16-18). </p>
Planning
Course documentation templates require the clear statement of learning objectives. <p> <input checked="" type="checkbox"/> Learning objectives are clearly included in course outline template (p56) with sections for course objectives and course skills. </p>
Learning objectives guide e-learning design and (re)development decisions regarding content and activities. <p>See also: D3(2), O6(2) & O7(2)</p> <p> <input checked="" type="checkbox"/> Learning objectives explicitly guide content and activity decisions during e-learning design and (re)development. Student learning outcomes are required in project design documents (p51 & 53). Learning objectives are referred to in both project full proposal (p22) and project plan (p27), however different language is used. </p>
Learning objectives guide e-learning design and (re)development decisions regarding technology and pedagogy. <p>See also: D3(2), O6(2) & O7(2)</p> <p> <input checked="" type="checkbox"/> E-learning design and (re)development activities reference learning objectives. Use of the learning objectives to guide activity selection evident (p28) 'Overview of project deliverables'. Student learning outcomes are required in project design documents (p51 & 53). Learning objectives are referred to in both project full proposal (p22) and project plan (p27), however different language is used. </p>
Definition
Institutional policies require that a formal statement of learning objectives is part of all course documentation provided to students. <p> <input checked="" type="checkbox"/> Clear, formal, policy requirement for inclusion of statements of learning objectives in course documentation in a consistent manner evident from template introduction and contents (p56) and example objectives (p12) sections for course objectives and course skills. </p>
Teaching staff are provided with support resources (including training, guidelines and examples) on developing learning objectives that address the full range of cognitive outcomes appropriate to the discipline, pedagogical approach and students. <p> <input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Identifying and Communicating Learning Objectives Workshop" provided. No evidence of documented guidelines or exemplars. </p>
Teaching staff are provided with support resources (including training, guidelines and examples) on using learning objectives to guide e-learning design and (re)development. <p>See also: L6(3)</p> <p> <input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Identifying and Communicating Learning Objectives Workshop" provided. No evidence of documented guidelines or exemplars. </p>
Management
Compliance with policies, standards and guidelines governing the incorporation of learning objectives in e-learning design and development activities is regularly monitored. <p> <input type="checkbox"/> No monitoring of compliance with policies, standards and guidelines governing the incorporation of learning objectives in e-learning design and development activities. </p>
A variety of qualitative and quantitative metrics are used to assess student achievement of course learning objectives. <p> <input type="checkbox"/> No collection of information on student achievement of learning objectives. </p>
Optimisation
Information on student achievement of learning objectives guides e-learning design and (re)development. <p> <input type="checkbox"/> No use of information on student achievement of learning objectives during e-learning design and (re)development. </p>

L2: Students are provided with mechanisms for interaction with teaching staff and other students	
Delivery	
Courses provide a variety of mechanisms for interaction between staff and students.	
<input checked="" type="checkbox"/> <i>Interaction between staff and students provided formally through multiple complementary communication channels. Use of face to face and online via LMS apparent in the example course outline (p12). 'Interaction strategy' in project plan (p29) and template (p53) includes a detailed consideration of interaction from multiple perspectives</i>	
Planning	
Students are provided with course documentation describing all of the communication channels used.	
<input checked="" type="checkbox"/> <i>'Learning online' section of the example course outline (p15) and template (p59) includes a description of the channels and how to use them effectively.</i>	
Students are provided with course documentation describing how different communication channels will support their learning.	
<input checked="" type="checkbox"/> <i>'Learning online' section of the example course outline (p15) and template (p59) includes a description of the channels and how to use them effectively. Assessment descriptions (p16) contain implied links to the channels rather than repeated encouragement.</i>	
Course (re)development plans include a structured interaction design incorporating a variety of communication channels.	
See also: L4(2) & L5(2)	
<input checked="" type="checkbox"/> <i>'Interaction strategy' in project plan (p29) and template (p53) includes a detailed consideration of interaction from multiple perspectives.</i>	
Definition	
Institutional policies define requirements for staff responsiveness to student communication.	
<input type="checkbox"/> <i>No policies, standards or guidelines define requirements for staff responsiveness to student communication.</i>	
Institutional policies define requirements that staff support student engagement through a mix of different types of interaction.	
<input type="checkbox"/> <i>No policies, standards or guidelines define requirements for staff use of different types of interaction.</i>	
Teaching staff are provided with support resources (including training, guidelines and examples) on effective ways of using communication channels to support student learning.	
<input checked="" type="checkbox"/> <i>Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Moderating Online Discussions" optional workshop provided.</i>	
Management	
Student and staff use communication channels is regularly monitored.	
See also: L4(4)	
<input type="checkbox"/> <i>No monitoring of staff or student use of communication channels.</i>	
Feedback collected regularly from students regarding the effectiveness of different communication channels.	
<input type="checkbox"/> <i>No feedback collected from students on the effectiveness of the different communication channels.</i>	
Feedback collected regularly from staff regarding the effectiveness of the communication channels.	
See also: L4(4)	
<input checked="" type="checkbox"/> <i>The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of communication channels but this information is not explicitly solicited.</i>	
Optimisation	
Information on interaction between students and teaching staff guides resourcing of communication channels.	
See also: L4(5) & L5(5)	
<input type="checkbox"/> <i>No use of information on interaction between students and teaching staff during e-learning resource planning and allocation.</i>	
Information on interaction between students and teaching staff guides training and support resourcing.	
See also: L4(5) & L5(5)	
<input type="checkbox"/> <i>No use of information on interaction between students and teaching staff during training and support resource planning and allocation.</i>	

L3: Students are provided with e-learning skill development	
Delivery	
Students are provided with explicit descriptions of the relationships between course components and activities.	
<input checked="" type="checkbox"/> The relationships between all key course components and activities are conveyed to students formally and consistently. A clear timetable for the course is included in the example course outline (p14) with assessment tasks included along with linking to topics in assessment descriptions (p16).	
Courses include opportunities for students to practice with e-learning technologies and pedagogies.	
See also: O6(1) & O7(1)	
<input checked="" type="checkbox"/> Formal opportunities for students to practice with all e-learning technologies and pedagogies provided prior to commencement, and during delivery, of all courses. LMS guest course/tutorial provided for use by students prior to starting study (p77). The example course 'Virtual Penguin' e-learning tool is designed to be used for practice and revision (p23). No explicit encouragement of student use of these materials within courses.	
Planning	
Support staff provide students with assistance in developing e-learning skills.	
<input checked="" type="checkbox"/> Full range of 'Student support services' evident in the example course outline (p20).	
Early assessments of individual student capabilities guide activities and support during the remainder of the course.	
<input checked="" type="checkbox"/> Staged assessments are apparent in the example course outline (p16, p17), however it is unclear how teaching staff support the links between the tasks.	
Definition	
Institutional policies require that assessment tasks be designed to support incremental development of student skills and capabilities for learning.	
See also: L8(3)	
<input type="checkbox"/> No policies provided that require assessment tasks be designed to support incremental development of student skills and capabilities for e-learning.	
Teaching staff are provided with support resources (including training, guidelines and examples) for developing learning activities that support incremental development of student e-learning skills.	
<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Writing Effective Essay Questions" optional workshop provided. CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy	
Management	
Compliance with policies, standards and guidelines governing the use of learning activities that progressively build student capabilities in e-learning design and development activities is regularly monitored.	
See also: L8(4)	
<input type="checkbox"/> CITL project process (p39) includes a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review but these are not conducted regularly for all courses.	
Feedback collected regularly from students regarding the effectiveness of the support facilities.	
<input type="checkbox"/> No feedback collected from students on the effectiveness of the different support facilities.	
Feedback collected regularly from staff regarding the effectiveness of the support facilities.	
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the different support facilities.	
Optimisation	
Information on the use of learning activities that progressively build student capabilities guides e-learning design and (re)development.	
<input type="checkbox"/> No use of information on the use of learning activities that progressively build student capabilities during e-learning design and (re)development.	

L4: Students are provided with expected staff response times to student communications	
Delivery	
Course documentation provides the expected staff response times students can expect when using communication channels.	
<input type="checkbox"/> <i>Course outlines and descriptions do not contain any information on the response times students can expect from staff when using the communication channels provided in the course.</i>	
Course documentation describes appropriate uses of different communication channels.	
See also: L2(2)	
<input checked="" type="checkbox"/> <i>'Learning online' section of the example course outline (p15) and template (p59) includes a description of the channels and how to use them effectively.</i>	
Planning	
Communication channels are monitored to ensure a timely response to students.	
<input checked="" type="checkbox"/> <i>'Interaction strategy' (p29) and 'Staff workload' (p30) in project plan include consideration of monitoring and impact on staff workload needed for monitoring and responding to students.</i>	
Course (re)development plans include a structured interaction design incorporating a variety of communication channels.	
See also: L2(2) & L5(2)	
<input checked="" type="checkbox"/> <i>'Interaction strategy' in project plan (p29) and template (p53) includes a detailed consideration of interaction from multiple perspectives.</i>	
Assessment tasks are explicitly linked to communication channels.	
<input type="checkbox"/> <i>'Assessment' information in example course outline (pp16-18) includes limited links to communication channels.</i>	
Definition	
Institutional policies define expectations for staff responses to student communications.	
<input type="checkbox"/> <i>No policies, standards or guidelines define requirements for staff responses to student communications.</i>	
Teaching staff are provided with support resources (including training, guidelines and examples) on using communication channels to engage in effective and timely communication with students.	
<input type="checkbox"/> <i>Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Moderating Online Discussions" optional workshop provided.</i>	
Students are provided with support resources (including training, guidelines and examples) to assist them in making effective use of staff feedback in their learning.	
See also: L5(3), L8(3) & E1(3)	
<input checked="" type="checkbox"/> <i>'Communicating online effectively' webpage provides some information on making effective use of staff feedback (p68). 'Learning online' section of the example course outline (p15) and template (p59) includes a description of feedback and communication channels and how to use them effectively.</i>	
Management	
Student and staff use of communication channels is regularly monitored.	
See also: L2(4)	
<input type="checkbox"/> <i>No monitoring of staff or student use of communication channels.</i>	
Feedback collected regularly from students regarding the effectiveness of the teaching staff use of communication channels.	
<input type="checkbox"/> <i>Limited feedback can be obtained somewhat from standard evaluation process (p91) but e-learning information is not explicitly sought.</i>	
Feedback collected regularly from staff regarding the effectiveness of the communication channels.	
See also: L2(4)	
<input type="checkbox"/> <i>The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of communication channels but this information is not explicitly solicited.</i>	
Optimisation	
Information on interaction between students and teaching staff guides training and support resourcing.	
See also: L2(5) & L5(5)	
<input type="checkbox"/> <i>No use of information on interaction between students and teaching staff during training and support resource planning and allocation.</i>	
Information on interaction between students and teaching staff used to identify effective communication strategies for reuse.	
See also: L5(5)	
<input type="checkbox"/> <i>No information on interaction between students and teaching staff used to identify effective communication strategies for reuse.</i>	

L5: Students receive feedback on their performance within courses
Delivery
<p>Students are provided with feedback beyond the marks assigned for assessed work.</p> <p>■ 'Interaction strategy' in project plan (p29) includes consideration of feedback from multiple perspectives. Assessment marking schemes included in the course outline (pp16-18) provide mechanism for formative feedback.</p>
Planning
<p>Course (re)development plans include a structured interaction design incorporating a variety of communication channels.</p> <p>See also: L2(2) & L4(2)</p> <p>■ 'Interaction strategy' in project plan (p29) and template (p53) includes a detailed consideration of interaction from multiple perspectives.</p>
<p>Courses include staged assessment tasks with structured opportunities for feedback and reflection.</p> <p>■ Staged assessments are apparent in the example course outline (p16, p17), however it is unclear how teaching staff support the links between the tasks.</p>
Definition
<p>Institutional policies define requirements for the quality and type of feedback to be provided to students.</p> <p>See also: S3(3)</p> <p><input type="checkbox"/> No policies, standards or guidelines define requirements for the quality and type of feedback to be provided to students.</p>
<p>Teaching staff are provided with support resources (including training, guidelines and examples) on how to use feedback to improve student learning.</p> <p>See also: L8(3)</p> <p><input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Getting and Giving Feedback for Learning" optional workshop provided. CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogical issues such as feedback.</p>
<p>Students are provided with support resources (including training, guidelines and examples) to assist them in making effective use of staff feedback in their learning.</p> <p>See also: L4(3), L8(3) & E1(3)</p> <p><input checked="" type="checkbox"/> 'Communicating online effectively' webpage provides some information on feedback (p68). 'Learning online' section of the example course outline (p15) and template (p59) includes a description of feedback and communication channels and how to use them effectively.</p>
Management
<p>Feedback delivered in response to student work is regularly monitored.</p> <p><input type="checkbox"/> No monitoring of feedback delivered in response to student work.</p>
<p>Feedback collected regularly from students regarding the effectiveness of the feedback provided.</p> <p><input type="checkbox"/> Feedback on the effectiveness of the feedback provided by staff can be obtained somewhat from standard evaluation process (p91) but e-learning information is not explicitly sought.</p>
<p>Feedback collected regularly from staff regarding the effectiveness of the student feedback mechanisms and support.</p> <p><input type="checkbox"/> No feedback collected from staff on the effectiveness of the different student feedback mechanisms.</p>
Optimisation
<p>Information on feedback type and quality, and student satisfaction with feedback, guides training and support resourcing.</p> <p>See also: L2(5) & L4(5)</p> <p><input type="checkbox"/> No use of information on feedback type, quality and student satisfaction during training and support resource planning and allocation.</p>
<p>Information on feedback type and quality, and student satisfaction with feedback, used to identify effective feedback strategies for reuse.</p> <p>See also: L4(5)</p> <p><input type="checkbox"/> No information on feedback type, quality and student satisfaction used to identify effective feedback strategies for reuse.</p>

L6: Students are provided with support in developing research and information literacy skills	
Delivery	
Students are provided with a description of the range of available information sources.	
<input checked="" type="checkbox"/> <i>Library support resources webpage provided for example course includes detailed information (p67).</i>	
Planning	
Students are provided with formal information literacy and research skills development opportunities in all courses.	
<input checked="" type="checkbox"/> <i>Online tutorials provided via the library and linked explicitly in the support webpage for the example course (p67) and the Library tutorials webpage (p81) but use of these is not actively encouraged.</i>	
Assessment marking rubrics include criteria reflecting the quality of student research and information use.	
<input checked="" type="checkbox"/> <i>Assessment marking schemes included in the course outline (pp16-18) include research and information use aspects.</i>	
Definition	
Institutional policies define expectations for student research skills and information literacy.	
<input type="checkbox"/> <i>No policies, standards or guidelines define expectations for student research and information literacy skills.</i>	
Teaching staff are provided with support resources (including training, guidelines and examples) on using library facilities to support student research and information literacy skill development.	
<input type="checkbox"/> <i>No training, guidelines or examples of how to develop student research and information literacy skills provided to teaching staff.</i>	
Standard bibliography and citation formats defined and provided to students and staff along with examples and training in their use.	
<input type="checkbox"/> <i>No standard bibliography and citation formats defined or provided.</i>	
Management	
Students' abilities to conduct effective research are regularly monitored.	
<input type="checkbox"/> <i>No monitoring of students' abilities to conduct effective research.</i>	
Feedback collected regularly from students regarding the effectiveness of the information literacy and research facilities.	
<input type="checkbox"/> <i>No feedback collected from students on the effectiveness of the information literacy and research facilities.</i>	
Feedback collected regularly from staff regarding the effectiveness of the information literacy and research facilities.	
<input type="checkbox"/> <i>No feedback collected from staff on the effectiveness of the information literacy and research facilities.</i>	
Optimisation	
Information on the ability of students to access and assess content and conduct research guides training and support resourcing.	
<input type="checkbox"/> <i>No use of information on student research and information skills during training and support resource planning and allocation.</i>	
Information on the effectiveness of information resources and tools guides e-learning design and (re)development.	
<input type="checkbox"/> <i>No use of information on the effectiveness of information resources and tools guides e-learning design and (re)development.</i>	

L7: Learning designs and activities actively engage students	
Delivery	
Learning activities are designed to encourage analysis and skill development.	
<input checked="" type="checkbox"/> Course outline assessment programme descriptions and design documents include detailed objectives including analysis and skill development (p16-18).	
Planning	
Course documentation describes the e-learning pedagogies used.	
See also: O7(2)	
<input type="checkbox"/> Information included in the example course outline introduction (p12) and Learning Online (p15) sections on e-learning but material is generic, has a technical focus and does not address pedagogical aspects clearly.	
The design of e-learning activities is guided by the need to build and develop student engagement.	
<input checked="" type="checkbox"/> Staged assessments are apparent in the example course outline (p16, p17).	
Definition	
Teaching staff are provided with support resources (including training, guidelines and examples) for designing, developing, and delivering learning activities that actively engage students.	
<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Writing Effective Essay Questions" optional workshop provided. CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy.	
Management	
Compliance with policies, standards and guidelines governing the incorporation of learning activities that actively engage students in e-learning design and development is regularly monitored.	
<input type="checkbox"/> No monitoring of e-learning activities within courses to ensure active engagement of students occurring.	
Feedback collected regularly from students regarding the effectiveness of the e-learning activities.	
See also: L1(4)	
<input type="checkbox"/> No feedback collected from students on the effectiveness of the e-learning activities.	
Feedback collected regularly from staff regarding the effectiveness of the e-learning activities.	
See also: L1(4)	
<input type="checkbox"/> The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of e-learning activities and tasks but this information is not explicitly solicited nor conducted regularly.	
Optimisation	
Information on the active engagement of students with course learning activities guides e-learning design and (re)development.	
<input type="checkbox"/> No use of information on the extent to which courses are actively engaging students to guide e-learning design and (re)development.	
Active engagement of students as learners guides e-learning strategic planning.	
<input type="checkbox"/> No use of information on student engagement during institutional e-learning strategic planning.	

L8: Assessment is designed to progressively build student competence	
Delivery	
Assessments are described in terms of course and programme objectives and requirements.	
See also: L1(1), D3(1) & O7(1)	
<input type="checkbox"/> Assessment descriptions include information on the context of the assessment that implies linkage with the course and programme objectives and requirements, but different objectives used in assessment descriptions (pp16-18)	
Students are provided with opportunities to discuss assessment tasks with each other and the teaching staff before attempting marked work.	
<input type="checkbox"/> No opportunities for students to discuss assessment tasks with each other and the teaching staff before attempting marked work.	
Students are provided with opportunities to practice assessment tasks before attempting marked work.	
<input type="checkbox"/> Assessment tasks available for review prior to course if students download the publically available course outline (p82) however use of this is not promoted.	
Planning	
Course documentation provides students with a description of the programme of assessment and the relationship between the individual assessment tasks and other learning activities.	
<input checked="" type="checkbox"/> The example course outline (pp12, 16-18) provides a clear overview of the assessment programme and its relationship to other course elements.	
The assessment programme is designed to make effective and consistent use of e-learning technologies used in other course activities.	
<input type="checkbox"/> The example course assessment programme provides some linkages to technology used elsewhere such as Assessment 6 (p18), but stronger links to communication and LMS facilities could be made.	
Definition	
Institutional policies require that e-learning assessment programmes provide sufficient time for feedback from staff and reflection by students.	
<input type="checkbox"/> No policies, standards or guidelines define requirements for designing assessment programmes to ensure sufficient time for feedback from staff and reflection by students.	
Teaching staff are provided with support resources (including training, guidelines and examples) on designing effective assessment programmes.	
<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Writing Effective Essay Questions" optional workshop provided. CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy.	
Management	
Feedback collected regularly from students regarding the effectiveness of the assessment activities.	
<input type="checkbox"/> Limited student feedback can be obtained somewhat from standard evaluation process (p91) but e-learning information is not explicitly sought.	
Feedback collected regularly from staff regarding the effectiveness of the assessment activities.	
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the assessment activities used with students.	
Optimisation	
Information on the use of assessment activities that progressively build student capabilities guides e-learning design and (re)development.	
<input type="checkbox"/> No use of information on the extent to which courses are providing assessment activities that progressively build student capabilities during e-learning design and (re)development.	

L9: Student work is subject to specified timetables and deadlines	
Delivery	
Students are provided prior to enrolment with details of the workload and time commitment required for course activities.	
<input checked="" type="checkbox"/> Example course outline (p14) and course outline template (p58) include standard section 'Mandatory requirements and workload' which includes workload level and timing information.	
Deadline and timing information provided as part of the descriptions of course activities.	
<input checked="" type="checkbox"/> Clear timetables and deadlines provided throughout the example course outline (pp16-18).	
The relationships between course activities are explicit and logical.	
<input checked="" type="checkbox"/> Clear descriptions provided throughout the example course outline (pp14-18).	
Planning	
Course documentation provides a timetable for key activities and associated deadlines.	
<input checked="" type="checkbox"/> Course outlines (p14) contain consistent and interlinked information on the timetable for key activities and associated deadlines.	
The extent and timing of e-learning activities is guided by student workload information.	
<input checked="" type="checkbox"/> Formal and systematic assessment of student workload apparent in the CITL Project Plan section 'Student Workload' (p30)	
Course documentation provides an explicit process for negotiating variances to timetables and deadlines.	
<input checked="" type="checkbox"/> Example course outline (p13) and course outline template (p58) include standard section 'Late Penalties' describing policy and process.	
Definition	
Institutional policies define expectations for student workloads within courses.	
<input type="checkbox"/> No policies or standards for course workloads expectations of students available.	
Teaching staff are provided with support resources (including training, guidelines and examples) on designing effective timetabling and workload schemes.	
<input type="checkbox"/> No training provided to teaching staff on designing and using effective timetabling and workload schemes.	
Management	
Student workload information is regularly monitored.	
<input type="checkbox"/> No monitoring of course workload expectations on students in e-learning courses.	
Feedback collected regularly from students regarding the effectiveness of the timetables and deadlines.	
<input type="checkbox"/> No feedback collected from students on the effectiveness of the timetable and deadline information provided.	
Feedback collected regularly from staff regarding the effectiveness of the timetables and deadlines.	
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the timetable and deadline information provided.	
Optimisation	
Information on the workload and timetabling implications of learning activities guides e-learning design and (re)development.	
<input type="checkbox"/> No use of information on the workload and timetabling implications of learning activities during e-learning design and (re)development.	

L10: Courses are designed to support diverse learning styles and learner capabilities	
Delivery	
Students told of diversity support mechanisms and encouraged to make use of the provided alternatives.	
<input type="checkbox"/> Example course outline (p19) and course outline template (p61) include standard section 'Reasonable accomodation policy', but this only covers disability aspects and nothing specific to the example course is apparent.	
Planning	
Course documentation provides the procedure to follow if course elements fail to meet individual student needs.	
See also: D4(2)	
<input type="checkbox"/> Example course outline (p19) and course outline template (p61) include standard section 'Reasonable accomodation policy', but this only covers disability aspects.	
Teaching staff provided with e-learning design and (re)development assistance that encourages and supports diversity.	
<input type="checkbox"/> No assistance on student learning diversity issues and requirements provided to teaching staff on using e-learning technologies and pedagogies.	
E-learning design and (re)development procedures include formal testing and review of diversity support with student participants.	
<input type="checkbox"/> No review and testing of diversity support undertaken during e-learning design and (re)development processes.	
Definition	
Diversity policies, standards and guidelines are provided to all staff and students.	
<input type="checkbox"/> CITL technical accessibility standards provided (p63) but nothing on wider student diversity concerns.	
Teaching staff are provided with support resources (including training, guidelines and examples) on supporting student diversity when designing, (re)developing and delivering e-learning courses.	
<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Diversity and Accessibility in the Classroom and Online" optional workshop provided.	
Management	
Compliance with policies, standards and guidelines governing diversity in e-learning courses is regularly monitored.	
<input type="checkbox"/> No monitoring of e-learning courses to ensure student learning diversity policy requirements are being met.	
Feedback collected regularly from students regarding the effectiveness of the e-learning tasks and activities in supporting diversity.	
<input type="checkbox"/> No feedback collected from students on the effectiveness of the provided e-learning tasks and activities in supporting their learning style and personal capabilities.	
Feedback collected regularly from staff regarding the effectiveness of the e-learning tasks and activities in supporting diversity.	
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the provided e-learning tasks and activities in supporting student learning styles and personal capabilities.	
Optimisation	
Information on the effectiveness of diversity support is used to guide e-learning initiative planning.	
<input type="checkbox"/> No use of information on the effectiveness with which courses are providing support for diversity during e-learning initiative planning.	
Diversity requirements guide the selection and implementation of new technologies for e-learning.	
<input type="checkbox"/> No student learning diversity requirements provided to staff involved in e-learning technology selection and deployment.	

D1: Teaching staff are provided with design and development support when engaging in e-learning	
Delivery	
Technical design and development assistance available to staff designing and (re)developing courses.	
<input checked="" type="checkbox"/> <i>Technical e-learning design and development assistance provided formally by CITL project staff allocated as part of project planning and approval process (p39).</i>	
Planning	
Technical design and development support is formally scheduled during e-learning design and development.	
See also: D2(2) & S5(2)	
<input checked="" type="checkbox"/> <i>Course e-learning design and (re)development plans include allocation and prioritisation of assistance in e-learning course development with detailed scheduling and timetabling of assistance. CITL project plan outlines the assistance provided in detail (p27).</i>	
Teaching staff are recognised and rewarded for their engagement with innovative e-learning initiatives.	
See also: S5(2), E2(2) & O9(2)	
<input type="checkbox"/> <i>Time allocation for Teaching Staff is made as part of the CITL project budget process (p26). No evidence of other incentives.</i>	
Definition	
Institutional policies define the support resources and assistance available to teaching staff for e-learning design and (re)development.	
<input checked="" type="checkbox"/> <i>Resources and assistance defined by formal CITL project process as set out in the project lifecycle (p39) and Project Plan (p54).</i>	
Teaching staff are provided with support resources (including training, guidelines and examples) for e-learning design and (re)development.	
See also: D2(3)	
<input checked="" type="checkbox"/> <i>Training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Preparing CITL Project Grants" optional workshop provided. Instructor training included in example project plan provided (p30) but inclusion is not part of formal template (pp53-54).</i>	
Teaching staff are provided with project tools (including standard contracts and licenses, checklists and quality assurance procedures) for e-learning design and (re)development.	
See also: D2(3), D3(3), D6(3) & S5(3)	
<input type="checkbox"/> <i>Resources and assistance defined by formal CITL project process as set out in the project lifecycle (p39) and Project Plan (p54), unclear what access to resources exists beyond the formal project support.</i>	
Management	
Staff use of templates, project supporting materials and quality assurance procedures during e-learning design and (re)development is regularly monitored.	
<input type="checkbox"/> <i>The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of the templates and other supporting resources but this information is not explicitly solicited.</i>	
E-learning design and (re)development activities are subject to formal quality assurance reviews at key milestones.	
See also: L1(4), L7(4), L8(4), D2(4), D4(4), D5(4), D6(4), S5(4), E1(4), E2(4), E3(4), O1(4), O2(4), O3(4), O4(4), O5(4) & O9(4)	
<input checked="" type="checkbox"/> <i>Project lifecycle includes formal QA plan and review process (p39).</i>	
Feedback collected regularly from staff regarding the effectiveness of the e-learning design and development support.	
<input type="checkbox"/> <i>No feedback collected from staff on the effectiveness of the e-learning design and development support.</i>	
Optimisation	
Information on the effectiveness of design and development support guides the strategic and operational planning of e-learning.	
See also: D3(5) & S5(5)	
<input type="checkbox"/> <i>Example course project completion report (p34) and completion report template (p55) include information on the outcomes and resources used but it is not clear how this is reported to senior managers and included in planning activities.</i>	

D2: Course development, design and delivery are guided by e-learning procedures and standards	
Delivery	
Teaching staff are provided with e-learning design and (re)development standards.	
<input checked="" type="checkbox"/> CITL process fully documented (p39). CITL e-learning guidelines and standards provided (p63).	
Planning	
Standards and procedures for changing pedagogies guide e-learning design and (re)development.	
<input type="checkbox"/> CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy.	
Definition	
Support staff are provided with standards and guidelines covering technical and pedagogical aspects of e-learning design and (re)development.	
See also: D1(3) & S5(3)	
<input type="checkbox"/> CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy.	
Teaching staff are provided with support resources (including training, guidelines and examples) for e-learning design and (re)development.	
See also: D1(3)	
<input checked="" type="checkbox"/> Training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Preparing CITL Project Grants" optional workshop provided. Instructor training included in example project plan provided (p30) but inclusion is not part of formal template (pp53-54).	
Teaching staff are provided with project tools (including standard contracts and licenses, checklists and quality assurance procedures) for e-learning design and (re)development.	
See also: D1(3), D3(3), D6(3) & S5(3)	
<input type="checkbox"/> Resources and assistance defined by formal CITL project process as set out in the project lifecycle (p39) and Project Plan (p54), unclear what access to resources exists beyond the formal project support.	
Management	
Staff use of e-learning procedures and standards during e-learning design and (re)development is regularly monitored.	
<input type="checkbox"/> No monitoring of the use of e-learning procedures and standards by teaching staff.	
Feedback collected regularly from staff regarding the effectiveness of the e-learning procedures and standards.	
<input type="checkbox"/> The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of the e-learning design and development support but this information is not explicitly solicited. No overall CITL review apparent.	
Optimisation	
Information on the effectiveness of e-learning procedures and standards is used to guide strategic and operational planning of e-learning initiatives.	
<input type="checkbox"/> No use of information on the effectiveness of e-learning procedures and standards when planning and resourcing e-learning initiatives.	
Information on the e-learning skills of teaching staff guides the content of institutional e-learning standards and procedures.	
<input type="checkbox"/> No information on the e-learning skills of teaching staff used when determining the content of institutional e-learning standards and procedures.	

D3: An explicit plan links e-learning technology, pedagogy and content used in courses
Delivery
Activities, content and assessment used in the course design are linked with common learning outcome statements. See also: L1(1), L8(1) & O7(1)
<input type="checkbox"/> Assessments and learning activities contain similar but different objectives to those listed formally for the course (pp16-18)
An explicit plan covers pedagogical and technological decisions taken during the design and (re)development process. <input checked="" type="checkbox"/> CITL process Full Proposal example (p22) and template (p51) and Project Plan example (p27) and template (p53) clearly illustrate the explicit design rationale used to guide development.
Planning
Learning objectives guide e-learning design and (re)development decisions regarding content and activities. See also: L1(2)
<input checked="" type="checkbox"/> Learning objectives explicitly guide e-learning design and (re)development. Student learning outcomes required in project design documents (p51 & 53). Learning objectives referred to in both project full proposal (p22) and project plan (p27), different language used.
Institutional reviews monitor e-learning design and development documents. <input type="checkbox"/> No inclusion of e-learning design and development documents in institutional programme, degree or qualification planning and review processes.
Learning objectives guide e-learning design and (re)development decisions regarding technology and pedagogy. See also: L1(2), O6(2) & O7(2)
<input checked="" type="checkbox"/> CITL process Full Proposal (p51) and Project Plan (p53) both require the identification of learning objectives and use in justifying the decisions being made.
Definition
Institutional policies require that a description of the explicit relationships between course elements is part of all course documentation provided to students. <input checked="" type="checkbox"/> The course outline template provides clear guidance (p36) and includes a reference to policy requirements that a description of the explicit relationships between course elements is part of all course documentation. No evident enforcement of requirement generally.
Institutional policies require that a formal statement of learning objectives is used as the starting point for e-learning design and (re)development. <input checked="" type="checkbox"/> CITL process Full Proposal (p51) and Project Plan (p53) both require the identification of learning objectives and use in justifying the decisions being made. No evident enforcement of requirement generally.
Teaching staff are provided with support resources (including training, guidelines and examples) for creating design rationales that effectively link learning outcomes with the pedagogies, content and technologies used. <input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Identifying and Communicating Learning Objectives" optional workshop provided. CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy. Support provided by CITL to develop full proposals such as that supplied for the example course (p22).
Management
Compliance with policies, standards and guidelines governing explicit linkages between pedagogies, content and technologies in e-learning design and development activities is regularly monitored. <input type="checkbox"/> No monitoring of compliance with policies, standards and guidelines governing explicit linkages between pedagogies, content and technologies in e-learning design and development activities.
Students' awareness of the relationships between course elements and learning objectives is regularly monitored. <input type="checkbox"/> Limited information on student understanding of the relationships between course elements and learning objectives can be obtained somewhat from standard evaluation process (p91) but information on the impact of learning objectives is not explicitly sought.
Optimisation
Information on changes in the student population is used to guide e-learning initiative planning activities. <input type="checkbox"/> No use of information on the changing student population during institutional e-learning initiative planning activities.
Information on the effectiveness of design and development support guides the strategic and operational planning of e-learning. See also: D1(5)
<input type="checkbox"/> No use of information on the effectiveness of design and development support during institutional e-learning strategic and operational planning.

D4: Courses are designed to support disabled students	
Delivery	
Students told of accessibility support mechanisms and encouraged to make use of the alternatives provided.	
<input type="checkbox"/>	<i>Policy information on disability access provided in the example course outline (p19), however nothing specific is included in the course materials encouraging the use of alternatives.</i>
Planning	
E-learning design and development is guided by the need to ensure that learning activities are accessible.	
<input checked="" type="checkbox"/>	<i>Project lifecycle includes formal Accessibility Plan developed by specialist staff (p39). 'Interaction strategy' in project plan (p29) and template (p53) includes a detailed consideration of interaction from multiple perspectives.</i>
Course documentation provides the procedure to follow if course elements fail to meet individual student needs.	
<i>See also: L10(2)</i>	
<input checked="" type="checkbox"/>	<i>Example course outline (p19) and course outline template (p56) include a standard section 'Reasonable accommodation policy' setting out clear requirements and expectations for disability support.</i>
E-learning design and (re)development procedures include formal testing and review of accessibility support with student participants.	
<input checked="" type="checkbox"/>	<i>Formal CITL Project Accessibility review (p45) required prior to final project signoff (p39).</i>
Definition	
Institutional policies defines requirements for supporting accessibility during e-learning design, (re)development and delivery.	
<input type="checkbox"/>	<i>No policies, standards or guidelines on supporting accessibility provided.</i>
Accessibility policies are provided to all staff and students.	
<input type="checkbox"/>	<i>Technical accessibility standards provided through the CITL website (p63) no consideration of pedagogical aspects and these are not provided clearly to students..</i>
Teaching staff are provided with support resources (including training, guidelines and examples) on supporting accessibility when engaged in e-learning design and (re)development.	
<input type="checkbox"/>	<i>Training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Diversity and Accessibility in the Classroom and Online" optional workshop provided.</i>
Management	
Effectiveness of e-learning templates, project supporting materials and quality assurance procedures in ensuring courses are accessible is regularly monitored.	
<input type="checkbox"/>	<i>No measures collected of the effectiveness and impact on accessibility of templates, project supporting materials and quality assurance procedures used by staff.</i>
Feedback collected regularly from students regarding accessibility support and resources.	
<input type="checkbox"/>	<i>No feedback collected from students on accessibility support and resources.</i>
Feedback collected regularly from staff regarding the effectiveness of the support for assisting disabled students.	
<input type="checkbox"/>	<i>No feedback collected from staff on the effectiveness of the support for assisting disabled students.</i>
Optimisation	
Information on the effectiveness of accessibility support guides e-learning strategic planning.	
<input type="checkbox"/>	<i>No use of information on the effectiveness of accessibility support during institutional e-learning strategic planning.</i>
Accessibility requirements guide the selection and implementation of e-learning technologies.	
<input type="checkbox"/>	<i>No accessibility requirements provided to staff involved in e-learning technology selection and deployment.</i>

D5: All elements of the physical e-learning infrastructure are reliable, robust and sufficient	
Delivery	
Technology performance, reliability and support issues explicitly addressed when implementing the physical e-learning infrastructure.	
<input checked="" type="checkbox"/> Mandated use of JISC e-framework as a guide to the selection and deployment of all technologies (p63).	
All user digital information is stored in a validated backup system.	
See also: S6(2) & O4(2)	
<input type="checkbox"/> Incomplete or informal backup procedures used to store student information.	
Planning	
Formal assessment of technology reliability and support is required by e-learning design and (re)development procedures.	
<input type="checkbox"/> Reliability and risk analysis potentially part of project plan as part of Infrastructure Requirements (p53), but there is no encouragement to do this. CITL Project Selection Criteria include an optional section on risk (p42).	
All elements of the e-learning infrastructure are regularly audited to ensure the validity of backups and disaster recovery procedures.	
<input type="checkbox"/> No audits undertaken and/or no backups and disaster recovery procedures in place.	
Selection of technologies used in the physical e-learning infrastructure is guided by reliability information.	
<input type="checkbox"/> No apparent consideration of reliability in technology selection processes.	
Definition	
Technologies used in the physical e-learning infrastructure are subject to regularly revised service level agreements that explicitly consider the impact of the technology on student learning.	
<input type="checkbox"/> No evidence of service level agreements governing the physical e-learning infrastructure.	
Management	
Performance of technologies used in the physical e-learning infrastructure is automatically monitored.	
<input checked="" type="checkbox"/> LMS system reports generated on a monthly basis (p84). Real time reporting and monitoring not apparent.	
Formal e-learning infrastructure risk assessments and mitigation strategy reviews are undertaken with the results endorsed by institutional leadership.	
See also: D6(4)	
<input type="checkbox"/> No e-learning infrastructure risk assessment and mitigation strategy review apparent.	
Feedback collected regularly from staff on the effectiveness, robustness and reliability of the e-learning infrastructure.	
See also: D6(4)	
<input type="checkbox"/> No feedback collected from staff on the effectiveness, robustness and reliability of the e-learning infrastructure.	
Feedback collected regularly from students on the effectiveness, robustness and reliability of the e-learning infrastructure.	
See also: D6(4)	
<input type="checkbox"/> No feedback collected from students on the effectiveness, robustness and reliability of the e-learning infrastructure.	
Optimisation	
Information on performance and reliability guides the deployment and ongoing use of e-learning technologies.	
<input type="checkbox"/> No information on performance and reliability guides e-learning technology use or deployment.	
Information on the effectiveness of the physical e-learning infrastructure guides e-learning strategic planning.	
<input type="checkbox"/> No use of information on the effectiveness of the physical e-learning infrastructure during institutional e-learning strategic planning.	

D6: All elements of the physical e-learning infrastructure are integrated using defined standards	
Delivery	
The physical e-learning infrastructure is integrated with key institutional administrative systems.	
<input checked="" type="checkbox"/>	<i>The physical e-learning infrastructure and other key institutional administrative IT systems are seamlessly linked with no human intervention required during normal operation. Integration apparent from the webpages and other information supplied such as the example course catalogue entry (p82) and LMS pages (pp69-74).</i>
Reference is made to appropriate standards when designing and (re)developing the physical e-learning infrastructure.	
<input checked="" type="checkbox"/>	<i>E-learning guidelines and standards provided on the CITL webpage (p63) appear to have incomplete coverage of key systems (for example student personal and assessment information). Mandated use of JISC e-framework as a guide to the selection and deployment of all technologies (p63).</i>
E-learning infrastructure standards are defined for all technologies used in the design, (re)development and delivery of courses.	
<input checked="" type="checkbox"/>	<i>E-learning guidelines and standards provided on the CITL webpage (p63) appear to have incomplete coverage of key systems (for example student personal and assessment information). Mandated use of JISC e-framework as a guide to the selection and deployment of all technologies (p63).</i>
Planning	
A searchable repository of standards for the physical e-learning infrastructure is provided.	
<input checked="" type="checkbox"/>	<i>E-learning guidelines and standards webpage (p63) no search facility or evident maintenance.</i>
Definition	
Institutional policies require the use of defined standards when designing, (re)developing or using the physical e-learning infrastructure.	
<input type="checkbox"/>	<i>No requirement to use e-learning infrastructure standards.</i>
Staff are provided with support resources (including training, guidelines and examples) for working with institutional standards for the physical e-learning infrastructure.	
<input type="checkbox"/>	<i>No training, guidelines or examples provided to teaching staff on using e-learning standards and infrastructure technologies.</i>
Management	
Compliance with and use of defined institutional standards is measured and enforced through regular review of the physical e-learning infrastructure and individual courses.	
<input type="checkbox"/>	<i>No e-learning infrastructure standards provided.</i>
Feedback collected regularly from staff on the effectiveness, robustness and reliability of the e-learning infrastructure.	
See also: D5(4)	
<input type="checkbox"/>	<i>No feedback collected from staff on the effectiveness, robustness and reliability of the e-learning infrastructure.</i>
Feedback collected regularly from students on the effectiveness, robustness and reliability of the e-learning infrastructure.	
See also: D5(4)	
<input type="checkbox"/>	<i>No feedback collected from students on the effectiveness, robustness and reliability of the e-learning infrastructure.</i>
Optimisation	
Information on the impact of institutional e-learning standards on student outcomes guides the content of those standards.	
<input type="checkbox"/>	<i>No information on the impact of institutional e-learning standards on student outcomes used when determining the content of institutional e-learning standards and procedures.</i>
Information on the performance and integration of the e-learning infrastructure guides the content of institutional e-learning standards.	
<input type="checkbox"/>	<i>No information on the performance and integration of the e-learning infrastructure used when determining the content of institutional e-learning standards and procedures.</i>

D7	D7: E-learning resources are designed and managed to maximise reuse	
	Delivery	
	E-learning resources are packaged and stored for reuse.	
	<input type="checkbox"/> <i>E-learning resources are packaged and stored in LMS normally (p72) but no reuse planning evident outside of course context.</i>	
	Planning	
	A searchable repository of reusable e-learning resources is provided.	
	<input type="checkbox"/> <i>No repository of reusable e-learning resources provided.</i>	
	E-learning design and (re)development procedures include explicit consideration of reusing pre-existing resources before new resources are created.	
	<input type="checkbox"/> <i>No apparent consideration of licensing or purchasing and reuse of pre-existing resources before new resources are created.</i>	
	Incentives provided to teaching staff who create reusable e-learning resources.	
	<input type="checkbox"/> <i>No recognition or incentives provided to teaching staff to create resources that can be effectively reused.</i>	
	Definition	
	Intellectual property agreements negotiated with all staff involved in the design, and (re)development of course resources.	
	<input checked="" type="checkbox"/> <i>Intellectual property agreement signed by involved Academics and an Authorised Manager required as part of full proposal (p25).</i>	
	Staff are provided with support resources (including training, guidelines and examples) on creating and adapting reusable e-learning resources.	
	<input type="checkbox"/> <i>No training, guidelines or examples provided to staff on using and creating reusable e-learning resources.</i>	
	Institutional policies encourage the reuse of e-learning resources.	
	<input type="checkbox"/> <i>No strategies, policies, contracts or standards provided that encourage the reuse of e-learning resources.</i>	
	Management	
	E-learning resources intended for reuse are tested and reviewed by staff and student users.	
<input type="checkbox"/> <i>No review and testing of e-learning resources during e-learning design and (re)development processes.</i>		
Feedback collected regularly from staff regarding the effectiveness of systems and procedures for encouraging and supporting reuse of course resources.		
<input type="checkbox"/> <i>No feedback collected from staff on the effectiveness of systems and procedures for encouraging and supporting reuse of course resources.</i>		
The extent to which resources are being reused is monitored regularly.		
<input type="checkbox"/> <i>No monitoring of the extent to which resources are being reused.</i>		
The extent to which resources are being created for reuse is monitored regularly.		
<input type="checkbox"/> <i>No monitoring of the extent to which resources are created for reuse.</i>		
Optimisation		
Deployment and use of e-learning technologies is guided by information on its support of reuse.		
<input type="checkbox"/> <i>No information on the support of reuse guides e-learning technology use or deployment.</i>		
Information on the effectiveness of attempts to encourage reuse guides e-learning strategic planning.		
<input type="checkbox"/> <i>No information on the effectiveness of attempts to encourage reuse used during institutional e-learning strategic planning.</i>		

S1: Students are provided with technical assistance when engaging in e-learning	
Delivery	
Students are provided with e-learning technical support through a variety of communication channels.	
<input checked="" type="checkbox"/> A formal e-learning technical support and training service is provided to students through a variety of communication channels and with hours of operation that are consistent with student study patterns. 'Getting help' section of course outline (p14), 'Technical support' (p15), Bb login and portal pages (p70/71) all provide clear information. Repeated mention of support contact information on webpages (p65)	
Planning	
E-learning design and (re)development plans are guided by technology support costs to the organisation, staff and students.	
See also: S4(2)	
<input type="checkbox"/> CITL Project Plan example (p30) and templates (p54) covers student and staff workload but not support issues.	
Students are provided with information describing e-learning support facilities prior to enrolment.	
See also: S4(2)	
<input checked="" type="checkbox"/> Information available prior to enrolment contains consistent and explicit information for students on what support they can expect from the institution when engaging in e-learning. 'Is studying online a good idea?' webpage provides information and guidance to students prior to enrolment (p65).	
Students are provided with information describing the institutional distribution of responsibility for student support services.	
See also: S(2) & S4(2)	
<input checked="" type="checkbox"/> Consistent and explicit information for students on the responsibility for student e-learning support is provided formally and in multiple places. 'Getting help' section of course outline (p14), also repeated mention of support contact information on webpages (p65).	
E-learning design and (re)development plans are guided by the available support facilities.	
See also: S2(2)	
<input type="checkbox"/> No evidence of consideration of available support facilities in design and (re)development documents and planning activities.	
Definition	
Institutional standards define requirements for student technical support that are explicitly linked to institutional e-learning strategies and technical plans.	
<input type="checkbox"/> No linkage between institutional standards for student technical support and institutional e-learning strategies or technical plans.	
Institutional procedures for acquiring and maintaining e-learning technologies include the explicit consideration of student support implications.	
<input type="checkbox"/> No consideration of student support needs included within Institutional procedures for acquiring and maintaining e-learning technologies.	
Management	
Demand for and effectiveness of the technical support provided to students is monitored regularly.	
<input checked="" type="checkbox"/> Support activity reports generated on a monthly basis (p83). Real time reporting and monitoring not apparent.	
Feedback collected regularly from students regarding the clarity and effectiveness of the technical support provided.	
<input type="checkbox"/> No feedback collected from students on the clarity and effectiveness of the technical support provided.	
Feedback collected regularly from staff regarding the clarity and effectiveness of the technical support provided to students.	
<input type="checkbox"/> No feedback collected from staff on the clarity and effectiveness of the technical support provided to students.	
Optimisation	
Information on the types and content of student requests for e-learning technical support guides the deployment and support of e-learning technologies.	
<input type="checkbox"/> No information on the types and content of student requests for e-learning technical support guides e-learning technology support or deployment.	
Information on the types and content of student requests for e-learning technical support guides the assessment and management of e-learning initiative risks.	
<input type="checkbox"/> No information on the types and content of student requests for e-learning technical support guides e-learning initiative risk assessment or management.	

S2: Students are provided with library facilities when engaging in e-learning	
Delivery	
Students are provided with library facilities.	
<input checked="" type="checkbox"/> Library services for students engaged in e-learning include the full range of available services for all students. Course library support resources webpage lists range of available resources (p67).	
Course documentation describes the available library facilities.	
<input checked="" type="checkbox"/> Course library support resources webpage lists range of available resources (p67), links to library materials and contact provided in example course outline (p12).	
Planning	
Summaries of useful library resources are provided on a course or discipline basis.	
See also: L6(2)	
<input checked="" type="checkbox"/> Links to summaries of useful library resources provided as part of course materials. Standard Library support resources webpage provided for all courses as per example (p67).	
Library staff are involved in e-learning design and (re)development initiatives.	
<input type="checkbox"/> No apparent involvement of library staff in the planning and (re)development of e-learning initiatives.	
E-learning design and (re)development plans are guided by the available library services and appropriately licensed resources.	
See also: S1(2)	
<input type="checkbox"/> No evidence of consideration of available library services and resources in design and (re)development documents and planning activities.	
Students are provided with information describing the institutional distribution of responsibility for student support services.	
See also: S1(2) & S4(2)	
<input checked="" type="checkbox"/> Consistent and explicit information for students on the responsibility for student library support is provided formally and in multiple places. 'Getting help' section of course outline (p14), also repeated mention of support contact information on webpages (p65).	
Definition	
Institutional policies require that students have access to a full range of library facilities when engaged in e-learning.	
<input type="checkbox"/> No institutional policy, standards, service level agreements and licenses provided which ensure that students have access to a full range of library resources and services when engaged in e-learning.	
Management	
Student use of library facilities is monitored regularly.	
<input type="checkbox"/> No monitoring of students' use of library resources and services.	
Feedback collected regularly from students regarding the effectiveness of the library facilities.	
<input type="checkbox"/> No feedback collected from students on the effectiveness of the library resources and services provided.	
Feedback collected regularly from staff regarding the effectiveness of the library facilities.	
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the library resources and services provided to students.	
Optimisation	
Information on the effectiveness of library facilities in supporting student learning guides e-learning strategic planning.	
<input type="checkbox"/> No use of information on effectiveness of library facilities in supporting student learning during institutional e-learning strategic planning.	
Information on the effectiveness of library facilities in supporting student learning guides e-learning design and (re)development.	
<input type="checkbox"/> No use of information on the effectiveness of library facilities in supporting student learning during e-learning design and (re)development.	

S3: Student enquiries, questions and complaints are collected and managed formally
Delivery
Students are provided with a mechanism for raising concerns or complaints.
<input checked="" type="checkbox"/> 'Getting help' section of example course outline (p14) provides contact point and complete list of student support provided also (p20).
Teaching staff are provided with an opportunity to address e-learning student concerns and complaints.
<input type="checkbox"/> No apparent communication to teaching staff of student concerns and complaints.
Planning
Students are provided with a formally documented procedure for making complaints.
<input type="checkbox"/> Clear contact information applied in example course outline (p20) and in course outline template (p62), but no process evident.
Students are provided with documentation of the formal procedures used to resolve any concerns or complaints they raise.
See also: S1(2)
<input type="checkbox"/> No apparent communication to students of the procedures that will be followed to resolve any concerns or complaints they raise.
Definition
Institutional policies define requirements and procedures for the handling of student complaints.
<input type="checkbox"/> No policies, standards or guidelines define requirements for the handling of student complaints.
Teaching and support staff are provided with support resources (including training, guidelines and examples) on handling student complaints.
<input type="checkbox"/> No training, guidelines or examples provided to staff on effective student complaint resolution.
Institutional policies define requirements for the quality and type of feedback to be provided to students.
See also: L5(3)
<input type="checkbox"/> No policies, standards or guidelines define requirements for the quality and type of feedback to be provided to students.
Management
Information on the type and resolution of student complaints and concerns is monitored regularly.
<input checked="" type="checkbox"/> Support activity reports generated on a monthly basis(p83).
Feedback collected regularly from students regarding the effectiveness of the collecting and resolution of student concerns and complaints.
<input type="checkbox"/> No feedback collected from students on the effectiveness of the collecting and resolution of student concerns and complaints.
Feedback collected regularly from staff regarding the effectiveness of the collecting and resolution of student concerns and complaints.
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the collecting and resolution of student concerns and complaints.
Optimisation
Information from student concerns and complaints guides e-learning strategic planning.
<input type="checkbox"/> No use of information from student concerns and complaints during institutional e-learning strategic planning.
Information from student concerns and complaints guides the allocation of staff e-learning development and training resources.
<input type="checkbox"/> No use of information on student concerns and complaints during training and support resource planning and allocation.

S4: Students are provided with personal and learning support services when engaging in e-learning	
Delivery	
Course documentation describes the available student personal and learning support services.	
<input checked="" type="checkbox"/> Information for students on accessing personal and learning support services is provided consistently and covers a range of communication channels that can be used to access the support. 'Getting help' section of example course outline (p14) provides contact point and complete list of student support provided also (p20).	
Planning	
E-learning design and (re)development plans are guided by technology support costs to the organisation, staff and students.	
See also: S1(2)	
<input type="checkbox"/> CITL Project Plan example (p30) and templates (p54) covers student and staff workload but not support issues.	
Students are provided with information describing the institutional distribution of responsibility for student support services.	
See also: S1(2) & S2(2)	
<input checked="" type="checkbox"/> Consistent and explicit information for students on the responsibility for student personal and learning support is provided formally and in multiple places. 'Getting help' section of example course outline (p14) provides contact point and complete list of student support provided also (p20).	
Students are provided with information describing personal and learning support facilities prior to enrolment.	
See also: S1(2)	
<input checked="" type="checkbox"/> Information available prior to enrolment contains consistent and explicit information for students on what personal and learning support they can expect from the institution. Clear information on support available from multiple places on webpages (for example p65).	
Definition	
Institutional standards define requirements for student personal and learning support that are explicitly linked to institutional e-learning strategies.	
<input type="checkbox"/> No institutional standards for student personal and learning support are defined.	
Management	
Student use of personal and learning support monitored regularly.	
<input checked="" type="checkbox"/> Support activity reports generated on a monthly basis(p83).	
Feedback collected regularly from students regarding the clarity and utility of the personal and learning support provided.	
<input type="checkbox"/> No feedback collected from students on the clarity and utility of the personal and learning support provided.	
Feedback collected regularly from staff regarding the clarity and utility of the personal and learning support provided to students.	
<input type="checkbox"/> No feedback collected from staff on the clarity and utility of the personal and learning support provided to students.	
Optimisation	
Information on the performance of personal and learning support services guides the resources allocated to support students.	
<input type="checkbox"/> No use of information on the performance of personal and learning support services during support resource planning and allocation.	
Information on student requests for personal and learning support guides the selection and deployment of e-learning technologies.	
<input type="checkbox"/> No information on student requests for personal and learning support guides e-learning technology use or deployment.	

S5: Teaching staff are provided with e-learning pedagogical support and professional development	
Delivery	
Teaching staff are provided with support resources (including training, guidelines and examples) on the pedagogical aspects of e-learning technologies.	<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): optional LMS workshops provided along with "Moderating Online Discussions" workshop.
Teaching staff are provided with support resources (including training, guidelines and examples) on researching and reflecting upon their own practice with e-learning technologies and pedagogies.	<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Fine-Tuning Your T2 Course" optional workshop provided.
Teaching staff are provided with support resources (including training, guidelines and examples) on how to assist students in developing e-learning skills.	<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): optional LMS workshops provided along with "Moderating Online Discussions" workshop
Planning	
E-learning design and (re)development procedures include a formal assessment of teaching staff e-learning skills.	<input type="checkbox"/> No assessment of teaching staff skills with e-learning technology and pedagogies apparent.
E-learning design and (re)development procedures include assistance for teaching staff in changing pedagogies.	<input checked="" type="checkbox"/> CITL Project Plan (p27) and Project Budget (p26) cover inclusion of assistance.
Teaching staff are recognised and rewarded for their engagement with innovative e-learning initiatives.	See also: D1(2), E2(2) & O9(2)
	<input type="checkbox"/> Time allocation for Teaching Staff is made as part of the CITL project budget process (p26). No evidence of other incentives.
Definition	
Institutional standards are defined for the assessment of teaching staff e-learning skills.	<input type="checkbox"/> No institutional standards for assessing teaching staff capability to use e-learning technology and pedagogies effectively are defined.
Pedagogical issues are formally addressed in e-learning design and (re)development procedures.	See also: D1(3) & D2(3)
	<input checked="" type="checkbox"/> The full CITL Project Proposal (p27) includes explicit and detailed consideration of pedagogical aspects.
Management	
Teaching staff use of pedagogical support and assistance is regularly monitored.	See also: S6(4)
	<input type="checkbox"/> The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of the pedagogical support and assistance but this information is not explicitly solicited. QA activities (Project evaluation and review, Academic Self Review, Student Evaluation, External Review) included in the CITL process may also provide some information (p39).
Teaching staff capability to use e-learning technology and pedagogies effectively is regularly monitored.	See also: S6(4)
	<input type="checkbox"/> No monitoring of the capability of teaching staff to use e-learning technology and pedagogies effectively.
Feedback collected regularly from staff regarding the effectiveness of the pedagogical support and training provided.	<input type="checkbox"/> No feedback collected from staff on the effectiveness of the pedagogical support and training provided.
Optimisation	
Information on the e-learning technology and pedagogy skills of teaching staff guides the resources allocated for support.	<input type="checkbox"/> No use of information on the e-learning technology and pedagogy skills of teaching staff during support resource planning and allocation.
Pedagogical support implications explicitly addressed when deploying e-learning technologies.	<input type="checkbox"/> No consideration of pedagogical support implications when deploying e-learning technologies.

96	S6: Teaching staff are provided with technical support in using digital information created by students	
	Delivery	
	Teaching staff are provided with support resources (including training, guidelines and examples) on the use of digital information by students.	
	<input type="checkbox"/> No support provided to teaching staff on the use of electronically accessed or submitted information by students.	
	Planning	
	All student digital information is stored in a validated backup system.	
	See also: D5(1) & O4(2)	
	<input type="checkbox"/> Dependence on LMS facilities by default, no explicit consideration of backups or validation apparent.	
	Access to all student digital information is authenticated and authorised.	
	See also: O4(2)	
	<input type="checkbox"/> Dependence on LMS facilities by default, no explicit consideration of security issues apparent.	
	E-learning design and (re)development procedures address the use of digital information by students.	
	<input type="checkbox"/> Limited consideration of student information provision and access in CITL example Project Pan 'Interaction design' (p29).	
	Definition	
	Teaching staff are provided with resources (including training, guidelines and examples) on supporting the use of digital information by students, including intellectual property, plagiarism and assessment aspects.	
<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Promoting Academic Integrity and Discouraging Plagiarism" optional workshop provided. CITL e-learning guidelines and standards (p63) focused on technology rather than pedagogy.		
Formal procedures for e-learning design and (re)development explicitly include consideration of the use, protection and privacy of digital information by students.		
<input type="checkbox"/> Limited consideration of student information provision in CITL example Project Pan 'Interaction design' (p29).		
Management		
Teaching staff use of support resources for developing student digital information skills is monitored regularly.		
<input type="checkbox"/> No monitoring of the effectiveness and uses of staff support resources for developing student digital information skills.		
Feedback collected regularly from students regarding the effectiveness of the digital information skills support provided.		
<input type="checkbox"/> No feedback collected from students on the effectiveness of the digital information skills support provided.		
Feedback collected regularly from staff regarding their effectiveness in supporting student digital information skills development.		
<input type="checkbox"/> No feedback collected from staff on the effectiveness of their support of student digital information skills development.		
Optimisation		
Information on teaching staff skills in supporting digital information use by students guides e-learning design and (re)development.		
<input type="checkbox"/> No use of information on teaching staff skills in supporting digital information use by students during e-learning design and (re)development.		

E1: Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience
Delivery
Summative feedback collected regularly from students regarding the quality and effectiveness of their e-learning experience.
<input type="checkbox"/> <i>Standard evaluation process includes no consideration of the use of e-learning (p91).</i>
Formative feedback collected regularly from students regarding the quality and effectiveness of their e-learning experience.
<input type="checkbox"/> <i>Standard evaluation process includes no consideration of the use of e-learning (p91).</i>
Planning
Students are provided with information on how feedback information has been and will be used to modify and improve their e-learning experience.
<input type="checkbox"/> <i>No information provided to students on how feedback and evaluation information is used.</i>
E-learning design and (re)development procedures include explicit evaluation phases assessing the quality and effectiveness of e-learning.
<input checked="" type="checkbox"/> <i>CITL project process (p39) includes a QA Plan and evaluations including a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review.</i>
E-learning design and (re)development procedures include opportunities for user testing by students.
<input checked="" type="checkbox"/> <i>CITL project process (p39) includes a QA Plan and evaluations including a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review.</i>
Definition
Institutional policies define requirements for student evaluations of the educational effectiveness of e-learning initiatives.
<input type="checkbox"/> <i>No institutional requirements for student evaluations of the educational effectiveness of e-learning initiatives are defined.</i>
Institutional policies define requirements for the quality and type of evaluation feedback to be provided to students.
<input type="checkbox"/> <i>No policies, standards or guidelines define requirements for the quality and type of evaluation feedback to be provided to students.</i>
Expert support provided for evaluations of student feedback on the quality and effectiveness of e-learning initiatives.
<input type="checkbox"/> <i>CITL evaluation staff and service available as set out in Evaluations Handbook (p91) focus is on traditional delivery rather than e-learning and services not promoted actively.</i>
Management
Evaluation results are reported regularly in a manner that allows for comparison of the educational effectiveness of e-learning initiatives.
See also: E2(4) & E3(4)
<input type="checkbox"/> <i>No reporting of student evaluations of the educational effectiveness of e-learning.</i>
Optimisation
Information from student evaluations of e-learning guides which pedagogical and technological changes are sustained.
<input type="checkbox"/> <i>No use of information from student evaluations of the quality and effectiveness of e-learning during e-learning initiative planning.</i>
Information from student evaluations of e-learning guides the allocation of resources for teaching staff support.
<input type="checkbox"/> <i>No use of information from student evaluations of the quality and effectiveness of e-learning during e-learning support planning.</i>

E2	E2: Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience	
	Delivery	
	Summative feedback collected regularly from teaching staff regarding the quality and effectiveness of their e-learning experience.	
	<input type="checkbox"/> No summative feedback collected from teaching staff regarding the quality and effectiveness of their e-learning experience.	
	Formative feedback collected regularly from teaching staff regarding the quality and effectiveness of their e-learning experience.	
	<input checked="" type="checkbox"/> The project self-review template (p40) and supplied example (p31) specifically requests information on the impact on the staff member as a teacher. Information is however not collected regularly, only on project completion.	
	Planning	
	Staff are provided with information on how feedback information has been and will be used to modify and improve their e-learning experience.	
	<input type="checkbox"/> No information provided to staff on how feedback and evaluation information is used.	
	E-learning design and (re)development procedures include explicit evaluation phases assessing the quality and effectiveness of e-learning.	
See also: E1(2)		
<input checked="" type="checkbox"/> CITL project process (p39) includes a QA Plan and evaluations including a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review.		
E-learning design and (re)development procedures include opportunities for user testing by staff.		
<input checked="" type="checkbox"/> CITL project process (p39) includes a QA Plan and evaluations including a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review.		
Definition		
Institutional policies define requirements for staff evaluations of the educational effectiveness of e-learning initiatives.		
<input type="checkbox"/> No institutional requirements for staff evaluations of the educational effectiveness of e-learning initiatives are defined.		
Expert support provided for evaluations of staff feedback on the quality and effectiveness of e-learning initiatives.		
<input type="checkbox"/> CITL evaluation staff and service available as set out in Evaluations Handbook (p91) focus is on traditional delivery rather than e-learning and service is not promoted actively.		
Management		
Evaluation results are reported regularly in a manner that allows for comparison of the educational effectiveness of e-learning initiatives.		
See also: E1(4) & E3(4)		
<input type="checkbox"/> No reporting of staff evaluations of the educational effectiveness of e-learning.		
Optimisation		
Information from staff evaluations of e-learning guides which pedagogical and technological changes are sustained.		
<input type="checkbox"/> No use of information from staff evaluations of the quality and effectiveness of e-learning during e-learning initiative planning.		
Information from staff evaluations of e-learning guides the allocation of resources for teaching staff support.		
<input type="checkbox"/> No use of information from staff evaluations of the quality and effectiveness of e-learning during e-learning support planning.		

E3: Regular reviews of the e-learning aspects of courses are conducted
Delivery
Reviews of course e-learning materials are conducted regularly.
<input type="checkbox"/> No apparent reviews of course e-learning materials and resources
Reviews of course e-learning teaching activities are conducted regularly.
<input type="checkbox"/> No apparent reviews of the effectiveness of the teaching provided using e-learning technologies and pedagogies.
Planning
Students and staff are provided with information on how reviews have been and will be used to modify and improve their e-learning experiences.
<input type="checkbox"/> No information provided to students and staff on how review and evaluation information is used.
Regular reviews are conducted formally as part of the normal procedures for delivering courses using e-learning technologies and pedagogies.
<input checked="" type="checkbox"/> CITL project process (p39) includes a QA Plan and evaluations including a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review.
E-learning design and (re)development procedures include formal plan for assessing the success of new technologies or pedagogies.
<input checked="" type="checkbox"/> CITL project process (p39) includes a QA Plan and evaluations including a Project evaluation and review, Academic Self Review, Student Evaluation, and External Review.
Definition
Institutional standards are defined for the regular review of the e-learning aspects of courses.
<input type="checkbox"/> No institutional standards for the review of the e-learning aspects of courses are defined.
Staff are provided with support resources (including training, guidelines and examples) in the analysis and use of review and evaluation information.
<input type="checkbox"/> No training, guidelines or examples provided to staff on using evaluation and review information.
Management
Reviews are reported regularly in a manner that allows for comparison of e-learning initiatives.
See also: E1(4) & E2(4)
<input type="checkbox"/> No reporting of reviews undertaken of e-learning initiatives.
Optimisation
Information from e-learning reviews guides e-learning strategic planning.
<input type="checkbox"/> No use of information from e-learning evaluations and reviews during institutional e-learning strategic planning.
Information on the success or failure of e-learning technologies guides the allocation of support and resources for technology use.
<input type="checkbox"/> No information on the success or failure of e-learning technologies guides the allocation of support and resources for technology use.

O1: Formal criteria guide the allocation of resources for e-learning design, development and delivery	
Delivery	
Resources for all e-learning initiatives are allocated according to formally defined criteria.	
<input checked="" type="checkbox"/> <i>CITL project selection criteria (p41) for selecting and prioritising the allocation of resources and funding for e-learning initiatives are systematically and formally applied to all e-learning initiatives.</i>	
Planning	
Resources for e-learning initiatives are allocated at designated times during the budget cycle.	
<input checked="" type="checkbox"/> <i>Resource allocation for e-learning design, development and delivery is handled formally as part of the formal CITL project process as set out in Lifecycle (p39).</i>	
E-learning initiative plans formally link decisions with the institutional criteria used to allocate resources.	
<input checked="" type="checkbox"/> <i>Formal linkage required with institutional e-learning resource allocation criteria in e-learning initiative plans with minimum compliance requirements included in CITL Full Proposal (p24) and are assessed according to CITL project selection criteria (p41).</i>	
Definition	
E-learning initiative resource allocation criteria are explicitly linked to the institutional e-learning strategies and technology plans.	
See also: O9(1)	
<input checked="" type="checkbox"/> <i>CITL project selection criteria includes explicit linkage to institutional plans (p41).</i>	
Staff are provided with support resources (including training, guidelines and examples) on the development of e-learning proposals using the resource allocation criteria.	
<input checked="" type="checkbox"/> <i>Support provided by CITL staff in the creation of full project proposals (p22).</i>	
Management	
Information on the success or failure of e-learning initiatives is regularly monitored.	
See also: E3(4)	
<input type="checkbox"/> <i>CITL example Project Completion Report (p34) and Project Completion Report template (p55) provided but not actively reviewed or formally structured.</i>	
Feedback collected regularly from students regarding the impact of e-learning initiatives on their learning.	
<input type="checkbox"/> <i>No feedback collected from students on the impact of e-learning initiatives on their learning.</i>	
Feedback collected regularly from staff regarding the impact of e-learning initiatives on student learning.	
<input type="checkbox"/> <i>The project self-review template (p40) and supplied example (p31) asks for information on impact on the course (and students by implication) and teaching staff, but this is not conducted regularly and is otherwise not apparent for other technology initiatives.</i>	
Optimisation	
Information from pilot e-learning initiatives guides the allocation of support and resources for the use of piloted e-learning technologies and pedagogies.	
<input type="checkbox"/> <i>Outcomes of e-learning pilots have no impact on support and resourcing for e-learning technologies and pedagogies.</i>	
Information on the strategic impact of e-learning resource allocation criteria guides e-learning strategic planning.	
<input type="checkbox"/> <i>No use of information on the strategic impact of e-learning resource allocation criteria during institutional e-learning strategic planning.</i>	

O2: Institutional learning and teaching policy and strategy explicitly address e-learning
Delivery
E-learning technologies and pedagogies explicitly addressed in relevant institutional learning and teaching policies and strategies.
<input checked="" type="checkbox"/> <i>E-learning strategy (p46) formally and systematically includes accurate consideration of e-learning aspects of all of the technologies and pedagogies in use.</i>
Planning
Staff with experience in e-learning are formally involved in the (re)development of institutional learning and teaching strategies and policies. See also: O9(2)
<input type="checkbox"/> <i>No apparent involvement of staff with experience in the design, (re)development and delivery of e-learning in the (re)development of institutional learning and teaching strategies and policies.</i>
Students are formally involved in the (re)development of institutional strategies and policies involving e-learning. See also: O9(2)
<input type="checkbox"/> <i>No apparent involvement of students in the (re)development of institutional learning and teaching strategies and policies involving e-learning.</i>
Inclusion of e-learning aspects in relevant institutional policies and strategies is formally endorsed by the institutional leadership.
<input checked="" type="checkbox"/> <i>E-learning strategy fully endorsed by leadership (p46).</i>
Definition
Institutional policies require that the implications of e-learning are included when (re)developing new and existing policies.
<input type="checkbox"/> <i>No evidence of e-learning considerations in policy templates and guidelines.</i>
Staff are provided with support resources (including training, guidelines and examples) on how to link e-learning initiative development plans with institutional e-learning strategic plans. See also: O5(3) & O9(3)
<input type="checkbox"/> <i>No training, guidelines or examples of how to link e-learning initiative development plans with institutional e-learning strategic plans provided to teaching staff.</i>
Management
Institutional learning and teaching strategies and policies are regularly and formally reviewed to ensure e-learning aspects are addressed.
<input type="checkbox"/> <i>No reviews of the e-learning aspects of institutional learning and teaching strategies and policies.</i>
Feedback collected regularly from students regarding the effectiveness of the e-learning policies and strategies.
<input type="checkbox"/> <i>No feedback collected from students on the effectiveness of the e-learning policies and strategies.</i>
Feedback collected regularly from staff regarding the effectiveness of the e-learning policies and strategies.
<input type="checkbox"/> <i>No feedback collected from staff on the effectiveness of the e-learning policies and strategies.</i>
Optimisation
Information on the outcomes of e-learning initiatives guides learning and teaching strategy and policy (re)development.
<input type="checkbox"/> <i>No use of the outcomes of e-learning initiatives during learning and teaching strategy and policy (re)development.</i>

CO	O3: E-learning technology decisions are guided by an explicit plan	
	Delivery	
	Institutional e-learning technology plans guide the adoption of technology during e-learning initiatives.	
	<input type="checkbox"/> No institutional e-learning technology plans apparent during e-learning initiatives.	
	Planning	
	E-learning design and (re)development activities formally link decisions regarding e-learning technologies and pedagogies with the institutional e-learning technology plans.	
	<input type="checkbox"/> No evidence of consideration of institutional e-learning technology plans in design and (re)development documents and planning activities.	
	Institutional e-learning technology plans have clearly defined and empirically measureable objectives and milestones.	
	<input type="checkbox"/> No institutional e-learning technology plans apparent.	
	Institutional e-learning technology plans are formally endorsed and explicitly supported by the institutional leadership.	
	<input type="checkbox"/> No leadership endorsement of institutional e-learning technology plans apparent.	
	E-learning initiative plans include risk assessment and mitigation plans linked to the institutional e-learning technology plans and associated risk assessments.	
	<input type="checkbox"/> No risk assessment and mitigation plans apparent in e-learning initiative plans.	
	Definition	
	Institutional policies require that all e-learning initiatives comply with institutional e-learning technology plans.	
	<input type="checkbox"/> No compliance with institutional e-learning technology plans required.	
	Staff are provided with support resources (including training, guidelines and examples) on the use of e-learning technology plans as part of e-learning design and (re)development.	
	<input type="checkbox"/> No training, guidelines or examples provided to staff on using institutional e-learning technology plans to guide e-learning decisions.	
	Resources for staff e-learning development and support are allocated with reference to institutional e-learning technology plans.	
	<input type="checkbox"/> No reference to technology plans when resources allocated for staff e-learning development and support.	
Management		
Compliance with institutional e-learning technology plans during e-learning design and development activities is regularly monitored.		
<input type="checkbox"/> No monitoring of compliance with institutional e-learning technology plans during e-learning design and development activities.		
Feedback collected regularly from staff regarding the effectiveness of institutional e-learning technology plans as tools for guiding the design and (re)development of courses and programmes.		
<input checked="" type="checkbox"/> Project Self Review document (p31) may contain information but there is no specific section to comment on CITL support/materials.		
Optimisation		
Information on compliance with institutional e-learning technology plans guides e-learning initiative support and resourcing.		
<input type="checkbox"/> No information on compliance with institutional e-learning technology plans guides e-learning initiative support and resourcing.		
Institutional e-learning technology plans undergo a formal (re)assessment of risk when any significant e-learning technology failure occurs.		
<input type="checkbox"/> No apparent re-evaluation of e-learning technology plans in response to failures.		

O4: Digital information use is guided by an institutional information integrity plan
Delivery
Integrity and validity of digital information is regularly monitored.
<input type="checkbox"/> No monitoring of digital information integrity and validity apparent.
Planning
E-learning design and (re)development activities formally link decisions with institutional digital information integrity plans.
<input type="checkbox"/> No evidence of consideration of institutional digital information integrity plans in design and (re)development documents and planning activities.
All course digital information is stored in a validated backup system.
See also: D5(1) & S6(2)
<input type="checkbox"/> Dependence on LMS facilities by default, no explicit consideration of backup validation apparent.
Access to all course digital information is authenticated and authorised.
See also: S6(2)
<input type="checkbox"/> Dependence on LMS facilities by default, no explicit consideration of security issues apparent.
Definition
Institutional digital information integrity plans are defined.
<input type="checkbox"/> No apparent institutional plans for ensuring the integrity and validity of digital information.
Institutional support standards are defined for the use of digital information in e-learning design and (re)development.
<input type="checkbox"/> No standards defined on the support resources and assistance for staff using digital information when designing and (re)developing e-learning courses.
Institutional policies define how digital information is retained and accessed.
See also: L6(3) & D7(3)
<input type="checkbox"/> No guidelines or policy on information storage apparent.
Management
Compliance with institutional information integrity plans is regularly monitored.
<input type="checkbox"/> No monitoring of compliance with the institutional information integrity plan.
Feedback collected regularly from staff regarding the effectiveness of the institutional information integrity plan as a tool for guiding e-learning design and (re)development.
<input type="checkbox"/> No feedback collected from staff on the effectiveness of the institutional information integrity plan.
Optimisation
Institutional information integrity plans undergo a formal (re)assessment of risk when any significant e-learning technology failure occurs.
<input type="checkbox"/> No apparent re-evaluation of information integrity plans in response to failures.
Institutional information integrity plans are formally re-evaluated when new e-learning initiatives are considered.
<input type="checkbox"/> No apparent re-evaluation of information integrity plans in response to new e-learning initiatives.
Information on student and staff use of digital information guides institutional information integrity plan (re)development.
<input type="checkbox"/> No apparent use of information on student and staff use of digital information during information integrity plan (re)development.

O5: E-learning initiatives are guided by explicit development plans	
Delivery	
E-learning technology and pedagogy decisions are guided by an explicit e-learning development plan.	
■ CITL full proposal (p22) and Plan (p27) includes explicit alignment with institutional plans.	
Planning	
Allocation of resources for e-learning design and (re)development is aligned with course and programme e-learning development plans.	
■ Project selection criteria include explicit alignment with institutional plans (p41).	
Teaching staff are formally involved in the creation and review of e-learning initiative development plans.	
■ CITL project process includes development of Full Proposal (p22) by teaching staff with support from CITL staff.	
Students are formally involved in the creation and review of e-learning initiative development plans.	
□ No apparent involvement of students in the (re)development of e-learning initiative development plans.	
E-learning initiative development plans formally link decisions with the institutional e-learning strategies and associated operational plans.	
See also: O2(2), O3(2), O6(2), O7(2), O8(2) & O9(2)	
■ CITL full proposal (p22) and Plan (p27) includes explicit alignment with institutional plans.	
Definition	
Institutional policy requires formal linkages between e-learning initiative plans and an overarching institutional plan.	
See also: O9(3)	
□ No apparent requirement for e-learning initiative development plans to link to overarching institutional plan.	
Staff are provided with support resources (including training, guidelines and examples) on how to link e-learning initiative development plans with institutional e-learning strategic plans.	
See also: O2(3) & O9(3)	
□ No training, guidelines or examples of how to link e-learning initiative development plans with institutional e-learning strategic plans provided to teaching staff.	
Management	
Information on the success or failure of e-learning initiative development plans is regularly monitored.	
■ Project completion reports (p34) are undertaken but are unstructured and not reviewed, Project Quality Assurance Review (p39) undertaken but detailed reports not apparent.	
Feedback collected regularly from students regarding e-learning initiative development plans.	
□ No feedback collected from students on the effectiveness of the e-learning initiative development plans.	
Feedback collected regularly from staff regarding e-learning initiative development plans.	
□ The project self-review template (p40) and supplied example (p31) can include information on the effectiveness of e-learning but this information is not explicitly solicited and is not regularly collected. No overall review of CITL e-learning project and planning activities apparent.	
Optimisation	
E-learning initiative plans are analysed for potential reuse.	
□ No apparent analysis or reuse of e-learning project and initiative development plans.	
E-learning initiative plans are regularly reviewed across all courses and programmes using similar technology or pedagogies to ensure consistency and effectiveness.	
□ No apparent reviews of e-learning project and initiative development plans.	

O6: Students are provided with information on e-learning technologies prior to starting courses
Delivery
Promotional materials available to students prior to enrolment list e-learning instructions and requirements.
<input checked="" type="checkbox"/> Information available prior to enrolment contains consistent and explicit instructions and requirements for students describing e-learning technologies and pedagogies used in particular courses. Catalogue web page includes a "Technology Requirements" section (p82).
Courses include opportunities for students to practice with e-learning technologies and pedagogies.
See also: L3(1) & O7(1)
<input checked="" type="checkbox"/> LMS guest course/tutorial provided for use by students prior to starting study (p77). The example course 'Virtual Penguin' e-learning tool is designed to be used for practice and revision (p23). Neither of these are actively promoted in the course.
Planning
Course documentation describes the e-learning technologies used.
<input type="checkbox"/> 'Learning online' section of the example course outline (p15) and template (p59) includes a description of the technologies and how to use them effectively but this information is generic.
E-learning technology practice sessions or tutorials organised and provided to all students as part of the course.
See also: L3(1) & O7(2)
<input type="checkbox"/> No opportunities for students to practice with e-learning technologies and pedagogies provided.
Definition
Standards for communicating e-learning technology requirements are defined for use in all course documentation.
<input checked="" type="checkbox"/> Catalogue web page includes a "Technology Requirements" section (p82) and course outline template includes sections on equipment and resources (p56).
Teaching staff are provided with course documentation templates and examples explaining to students how to make effective use of e-learning technologies.
See also: O7(3)
<input checked="" type="checkbox"/> 'Learning online' section of the template (p59) includes a description of the technologies and how to use them effectively.
Management
Students' abilities to comply with e-learning technology and media expectations are regularly monitored.
See also: O7(4)
<input type="checkbox"/> No monitoring of students' abilities to comply with the technology and media expectations.
Feedback collected regularly from students regarding problems with technology and media that are not addressed in the provided course descriptions.
<input type="checkbox"/> No feedback collected from students regarding problems with technology and media that are not addressed in the provided course descriptions.
Feedback collected regularly from staff regarding problems with student use of technology and media that are not addressed in the provided course descriptions.
<input type="checkbox"/> No feedback collected from staff regarding student problems with technology and media that are not addressed in the provided course descriptions.
Optimisation
Information on the effectiveness of institutional standards for providing students with technology and media expectations guides the (re)development of those standards.
<input type="checkbox"/> No use of information on the effectiveness of institutional standards for providing students with technology and media expectations during (re)development of the standards.
Information on student preparedness for e-learning guides the allocation of support resources for e-learning initiatives.
See also: O7(5)
<input type="checkbox"/> No use of information on student preparedness for e-learning during e-learning initiative support planning.

O7: Students are provided with information on e-learning pedagogies prior to starting courses	
Delivery	
Promotional materials available to students prior to enrolment describe e-learning pedagogies.	
<input checked="" type="checkbox"/> Limited material describing pedagogical approach in example course outline (p12/13).	
Activities requiring the use of particular media and technologies clearly link the requirements with the stated learning outcomes of the course and activity.	
See also: L1(1), L8(1) & D3(2)	
<input type="checkbox"/> Learning activities contain similar but different objectives in assessment descriptions (pp16-18)	
Courses include opportunities for students to practice with e-learning technologies and pedagogies.	
See also: L3(1) & O6(1)	
<input checked="" type="checkbox"/> LMS guest course/tutorial provided for use by students prior to starting study (p77). The example course 'Virtual Penguin' e-learning tool is designed to be used for practice and revision (p23). Neither of these is actively promoted.	
Planning	
Course documentation describes the e-learning pedagogies used.	
See also: L7(2)	
<input type="checkbox"/> Limited information included in the example course outline introduction (p12) and Learning Online (p15) sections, focus is primarily technical.	
Learning objectives guide e-learning design and (re)development decisions regarding technology and pedagogy.	
See also: L1(2), D3(2) & O6(2)	
<input checked="" type="checkbox"/> Student learning outcomes required in project design documents (p51 & 53). Learning objectives referred to in both project full proposal (p22) and project plan (p27), however different language used to express the objectives. Use of the learning objectives to guide activity selection also evident (p28) 'Overview of project deliverables'.	
E-learning skills practice sessions or tutorials organised and provided to all students as part of the course.	
See also: L3(1) & O6(2)	
<input type="checkbox"/> No opportunities for students to practice with e-learning technologies and pedagogies provided.	
Definition	
Standards for communicating the pedagogical rationale for e-learning technology requirements are defined for use in all course documentation.	
<input type="checkbox"/> No standards for communicating the pedagogical rationale for e-learning technology requirements of courses and programmes are defined.	
Teaching staff are provided with course documentation templates and examples explaining to students how to make effective use of e-learning technologies.	
See also: O6(3)	
<input checked="" type="checkbox"/> Course outline template includes standard Learning Online section (p59).	
Teaching staff are provided with support resources (including training, guidelines and examples) on supporting student e-learning skill acquisition.	
<input type="checkbox"/> Optional training programme evident from CITL Academic Development Programme Brochure (pp85-86): "Moderating Online Discussions" optional workshop provided. LMS workshops also include some aspects.	
Management	
Students' compliance with the pedagogical expectations arising from e-learning is regularly monitored.	
<input type="checkbox"/> No monitoring of students' compliance with the pedagogical expectations arising from e-learning.	
Feedback collected regularly from students regarding the clarity and utility of the information provided.	
<input type="checkbox"/> No feedback collected from students regarding the clarity and utility of the supplied information.	
Feedback collected regularly from staff regarding the clarity and utility of the information provided.	
<input type="checkbox"/> No feedback collected from staff regarding the clarity and utility of the supplied information.	
Optimisation	
Information on student preparedness for e-learning guides allocation of support resources for e-learning initiatives.	
See also: O6(5)	
<input type="checkbox"/> No use of information on student preparedness for e-learning during e-learning support planning.	

O8: Students are provided with administration information prior to starting courses
Delivery
Promotional materials available to students prior to enrolment list administrative requirements.
<input checked="" type="checkbox"/> Information available prior to enrolment contains consistent and explicit descriptions of the administrative requirements and procedures that apply to students. Course outline available prior to enrolment (p82). Course outline example (p12) and template (p56) includes standard administrative information.
Planning
Course documentation provides the administrative requirements of the course and institution.
<input checked="" type="checkbox"/> Course outline template includes standard administrative information (p56).
Definition
Standards for communicating the administrative requirements of the course and institution are defined for use in all course documentation.
<input checked="" type="checkbox"/> Course outline template includes standard administrative information (p56).
Staff are provided with support resources (including training, guidelines and examples) in supporting student compliance with administrative requirements.
<input type="checkbox"/> No training, guidelines or examples provided to staff on supporting students with administrative concerns.
Management
Students' compliance with the administrative requirements of the course and institution is regularly monitored.
<input type="checkbox"/> No monitoring of students' compliance with the administrative requirements of the course and institution.
Feedback collected from students on the clarity and utility of the supplied administrative information.
<input type="checkbox"/> No feedback collected from students regarding the clarity and utility of the supplied administrative information.
Feedback collected from staff on the clarity and utility of the supplied administrative information.
<input type="checkbox"/> No feedback collected from staff regarding the clarity and utility of the supplied administrative information.
Optimisation
Information from student feedback guides allocation of resources for administrative support services.
<input type="checkbox"/> No use of information from student feedback during administrative support planning.
Student and staff communication plans incorporated into any new administration procedures.
<input type="checkbox"/> No apparent staff or student communication plans.

O9: E-learning initiatives are guided by institutional strategies and operational plans	
Delivery	
E-learning initiative resource allocation is explicitly linked to the institutional e-learning strategies and technology plans.	
See also: O1(3)	
<input checked="" type="checkbox"/> CITL project selection criteria (p41) include explicit linkage to institutional plans.	
Strategic impact and contribution of e-learning technologies and projects is evident in institutional governance activities.	
<input checked="" type="checkbox"/> E-learning strategy (p46) conveys institutional governance engagement with e-learning.	
Planning	
Staff with experience in e-learning are formally involved in the (re)development of institutional learning and teaching strategies and policies.	
See also: O2(2)	
<input type="checkbox"/> No apparent involvement of staff in the (re)development of institutional learning and teaching strategies and policies.	
Staff are recognised and rewarded for their engagement with innovative e-learning initiatives.	
See also: D1(2), S5(2) & E2(2)	
<input type="checkbox"/> Time allocation for Teaching Staff is made as part of the CITL project budget process (p26). No evidence of other incentives.	
Students are formally involved in the (re)development of institutional strategies and policies involving e-learning.	
See also: O2(2)	
<input type="checkbox"/> No apparent involvement of students in the (re)development of institutional learning and teaching strategies and policies involving e-learning.	
Support for e-learning projects and initiatives is formally linked to strategic and operational outcomes.	
<input checked="" type="checkbox"/> CITL project selection criteria (p41) include explicit linkage to institutional plans.	
Definition	
Institutional policy requires formal linkages between e-learning initiative plans and an overarching institutional plan.	
See also: O5(3)	
<input type="checkbox"/> No apparent requirement for e-learning initiative development plans to link to overarching institutional plan.	
Staff are provided with support resources (including training, guidelines and examples) on how to link e-learning initiative development plans with institutional e-learning strategic plans.	
See also: O2(3) & O5(3)	
<input type="checkbox"/> No training, guidelines or examples of how to link e-learning initiative development plans with institutional e-learning strategic plans provided to teaching staff.	
Management	
Success or failure of e-learning initiatives in supporting the achievement of strategy and business goals is regularly monitored.	
<input type="checkbox"/> Project completion reports (p34) may include some information but no specific section or encouragement to consider strategic aspects provided.	
Feedback collected regularly from students regarding the strategic and operational e-learning goals of the institution.	
<input type="checkbox"/> No feedback collected from students on the strategic and operational e-learning goals of the institution.	
Feedback collected regularly from staff regarding the strategic and operational e-learning goals of the institution.	
<input type="checkbox"/> Project Self Review (p31) may include some information but no specific section or encouragement to consider strategic aspects provided.	
Financial costs and benefits of e-learning projects and initiatives regularly monitored.	
<input type="checkbox"/> No monitoring of the financial costs and benefits of e-learning projects and initiatives.	
Optimisation	
Information on the outcomes of e-learning initiatives guides reuse of e-learning strategic planning and management documents.	
<input type="checkbox"/> No apparent analysis or reuse of e-learning strategies and management documents.	
Information on the outcomes of e-learning initiatives guides regular (re)assessment of the effectiveness of governance and management mechanisms.	
<input type="checkbox"/> No assessment of the effectiveness of e-learning governance and management mechanisms apparent.	

Appendix B: Institutional Process Capability Comparisons

L1: Learning objectives guide the design and implementation of courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L2: Students are provided with mechanisms for interaction with teaching staff and other students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L3: Students are provided with e-learning skill development					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L4: Students are provided with expected staff response times to student communications					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L5: Students receive feedback on their performance within courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L6: Students are provided with support in developing research and information literacy skills					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L7: Learning designs and activities actively engage students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L8: Assessment is designed to progressively build student competence					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L9: Student work is subject to specified timetables and deadlines					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

L10: Courses are designed to support diverse learning styles and learner capabilities					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D1: Teaching staff are provided with design and development support when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D2: Course development, design and delivery are guided by e-learning procedures and standards					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D3: An explicit plan links e-learning technology, pedagogy and content used in courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D4: Courses are designed to support disabled students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D5: All elements of the physical e-learning infrastructure are reliable, robust and sufficient					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D6: All elements of the physical e-learning infrastructure are integrated using defined standards					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

D7: E-learning resources are designed and managed to maximise reuse					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

S1: Students are provided with technical assistance when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

S2: Students are provided with library facilities when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

S3: Student enquiries, questions and complaints are collected and managed formally					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

S4: Students are provided with personal and learning support services when engaging in e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

S5: Teaching staff are provided with e-learning pedagogical support and professional development					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

S6: Teaching staff are provided with technical support in using digital information created by students					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

E1: Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

E2: Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

E3: Regular reviews of the e-learning aspects of courses are conducted					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O1: Formal criteria guide the allocation of resources for e-learning design, development and delivery					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O2: Institutional learning and teaching policy and strategy explicitly address e-learning					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O3: E-learning technology decisions are guided by an explicit plan					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O4: Digital information use is guided by an institutional information integrity plan					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O5: E-learning initiatives are guided by explicit development plans					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O8: Students are provided with administration information prior to starting courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O6: Students are provided with information on e-learning technologies prior to starting courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O9: E-learning initiatives are guided by institutional strategies and operational plans					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

O7: Students are provided with information on e-learning pedagogies prior to starting courses					
	1	2	3	4	5
University A					
University B					
University C					
University D					
University E					
University F					
University G					
Polytechnic Z					
Polytechnic Y					
Polytechnic X					
Polytechnic W					
University of the South Pole					

	University A	University B	University C	University D	University E	University F	University G	Polytechnic Z	Polytechnic Y	Polytechnic X	Polytechnic W	USP Example
Learning: Processes that directly impact on pedagogical aspects of e-learning												
L1. Learning objectives guide the design and implementation of courses												
L2. Students are provided with mechanisms for interaction with teaching staff and other students												
L3. Students are provided with e-learning skill development												
L4. Students are provided with expected staff response times to student communications												
L5. Students receive feedback on their performance within courses												
L6. Students are provided with support in developing research and information literacy skills												
L7. Learning designs and activities actively engage students												
L8. Assessment is designed to progressively build student competence												
L9. Student work is subject to specified lineables and deadlines												
L10. Courses are designed to support diverse learning styles and learner capabilities												
Development: Processes surrounding the creation and maintenance of e-learning resources												
D1. Teaching staff are provided with design and development support when engaging in e-learning												
D2. Course development, design and delivery are guided by e-learning procedures and standards												
D3. An explicit plan links e-learning technology, pedagogy and content used in courses												
D4. Courses are designed to support disabled students												
D5. All elements of the physical e-learning infrastructure are reliable, robust and sufficient												
D6. All elements of the physical e-learning infrastructure are integrated using defined standards												
D7. E-learning resources are designed and managed to maximise reuse												
Support: Processes surrounding the support and management of e-learning												
S1. Students are provided with technical assistance when engaging in e-learning												
S2. Students are provided with library facilities when engaging in e-learning												
S3. Student enquiries, questions and complaints are collected and managed formally												
S4. Students are provided with personal and learning support services when engaging in e-learning												
S5. Teaching staff are provided with e-learning pedagogical support and professional development												
S6. Teaching staff are provided with technical support in using digital information created by students												
Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle												
E1. Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience												
E2. Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience												
E3. Regular reviews of the e-learning aspects of courses are conducted												
Organisation: Processes associated with institutional planning and management												
O1. Formal criteria guide the allocation of resources for e-learning design, development and delivery												
O2. Institutional learning and teaching policy and strategy explicitly address e-learning												
O3. E-learning technology decisions are guided by an explicit plan												
O4. Digital information use is guided by an institutional information integrity plan												
O5. E-learning initiatives are guided by explicit development plans												
O6. Students are provided with information on e-learning technologies prior to starting courses												
O7. Students are provided with information on e-learning pedagogies prior to starting courses												
O8. Students are provided with administration information prior to starting courses												
O9. E-learning initiatives are guided by institutional strategies and operational plans												

	Not practised/not adequate
	Partially adequate
	Largely adequate
	Fully adequate
	Not assessed