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Tectonic Plates: Leading and Advancing Technology Enhanced Learning

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<http://dx.doi.org/10.5772/intechopen.68667>

Abstract

A blended approach to teaching in higher education, which integrates online with face-to-face teaching, has been found to result in higher student satisfaction, increased student motivation and positive student performance and outcomes. Blended learning promotes flexibility, self-pacing and access as well as providing manageable solutions to issues associated with large classes. However, the adoption of blended learning in higher education frequently relies on repackaging traditional teaching approaches in a new medium rather than harnessing the potential of incorporating online or eLearning pedagogies. Effective online learning requires academics to rethink how they might transform old practices utilising the affordances of new and emerging technologies. This transition involves considerable realignment of pedagogical approaches and a shift in the existing culture. Further, it necessitates appropriate professional development and support. This chapter describes an initiative that sought to support and guide the advancement of eLearning through the conceptualisation of an eTeaching Framework. The resulting Framework could be used at an individual, unit, and institution level to inform staff professional development, probation, promotion and recruitment, funding and support decisions, and evaluation and progression of online learning.

Keywords: eTeaching, eLearning, capability Framework, pedagogy, transformation

1. Introduction

Blended learning is a term that broadly refers to the integration of online with face-to-face teaching [1]. It is an approach that has been found to result in high student satisfaction, better student performance and increased student motivation. Further, the advantages of blended

learning include flexibility, self-pacing, and access as well as a solution to issues associated with large classes [1]. However, the adoption of blended learning in higher education tends to rely on repackaging traditional teaching approaches, rather than harnessing the potential of emergent online or eLearning pedagogies and technologies [2]. The effective integration of eLearning requires academics to rethink how they might transform traditional practices to embrace the affordances of new and emerging technologies and pedagogies. For universities it requires significant change and adaption to accommodate the impact of technology on learning [3]. This does not necessarily mean replacing old technologies but rather subtly changing how and when they are used [2]. Similarly, pedagogical progression is in relation to education theories and models [4]. Some illustrations of how technology and pedagogy might transition from traditional to emergent are outlined in **Table 1**.

	Traditional	Emergent
Technology	Printed text, books, oral narration, visual media (e.g. TV, photographs, movies), note-taking, word-processed documents,	Computers, mobile phones, ipods, email, web-based resources, social networking, wikis, podcasts, content management and learning management systems
Pedagogy	Drill and practice approach to learning, transmission mode of teaching, behaviourism, cognitivist approaches, experiential learning, posting to discussion board, downloading content for face-to-face interaction, 'Sage on the stage', academic role is one of instructor	Self-directed learning, co-authoring and networking, Communities of Practice, Connectivist approaches, creating wikis and blogs, fully online courses that are accessed anytime, anywhere, 'Guide on the side', academic role is one of instructor

Table 1. Illustrations of how traditional approaches to learning might transform in an online environment [2, 4].

Transformation and effective integration of eLearning not only require considerable realignment of pedagogy and assimilation of new and emergent technologies, it also involves a shift in the existing teaching culture. Some higher education teachers are reluctant to embrace the affordances of eTeaching and this has a detrimental impact on students' learning [5]. There are many reasons for this reluctance: (a) perceptions that online learning erodes teachers' status; (b) fear that teachers will be shown up as incompetent due to lack of ability and knowledge in basic technology; (c) lack of technological expertise; (d) resistance to change; (e) lack of incentives and rewards to facilitate eLearning; and (f) being overwhelmed by the rapidly changing technological environment [5–7]. Teachers' perceptions, attitudes and abilities in online teaching and learning are significantly linked to their utilisation of technology and integration of eTeaching approaches [3, 6]. Studies suggest that a current lack of research on academics' blended learning practices as well as the lack of appropriate professional development and support, are barriers to the adoption of eTeaching approaches [1, 6, 8].

Fear and uncertainty in eTeaching needs to be alleviated if transformation of pedagogy and adoption of new technologies is to be achieved. The literature suggests that this transformation can be initiated and progressed through strategic planning and initiatives that include:

- Professional development:
 - Guides how technology can be integrated into teaching strategies, such as curriculum materials developed from eLearning technologies and accessed from a variety of media.
 - Elucidates how innovative student-centred learning experiences can be created, for example, through the use of a range of tools and technologies to enhance learning.
 - Strengthens understanding of pedagogical, technical, and content knowledge.
- Learning design and styles are offered in the context of online education, meaning appropriate pedagogy is adopted in selection and use of eLearning technologies.
- Students' online learning needs are addressed, such as access to necessary hardware and software, proficiency in using technology, and adequate written communication skills.
- The provision of institutional infrastructure and support is provided, including learning management systems, help desk assistance and intuitive software programs that operate proficiently across all technology platforms.
- Blended learning scholarship and research is ongoing, for example research into academic blended learning practice, the pedagogical value of technology in learning contexts, or the most effective means of transitioning from traditional instruction to online teaching.
- The re-imagination of technology enhanced assessment approaches are encouraged, for example podcasts, video vignettes, and wikis [1, 7, 8].

Given these recommendations for supporting eTeaching and eLearning transformation, this chapter presents a Framework designed to support, guide and inform learning and teaching transpiring in an online environment. The intention is for the framework to compliment University eLearning Strategic Plans and be of value and have applicability across the higher education sector. The focus of the Framework is centred on (a) the promotion of excellence in learning and teaching and guiding the development and administration of curriculum renewal, (b) pedagogical practice and the ongoing adoption and integration of educational technologies and (c) supporting innovative approaches to teaching and learning. This chapter describes the initiative that resulted in the Framework, the iterations that the Framework progressed through, and offers suggestions for how the Framework might be used at the individual, unit, and institutional levels.

2. A Framework to guide and support the development of academics' eTeaching capabilities

The ability to adapt to change has been highlighted as a crucial factor in the successful transition from traditional to emergent eLearning and eTeaching approaches [2, 3]. The role of the eTeacher is constantly evolving and, as such, difficult to explicate, develop, evaluate or quantify [5]. Descriptions of eTeaching and eTeachers include: those who use technology teaching tools [6]; "instructor, designer, guide, mediator, curator and mentor" ([2], p266); role-model

in the effective use of technology for learning [5]; and having a sound understanding of technology as well as encouraging eLearning [8]. There is still recognition that a good teacher in an online environment is no different in principle to a good teacher in the face-to-face setting. That is, they require “awareness of student needs, levels of understanding and knowledge, ability to plan effective learning experiences, ability to communicate accessibly and stay in touch not just with current discipline knowledge but also with contemporary influences on students’ learning” ([5], p267). eTeaching and eTeachers have been acknowledged as more aligned and therefore skilled in regard to technology related principles and capabilities [1]. It is in reference to these principles and capabilities that interventions are needed, to develop academics’ eTeaching, so that contemporary pedagogically appropriate approaches are used in the online environment [1, 3, 7].

Effective eTeachers need expertise in pedagogical, social, managerial and technical capabilities [2, 7, 8]. Further, the literature suggests that successful eTeaching requires attendance at a range of diverse professional development and training opportunities [6, 7], more research into blended learning and associated academic practice [1, 6], and supportive systems and institutional infrastructure [1, 3, 9]. This inventory of requirements informed the conceptualisation of the Framework that was developed as part of the initiative that is the focus of this chapter. In this chapter the reference to capabilities encompasses both the individual’s ability to do ‘something’ as well as the extent to which they can do ‘something’. eTeaching capabilities provide a means of defining the sequentially developmental implementation and utilisation of tasks and resources to promote student engagement, learning outcomes and experience. These capabilities enable both student and teacher performance to be purposely organised in a progressive sequence that builds on prior learning and ensures foundational skills are acquired before progressing to complex levels of competence.

Across the higher education sector, learning and teaching standards are being increasingly used as a means of establishing the knowledge and skills that are important for effective learning and sound teaching as well as guiding and progressing change. These standards and their associated criterion assist universities to prioritise and better use resources as well as enabling the astute identification of potential enhancements [10].

As a mean of assisting academics and institutions to transition and navigate through the terrain of eLearning and eTeaching, change targeted resources and initiatives have been developed [2, 3, 7]. These resources and initiatives have focused on the dimensions of technology, pedagogy and context, and the aligning of these dimensions when designing eLearning environments [2–4, 7]. The emergent technologies incorporated in eLearning resources and initiatives include mobile devices as well as social media and networks. Connectivism, Communities of Practice (COP) and other co-authoring learning styles are relevant pedagogies to consider for the eLearning environment. Connectivism is a new learning theory that describes how technologies afford opportunities for individuals to learn through the virtual sharing and communication of information. A key feature of connectivism is peer and self-directed learning that transpires through technologies such as Web browsers, email, online discussion forums, wikis, YouTube, or any other means by which information can be shared. Communities of Practice (COP) is a reference to the process of shared learning in relation to a

particular area of concern or interest. COP foster relationships, the engagement and interaction of individuals to collectively learn about a topic or how to do things better. Co-authoring is the essence of these learning styles whereby learning does not occur in a one-way direction but rather is jointly constructed by two or more people.

The initiative that is a focus of this chapter sought to develop a resource that would promote and support the progression of eLearning and eTeaching across both the faculty and broader institution.

3. The initiative

Discussions with key personnel at the University of Wollongong highlighted the absence of a specific framework to further develop eLearning and eTeaching at this institution. It was rationalised that the establishment of such a framework could provide a consistent understanding of the dimensions of eLearning and eTeaching and that it could also guide and inform the aspirational goals for teacher development in eLearning and ensure that eLearning and eTeaching was sustainable, innovative, adequately supported, and effectively reviewed.

The project team sought and acquired institutional funding to support the development of the Framework, including strategic collaboration with an international higher education partner, which had extensive experience with delivering online courses. The project team engaged in a comprehensive global search of the higher education sector to identify world leaders with a reputation for excellence in online learning and teaching. There were other criteria used to narrow this search including geographical location being a prioritised partnering location for the University, the strategic priorities of the partner institution aligning to the University's priorities, and the potential to establish a partnership with a university that was not already a partner institution of the University.

A subsequent partnership with the Indira Ghandi National Open University (IGNOU) was forged. IGNOU is situated in India and delivers approximately 228 certificate, diploma, degree and doctoral programmes to over "3 million students in India and other countries through 21 Schools of Studies and a network of 67 regional centres, around 2,667 learner support centres and 29 overseas partner institutions" ([11], preamble paragraph 3). The University has nearly 810 faculty members, 574 academic staff and approximately 33,212 academic counsellors [11]. IGNOU has been recognised internationally for its use of innovative technologies and methodologies and the provision of seamless student-centred quality education across numerous learning platforms and management systems. IGNOU has an abundance of online programs and web-based methods to enhance the teaching and learning processes of their programs [11]. Given this reputation and acumen, collaborating with them was viewed as being strategic, viable and beneficial.

The Framework initiative was implemented across a number of developmental stages (see **Figure 1**), which iteratively developed and progressed versions of the consequent Framework. Underpinning the Framework was an extensive review of literature related to principles and

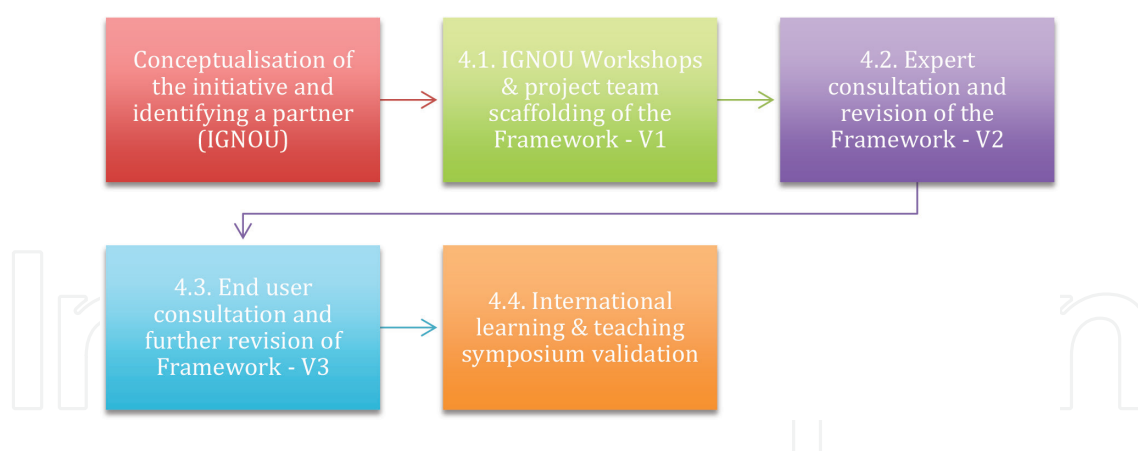


Figure 1. The methodological stages that were implemented across the course of the initiative.

practices of effective online teaching and with a specific focus on the benchmarking of learning and teaching. As a consequence of this literature review, the project team established that in the online environment students need to have a variety of interactions that are separated into self-contained segments and that provide assessment and constructive feedback on mastery of each interaction.

3.1. Workshops to scaffold the Framework

The seed funding, secured from the University of Wollongong International Committee, supported the initial development of the Framework. This funding enabled the project team to travel to India to work with IGNOU partners. The initial face-to-face meeting in India, was considered essential to establish a strong relationship and harness the concerted efforts of the team members from the partner organisation. The first iteration of the Framework was conceptualised across a number of structured workshops, specifically designed to facilitate comprehensive discussions on important aspects of effective online learning. These workshops were followed by collaborative project team sessions that further developed and conceptualised the Framework. Prior to the workshops, a detailed work plan and associated schedule was negotiated, which comprised 1 day of collaborative engagement involving both the institutional teams, followed by a day where just the project team worked on contextualising the joint output for the UOW environment. This work plan and schedule were arranged for 4 days with Day 5 focussing on mapping a strategic plan for finalising the Framework and identifying potential future collaborative projects, between the two institutions/teams, which could be fostered out of this principle initiative. The primary focus of the workshops was to rationalise the elements, knowledge, skills, and enablers for eLearning that would inform the development of the Framework. The following questions guided discussions and planning that transpired across the workshop days:

- Are the capabilities and criteria appropriate and organised logically and aptly?
- Are there any capabilities/criteria missing?
- Is there indicative evidence that could inform the assessment of the criteria/capabilities?

- Are there any capabilities that should be rationalised as minimum standards?
- Where/How should the institutional enablers be recorded, if at all?
- Are there any other questions that need to be asked/addressed?

Figure 2 and **Table 2** are the first version of the Framework that resulted from the stage 1 workshops. This initial Framework illustrates early thinking about the elements of eLearning that were being considered, the responsibilities associated with delivering these elements and the first attempt to differentiate between eLearning and eTeaching capabilities. This version of the Framework comprises a set of responsibilities, grouped under three themes of (1) Teacher Capability and Scholarship, (2) Curriculum Design, Delivery and Evaluation and (3) Student Progress and Achievement, and then assignment of responsibilities according to whom it was perceived should have the associated accountability – teacher or institution.

The process undertaken to differentiate between eLearning and eTeaching capabilities involved a number of iterative discussions between the project team as well as consultation with the project partner IGNOU. The conceptualisation by the project team of the capabilities and practices pertinent to eTeaching are illustrated in **Figure 2**. This figure was designed to incorporate key components of eTeaching, which were rationalised as: Paradigm 1 Teacher Capability and Scholarship; Paradigm 2: Curriculum design, delivery and evaluation; and Paradigm 3: Student

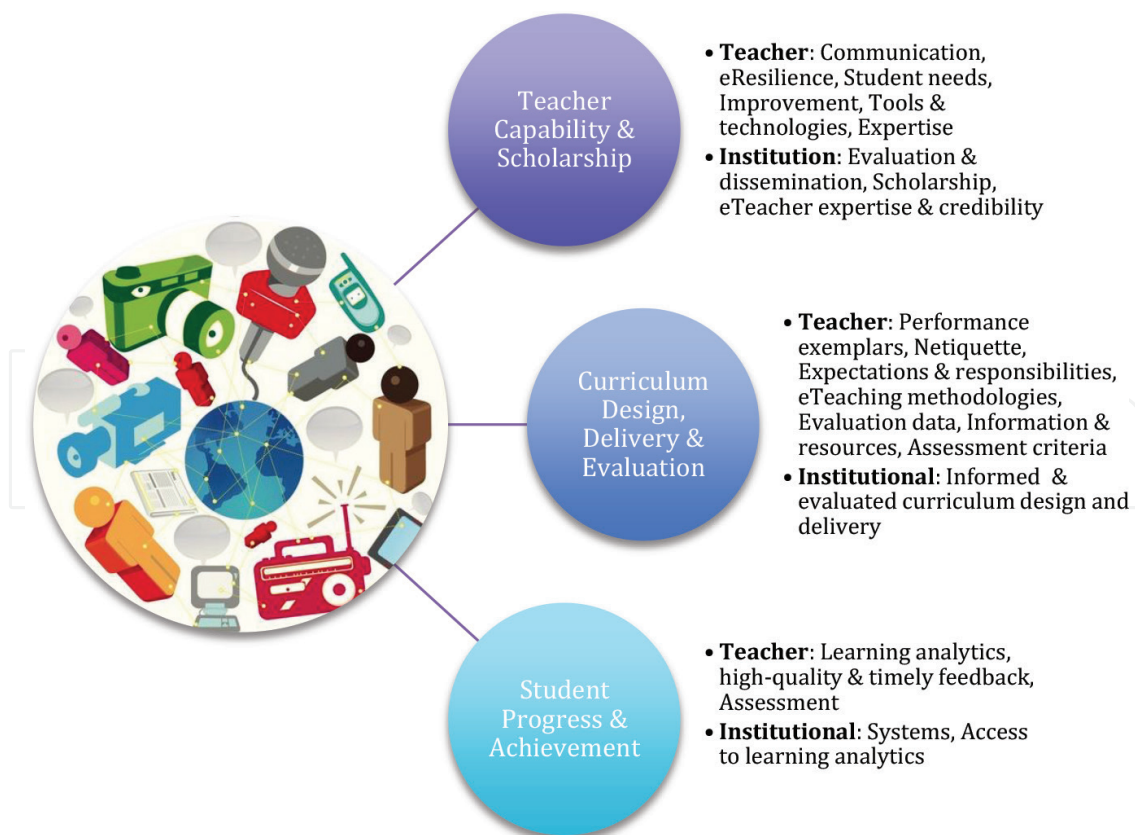


Figure 2. The first iteration of the Framework.

Progress and achievement. Each of the three paradigms of the Framework incorporated both teacher and institution responsibilities because the project team and IGNOU partners established that for eTeaching development, both teachers and institutions shared the key responsibilities.

The responsibilities that were identified as being critical to the three paradigms associated with the first iteration of the Framework are detailed in **Table 2**. These responsibilities focused on communication, role-modelling, student support and engagement, effective facilitation of learning that is informed by evidence; and pedagogy for teachers. For institutions the Framework identified responsibilities aligned to quality assurance and evaluation as well as the promotion and facilitation of best practice. The development of the specific responsibilities that were rationalised for teachers and institutions emerged as a result of the brainstorming activities undertaken by the project team. These brainstorming activities started by identifying the broad areas that were perceived to contribute to successful eTeaching and then conceptualising the specific responsibilities that would most significantly contribute to these success factors in relation to the individual teaching and the institution (acknowledged to collectively be the Faculty, School, Department or Institution). After conceptualising the responsibilities there was some synthesis and further rationalising of responsibilities, which eventually arrived at the first iteration of the Framework detailed in **Table 2**.

	Teacher capability & scholarship	Curriculum design, delivery & evaluation	Student progress & achievement
Teacher responsibilities	<ul style="list-style-type: none"> Communicate clearly & convincingly Promote, exercise & facilitate eResilience¹ Recognise & appropriately respond to students' learning needs Use feedback to inform & improve eTeaching & the curriculum Utilise suitable tools & technologies eTeachers have appropriate subject & pedagogical expertise/credibility 	<ul style="list-style-type: none"> Exemplars of desired assessment performance are provided Netiquette² is explicitly stated, promoted & maintained Realistic indications of time & effort commitments are explicitly stated eLearning & eTeaching expectations & responsibilities are explicitly stated A range of appropriate eTeaching methodologies are used & used effectively Programme evaluation data is regularly reviewed which then informs eLearning/eTeaching Students & teachers have adequate information & resources to meaningfully engage in the eLearning/eTeaching Assessment marking criteria are clearly stipulated, applied and moderated 	<ul style="list-style-type: none"> Learning analytics informs the facilitation of student progress & achievement High-quality feedback is provided to students Timely feedback is provided to students The efficiency, efficacy & relevance of strategies employed to assess student progress & achievement is regularly reviewed & renewed eTeaching reflection informs the renewal of strategies employed to assess student progress & achievement

	Teacher capability & scholarship	Curriculum design, delivery & evaluation	Student progress & achievement
Institutional responsibilities (these may be associated with faculty, school, or department accountability)	<ul style="list-style-type: none"> Content, facilitation & efficacy of eTeaching is regularly & rigorously evaluated & the outcomes are disseminated publicly Scholarship of eLearning & eTeaching is widely disseminated eTeachers have appropriate subject & pedagogical expertise/credibility 	<ul style="list-style-type: none"> The curriculum is informed by contemporary educational scholarship The curriculum is developmentally sequenced & suitable paced Feedback is used to inform & improve the curriculum Learning outcomes are clear The curriculum is designed to ensure specified learning outcomes are achieved Learning outcomes are constructively aligned to assessment tasks & curriculum content The University regularly provides programme evaluation data to relevant stakeholders including eTeachers Marking criteria are clearly linked to the intended learning outcomes & assessment tasks eLearning & eTeaching expectations & responsibilities are explicitly stated Students and teachers have adequate information & resources to meaningfully engage in the eLearning/eTeaching activities Programme evaluation data is regularly reviewed & informs continuing eLearning/eTeaching development University systems exist to collect & store programme evaluation data, including student feedback University resources ensure access to high quality & timely support for the development of eLearning materials 	<ul style="list-style-type: none"> University systems exist to collect & store data regarding student progress & achievement The University regularly provides eTeachers with access to learning analytics to assist them to identify students 'at risk' of not progressing or achieving The University provides an online system to facilitate students to collect & collate evidence of their progress & achievement throughout their programme

¹eResilience in this framework refers to the ability of those using technology to bounce back after a negative encounter. It includes the ability of the user to learn from, change and adapt to the situation and technology use, ultimately developing the flexibility needed to deal with the uncertainties and harness the opportunities of technology.

²Netiquette refers to commonly accepted conventions of behaviour in a networked online environment.

Table 2. Version 1 of the Framework and the associated eTeaching responsibilities.

3.2. Refinement and revision of the Framework

Following the conceptualisation, refinement and creation of the first version of the Framework, the project team initiated an expert review and consultation. This involved the identification of senior higher education leaders from Australia who were reputed globally for their significant experience and expertise in eLearning and/or eTeaching. These experts were identified on the basis that peers considered them to have extensive knowledge, prolific publications and advanced capabilities in online learning and teaching. The project team sent the framework to these identified senior higher education leaders for feedback as critical friends. This group of critical friends were invited to provide comment on the importance or usefulness of this first iteration of the Framework. They were also asked to identify any additional responsibilities that would be relevant and necessary inclusions in the Framework. Finally, they were asked to indicate any similar resources that may be useful in informing the ongoing development of the Framework. On receipt of their feedback, the project team met to discuss the recommendations and then further refine the Framework. This resulted in the creation of version two of the framework (See **Table 3**). This version of the Framework comprised a set of principles/capabilities instead of responsibilities, which could be used to identify the professional development needs that could advance academics and institutions in regard to their eTeaching performance. The primary focus of the first iteration of the Framework was maintained in this second iteration of the Framework but greater detail in relation to some of the responsibilities, now principles/capabilities, was incorporated. Those critiquing the Framework did not always glean the intent of some of the responsibilities. This highlighted the need to not only provide further explanation to clarify what was intended in some of the responsibilities but also in some cases add additional principles/capabilities or tease a principle/capability out to two or more subsequent principles/capabilities. The organisation of the Framework was also significantly revised to present the Framework more holistically for different levels of engagement and operationalization. The principles/capabilities were worded and framed to encourage stakeholders to engage personally with the aspiration of how eTeaching and eLearning could be enhanced. The anticipated stakeholders who would use this Framework were notionally identified as teachers including sessional staff, subject coordinators or those with leadership responsibility for teaching and the institution. It was acknowledged that the institution was more concerned with enabling others than having specific principles/capabilities to facilitate eTeaching.

3.3. End user consultation and revision of the Framework

The next stage of the Framework development encompassed consultation with end users via an online survey and facilitated focus groups. These end users and key stakeholders were identified as potentially being the most impacted and influenced by the implementation of the Framework, particularly in relation to operations, management, career planning, promotion and probation.

The online anonymised survey and focus groups were advertised through professional organisations and institutional channels. In addition to basic profile questions about gender and place of work, both the survey and focus groups explored the following questions:

Teacher including sessional staff at subject level

Capable eTeachers:

- Communicate appropriately clearly and convincingly including but not limited to:
 - Avoiding use of technical language and jargon
 - Providing clear concise subject information
 - Providing compelling explanation of the importance and relevance of the subject to the students
- Model, monitor and maintain appropriate netiquette
- Promote, exercise and facilitate eResilience including but not limited to:
 - Being open to the use of new and emerging technologies
 - Actively seeking opportunities for enhancing pedagogy through the use of new and emerging technologies
 - Willingly trying new and emerging technologies with persistence and commitment to acquiring expertise in those technologies that may advance pedagogy
 - Effectively managing technology setbacks, anxieties or failures
- Recognise and appropriately respond to students including managing their expectations and support needs for online learning
- Reflect on their own performance and subject delivery in light of content feedback and subject level learning analytics to inform and improve eTeaching
- Select appropriate eTeaching tools and technologies relevant for desired learning outcomes and uses them effectively
- Have appropriate subject and pedagogical expertise/credibility
- Ensure an evidence-base informs their eTeaching practice
- Work collaboratively with members of the eTeaching team to ensure consistency in the facilitation and quality of student learning and assessment experiences

Subject coordinator at subject level

Capable eTeaching subject coordinators:

- Provide exemplars of desired student performance in assessment tasks
- Ensure that relevant eTeaching and eLearning information is explicitly stated in subject materials, including but not limited to:
 - Netiquette
 - Realistic indications of time and effort commitments
 - Assessment marking criteria
 - eLearning expectations
 - eTeaching responsibilities
- Encourage eTeachers to use a range of appropriate eTeaching tools and technologies relevant for desired learning outcomes
- Regularly reflect on evaluation data to inform eLearning/eTeaching strategies and content
- Ensure eTeachers have adequate information and resources to meaningfully facilitate eTeaching
- Ensure that appropriate assessment techniques are employed for electronic assessments

Institutional enablers

eTeaching administrators ensure that:
<ul style="list-style-type: none">• University resources ensure access to high quality and timely support for the development of eLearning materials• The University provides robust and reliable technical systems• The University regularly provides eTeachers with access to learning analytics to assist them to identify students 'at risk' of not progressing or achieving/facilitate student progress and achievement• The University provides an online system to facilitate students to collect and collate evidence of their progress and achievement throughout their programme• Content, facilitation and efficacy of eTeaching is regularly and rigorously evaluated and the outcomes are disseminated publicly• Scholarship of eLearning and eTeaching is widely disseminated

Table 3. The second iteration of the Framework.

- To what extent could the eTeaching principles and capabilities be useful in developing your learning and teaching?
- What are the most important or useful eTeaching principles and capabilities? Why?
- What are the least important or useful eTeaching principles and capabilities? Why?
- Can you identify additional eTeaching principles and capabilities that would be useful in building teaching capacity to enhance the online learning of students?
- What are some similar resources that may be useful in informing the development of the eTeaching principles and capabilities?

A total of five facilitated Focus Groups were held in 2014 and there were 10 respondents to the online survey. Participant’s responses diverted largely into ‘examples of practice’ and suggestions for ‘how tos’, which spoke more to personal journeys towards eTeaching than offering comment on the Framework. Transcripts of the focus groups were created and the survey responses were added to these data sets, all of which were analysed by an external researcher. The project team met to discuss the findings from the analysis of both the focus group transcripts and the online survey. This discussion incorporated a consideration of the perceived relevance and usefulness of the framework as well as how aspects of the framework could be enhanced.

Based on the feedback and findings, the project team decided to audit other frameworks that were highly regarded by the sector and used for assessing and progressing quality learning and teaching. These subsequent identified resources were evaluated using four criteria: presentation; content; usability and potential alignment to the Framework. A synopsis of the relevance of these identified resources and how they informed the refinement of the Framework is detailed in **Table 4**.

Version three of the Framework saw the project team also refine the visual presentation of information. This third iteration of the Framework was sent electronically to the IGNOU team for them to review, provide feedback, and annotate. Their feedback was incorporated into the

Resource	Presentation	Content	Usability	Alignment
ACODE benchmarks for technology enhanced learning M. Sankey 2014		X		X
Australian university teaching criteria & standards Framework	X	X		X
The UK professional standards Framework for teaching and supporting learning in higher education academy 2011	X			
SOE: standards online education M. Parsell 2013 Version 1		X	X	

Table 4. Existing quality learning and teaching resources and a summary of how they informed the 3rd iteration of the Framework.

third version of the Framework (See **Table 5**). This version of the Framework established a set of seven criteria that it was perceived provided a scaffold under which all of the rationalised eTeaching principles/capabilities could sit. The seven criteria were:

1. Learning activities, learning resources and materials, for a unit, course or degree program are appropriately planned, designed, developed and prepared.
2. eTeaching and support for students' eLearning is of high quality.
3. Assessment tasks are aligned with student learning outcomes and appropriate and timely feedback is provided to students.
4. An effective, supportive and engaging eLearning environment is developed and maintained.
5. Scholarship, research and professional activities are integrated into teaching practice, curriculum design, student engagement, and in support of sound eLearning.
6. Professional practice is evaluated and continuing professional development encouraged.
7. Infrastructure and capacity to support and promote student and staff eTeaching criteria and capability is established and progressed.

Other than for criteria 7, which had a suite of institutional enablers detailed, the other criteria had illustrations of eTeaching capabilities and eTeaching leadership capabilities. These two

Criteria	eTeaching capabilities	Indicative evidence
1. Learning activities, learning resources and materials, for a unit, course or degree program are appropriately planned, designed, developed and prepared	<p>eTeaching capabilities</p> <ul style="list-style-type: none"> • Effective and appropriate use of eLearning technologies • eLearning activities support the content and pedagogical intent of the subject learning outcomes • Curriculum materials are provided using a variety of media <p>eTeaching leadership capabilities</p> <ul style="list-style-type: none"> • Integration of eLearning technologies adopts the TPCK –technology, pedagogy, content knowledge approach [12] • The eTeaching team are appropriately prepared and competent in the use and management of the integrated eLearning technologies • The basics of Cognitive Load Theory [13] are applied to the instructional design of learning across the subject • Actively seeks opportunities to enhance eLearning pedagogy through the use of new and emerging technologies • Regularly reflects on evaluation data to inform eLearning/eTeaching strategies 	<p>Student feedback</p> <p>Feedback from eTeaching teams Expert peer review on course/program materials and design External peer recognition Awards and citations</p>
2. eTeaching and support for students' eLearning is of a high quality	<p>eTeaching capabilities</p> <ul style="list-style-type: none"> • A range of eTeaching is undertaken • A range of eTeaching tools and technologies, relevant to the learning outcomes and pedagogy, are used • eLearning expectations are explicitly communicated to students, including realistic indications of time and effort commitments • eLearning activities are facilitated using technology to enable and enhance learning • Reflect on own performance and subject delivery in light of feedback and learning analytics to inform and improve eTeaching • Recognise and appropriately respond to students' support needs for online learning <p>eTeaching leadership capabilities</p> <ul style="list-style-type: none"> • Create and provide students with comprehensive guides on how to use integrated technologies • Work collaboratively with members of the eTeaching team to ensure consistency in the facilitation and quality of student learning • Students have access to online resources that promote understanding of key concepts and skills 	<p>Student feedback Awards and citations</p> <p>Feedback from eTeaching teams Awards, recognition and citations Adoption of innovation by others</p>

Criteria	eTeaching capabilities	Indicative evidence
3. Assessment tasks are aligned with student learning outcomes and appropriate and timely feedback is provided to students	<p>eTeaching capabilities</p> <ul style="list-style-type: none"> • Timely feedback is provided electronically to students • Social media is used to promote student and teacher engagement and communication • Feedback seeks to promote positive messages alongside the critiques <p>eTeaching leadership capabilities</p> <ul style="list-style-type: none"> • Examples of desired student performance in assessment tasks are provided electronically • Assessment techniques employed for electronic assessments are appropriate • Work collaboratively with members of the eTeaching team to ensure consistency in the facilitation and quality of assessment 	<p>Student feedback Learning analytics</p> <p>Feedback from eTeaching teams Evidence of examples Awards, recognition and citations Peer review Adoption of innovation by others</p>
4. An effective, supportive and engaging eLearning environment is developed and maintained	<p>eTeaching capabilities</p> <ul style="list-style-type: none"> • Model, monitor and maintain appropriate netiquette • Promote, exercise and facilitate eResilience including the effective management of technology setbacks, anxieties or failures • Intentional efforts are made to communicate specific encouraging messages to individual learners • Build a positive learning environment by deliberately facilitating student introductions, and using discussion starters to facilitate conversations among students • Model good online engagement including being an active participant in online discussions. 	<p>Student feedback, both formal and informal</p>

Criteria	eTeaching capabilities	Indicative evidence
	eTeaching leadership capabilities <ul style="list-style-type: none"> • Ensure members of the eTeaching team have adequate information and resources to develop and maintain an effective, supportive and engaging eLearning environment • Leadership in promoting inclusive eTeaching practices and technologies that encourage cultural diversity, equality, indigenous culture and traditions, support for students with special needs, and support for students in transition (e.g. 1st year, postgrad) 	Feedback from eTeaching teams Extent and participation in student engagement innovations
5. Scholarship, research and professional activities are integrated into teaching practice, curriculum design, student engagement and in support of sound eLearning	eTeaching capabilities <ul style="list-style-type: none"> • Open and willing to integrate new and emerging technologies, as appropriate to course design and pedagogy, with persistence and commitment to acquiring expertise • Ensure an evidence-base informs eTeaching practice • Share eLearning/eTeaching strategies and exemplars with peers and colleagues eTeaching leadership capabilities <ul style="list-style-type: none"> • Actively seeks opportunities to enhance pedagogy through the use of new and emerging technologies • Technology expectations that are evidence-based and contemporary are established • Ensure eTeachers have adequate information and resources to meaningfully facilitate eTeaching • Contribution, co-authorship or authorship of publications, presentations or workshops on eTeaching and learning 	Student feedback Peer review of teaching Feedback from eTeaching teams Expert peer review on course/program materials, design and implementation Awards & grants Proceedings & publications
6. Professional practice is evaluated and continuing professional development encouraged	eTeaching capabilities <ul style="list-style-type: none"> • Maintain appropriate subject and pedagogical expertise/credibility • Engage in professional development related to eTeaching and eLearning • Reflect on feedback and learning analytics to evaluate and develop own practice/performance 	Completion of formal qualifications (e.g. ULT, Graduate Certificate)

Criteria	eTeaching capabilities	Indicative evidence
7. Infrastructure and capacity to support and promote student and staff eTeaching criteria and capability is established and progressed	eTeaching leadership capabilities <ul style="list-style-type: none"> • Expectations around technology competence and integration are monitored and achieved • Mentoring and coaching opportunities to encourage continuing professional development for members of the teaching team are fostered • Progressive innovations to enhance eTeaching practice and ongoing professional development of eTeaching are promoted 	
	eTeaching institutional enablers <ul style="list-style-type: none"> • Ensure access to high quality and timely support for the development of eLearning materials • Provide robust and reliable IT systems • Regularly provide eTeachers with access to learning analytics to assist them to: • Identify students 'at risk' of not progressing or achieving • Facilitate student progress and achievement • Provide an online system to facilitate students to collect and collate evidence of their progress and achievement throughout their programme • Content, facilitation and efficacy of eTeaching is regularly and rigorously evaluated and the outcomes are disseminated publicly • Scholarship of eLearning and eTeaching is widely disseminated 	

Table 5. The third iteration of the Framework.

categories of capabilities were the iterative development of the previous categories of: *teachers including sessional staff and subject coordinators or those with leadership responsibility for teaching*. The capabilities were expressed so that stakeholders using the Framework could facilitate a self-assessment and decide which assessment outcome was most applicable:

- a. 'Yes' signifying they were achieving the capability and thus should maintain this performance standard;
- b. 'Yes but' signifying they are largely achieving the capability but some further development is warranted and should be planned;
- c. 'No' signifying they are not achieving the capability and as such this capability is an area for further development and potentially the focus of subsequent professional development activity; or
- d. N/A signifying the capability does not relate to the job role or associated responsibilities.

The inference in the design of this iteration of the Framework is that the capabilities listed are illustrations of desired performance as well as best practice that should be either maintained or espoused. Examples of indicative evidence that could be used to inform the self-assessment is provided, which is also intended to encourage robust and substantiated assessment based on fact rather than personal assumptions based on "gut" feelings. The capabilities are not intended as a definitive list but rather a starting point from which discussions about career progression and development needs can transpire, between the stakeholder and their supervisor/governing body.

3.4. International peer review and validation

The final stage in the development of the Framework was the presentation of version three at an international learning and teaching symposium - The 12th Annual Conference of the International Society for the Scholarship of Teaching and Learning (ISSOTL), held in Melbourne, Australia in October 2015. This stage was designed to ascertain and validate the relevance of the Framework to the higher education sector. An opportunity for interested academics to self-nominate for a peer review roundtable symposium, to interrogate the Framework, was provided. Roundtable participants were asked to:

- Undertake a brief priority analysis of the Framework criteria and capabilities (a matrix of how important and how common each of the capabilities were);
- Suggest strategies for engaging and getting buy-in of academic staff in the use of the Framework;
- Identify challenges that might face leaders trying to utilise a tool such as this as a means of facilitating innovation, particularly regarding eLearning; and
- Rationalise how the Framework capabilities differ in the online and physical teaching environments.

As a result of the roundtable, feedback was gleaned that could inform the development of a strategic plan to accompany and inform implementation of the Framework, across the higher education sector.

4. Discussion

Originally the focus of this project was to develop an eLearning Framework but early in the project, during discussions with IGNOU, the need to identify eTeaching capabilities as the antecedents to eLearning became very obvious. This realisation led to a premise, which subsequently guided the initiative, that effective eTeaching is the foundation for successful eLearning.

Across all of the consultation forums, facilitated to develop and progress the Framework, the importance of institutional infrastructure and culture to promote and progress eLearning and eTeaching capacity was noted. The eTeaching capability of teachers was acknowledged as both a means of progressing online learning and a potential barrier to advancement depending on level of competence. There was recognition that eTeaching responsibilities differed between teachers facilitating the learning and leaders responsible for the administration of the learning, which included program directors, course coordinators, faculty executive and institutional managers. This perception led to the differentiation of capabilities, in the final version of the Framework, for eTeachers and eTeaching leaders.

A direct outcome of the expert and academic consultation was the need to review and align to existing learning and teaching frameworks and quality measures of teaching, valued across the international and Australian Higher Education sector. The importance of this activity in the development of the Framework was to ensure that the final version of the Framework was aligned with existing tools and therefore added to the quantum in online teaching. The frameworks and quality measurement tools that were subsequently reviewed included:

- ACODE TEL Benchmarks
(http://www.acode.edu.au/pluginfile.php/550/mod_resource/content/7/TEL_Benchmarks.pdf)
- Australian University Teaching Criteria and Standards Framework
(<http://uniteachingcriteria.edu.au/>)
- UK Professional Standards Framework (<https://www.heacademy.ac.uk/ukpsf>)
- Standards for Online Learning (<https://www.onlinestandards.net/>)

The Framework was recognised at the international learning and teaching symposium as a means for individuals, units and institutions to identify:

- Staff professional development requirements and criteria that could be used for assessing probation and promotion, eTeaching performance.
- Support and resource needs, this included funding for: development and implementation of online learning courses and units; targeted staff appointments to assist with instructional

design, technical support and online content development; and robust and appropriate systems to support online learning and management.

- Criteria for gauging the effectiveness and opportunities for enhancing online learning.
- Strategies and electronic tools to support student learning and quality eTeaching.

The Framework is intended to be underpinned and informed by evidence; and while a range of indicative evidence artefacts have been suggested in the final version of the Framework, how these are used will depend on the individual, unit and institution as well as the situation. The Framework has been developed to deliberately be generic so that it can be adapted to suit varying contexts, audiences and needs.

A major limitation of the initiative described in this chapter is the sample size of reviewers and critical friends who contributed, through the consultation forums, to the development of the Framework. A reassurance that the project team had to this limitation was that those who did contribute were able to knowledgeably do so and as such their contributions were valuable and highly beneficial to the conceptualisation of the resulting Framework.

5. Conclusion

The Framework that has been developed and described in this chapter is the subject of ongoing user testing and evaluation. Further refinement of the Framework is anticipated as a result of this process. It is intended that a framework for eLearning, which will guide and scaffold the development of students' technological competency will be produced. The expectation is that this framework would also guide teachers in their employment of technologies and design of online learning.

Acknowledgements

The authors would like to acknowledge the significant contributions of Professor Patrick Crookes who was an academic member of the Project Team. Also the contributions of Mr Ravi Daga and the IGNOU team including: Professor Marmar Mukopadhyay, Professor Madhu Parhar and Ms. G. Mythili. Additionally the academics and senior higher education leaders from Australian and New Zealand institutions who provided feedback on the framework, which helped shape it. Finally the University of Wollongong for the provision of two funding grants that was critical in the development of the Framework.

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