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EXPLORING BENCHMARKS AND STANDARDS FOR ASSURING QUALITY ONLINE TEACHING AND LEARNING IN HIGHER EDUCATION

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Abstract

With the current level of interest in, and exploration of, quality and standards as they apply to teaching and learning in higher education, it is important to know and understand benchmarks that can be applied in the quality assurance process. This paper explores the development of benchmarks and a benchmarking process undertaken at Edith Cowan University for teaching and learning in general. The paper explores those elements that are relevant to online learning and explores quality indicators and benchmarks that arise from these.

Introduction

Issues of quality in online teaching and learning have been discussed for many years now with various authors expressing concerns with the forms and the implementations that conventional online programs have taken (eg. Reeves and Dehoney, 1996; Mioduser et al. 1999). The types of issues which surface stem mainly from the economic and political strategies and forces which promote the moves to reform and change university teaching and learning: the need for accessibility, flexibility in programs, economic imperatives and movements supporting improved learning quality (eg Holt & Thompson, 1998; Fraser & Deane, 1997; Nunan, 1996). These issues manifest themselves in practical terms in university settings through such strategies as:

- Achieving cost-effective solutions for online teaching and learning. Many writers are still unconvinced that the promised economic returns for this alternative form of delivery are being met. There are a number of strategies being proffered now which have the prospect to make online learning more cost-effective (eg. Jung & Rha, 2000);
- Achieving and maintaining quality in online learning. There has been the view in the past that online programs and courses by their very nature are more effective and flexible for learners than other means. Research is now suggesting that this is not always the case and that there is a need for institutions to proactively pursue such issues of quality (eg. Biggs, 2001);
- Ensuring access and equity in the delivery of online programs. Flexible and open learning programs were always seen as ways to reduce issues of equity and access however in online forms, the technology components are realising large access issues and this is causing many to seriously question the whole process (eg. Roblyer, 2000); and
- Sustaining online program delivery. Many technology-based learning programs have flourished in the past with injections of income and support from special projects but the programs themselves have tended to remain as specialist activities and few tend to end up in the mainstream (eg. Collis & Oliver, 1999; Alexander & McKenzie, 1998).

While institutions have been grappling with these issues independently and in varying ways, a number of systemic and governmental activities have emerged which have caused many to revisit these issues. In particular, institutions are now being required to account for their online teaching and learning initiatives through quality assurance processes being undertaken by external bodies and funding agencies. In the case of Australian universities, this is happening through the activities of the Australian University Quality Agency (AUQA).

Quality assurance in higher education

The movement to ascertain and assure quality in higher education appears to have grown from activities in the United Kingdom where quality assurance processes have been in place for some time. The document *Quality Assurance for Higher Education* prepared by the Quality Assurance Agency for Higher Education (QAAHE) in the United Kingdom describes the intention of the objectives of quality assurance of teaching and learning in higher education as:

- a. *To contribute, in conjunction with other mechanisms, to the promotion of high quality and standards in teaching and learning.*
- b. *To provide students, employers and others with reliable and consistent information about quality and standards at each higher education institution (HEI).*
- c. *To ensure that HE programmes are identified where quality or standards are unsatisfactory, as a basis for ensuring rapid action to improve them.*
- d. *To provide one means of securing accountability for the use of public funds received by HEIs. (QAAHE, 2001, p. 2).*

The current quality activity in higher education in Australia commenced in December 1999 when the Minister for Education, Training and Youth Affairs, announced plans for the establishment of the Australian University Quality Agency (AUQA) with a brief to conduct regular quality audits and to provide reports on the quality assurance arrangements of self-accrediting higher education institutions in Australia. □ This quality audit process planned to adopt an approach that encompassed all aspects of institutions' activities including, teaching and learning, research and management and included those activities that involved offshore elements.

The AUQA process was not the first quality audit undertaken among Australian higher education institutions. An earlier audit was commenced in 1992 when the Government of the day established the Committee for Quality Assurance in Higher Education to assist the Government in the implementation of its strategy for ensuring the quality, excellence and international standing of Australia's higher education system. The resulting audit was undertaken in three rounds across 1993, 1994 and 1995 with each round targeting a discrete area of activity. The second round in 1994 reviewed teaching and learning. □

As with the current audit process, the approach adopted by the Commonwealth in 1992 placed responsibility for the determination of the quality processes onto each institution. The resulting process saw a strategy of self-assessment being undertaken with institutions determining for themselves how they would demonstrate the outcomes and the effectiveness of their programs, policies and procedures. The Government provided no benchmarks and few guidelines and gave the institutions considerable freedom in determining how they would review themselves against their own plans, mission statements and written goals. The AUQA audits are now being conducted in similar ways. Institutions are being asked to demonstrate their achievements through self-assessment approaches and within teaching and learning, this involves a detailed examination of institutional goals and aims and resulting programs and instructional practices.

Quality in teaching and learning

While the AUQA audit covers all aspects of higher education from teaching and learning through research and commercial activities, this paper is interested in the issues of determining and demonstrating quality in teaching and learning, and in particular, determinations of quality in online learning. The purpose of the paper is to explore and discuss the notion of quality as it pertains to teaching and learning and to explore possible strategies for establishing standards and benchmarks by which institutions might be able to demonstrate quality outcomes in this area of activity, and in particular within online activities.

There is an abundance of literature that has been developed which broadly describes quality in teaching and learning and this is achieved primarily through detailed examinations of discrete aspects of these activities. In determinations of overall quality, the important considerations take on far broader meanings and contexts and include activities that extend way beyond the curriculum, its implementation and student learning outcomes. In the broadest context, the following questions suggest those that are fundamental to underpinning a review of teaching and learning: □

- *What quality assurance policies and practices does the institutions have in place or in the process of development to assure the quality of its teaching and learning performance?*
- *How effective and how fully deployed are these?*
- *What processes does the institution have to evaluate and monitor the quality of its outcomes?*
- *What quality related indicators does the institution use and why?*
- *What are the institution's priorities for improvement?*
- *What quality initiative has (sic) the institutions undertaken (since the last review) and what evidence of improved performance is there? (University of Tasmania, 2000)*

Within the Australian scene, the audit model used by AUQA is the ADRI approach. This approach involves an investigation of 4 main activities:

- **Approach:** How does the university characterise itself? What is its vision and mission? How do these relate to its historical development, context and capabilities? What are its major strengths and areas of emphasis?
- **Deployment:** Is the approach being deployed in the best possible manner? According to whom? How does the University know this is the case?
- **Results:** What are the results in relation to each of the University's stated objectives? Does the University understand why it achieved these particular results?
- **Improvement:** Does the University know how it can improve? How does it know this? (AUQA, 2002).

The process of demonstrating quality within the activities of such enterprises as education and training is a relatively new activity for many and we are now beginning to see the development of a body of knowledge and literature base that can provide guidance and assistance for those for whom such activities are important. In particular, we are now beginning to see the development of standards and benchmarks as indicators of quality against which performance and outcomes can be judged as part of the quality assurance process.

Quality standards for teaching and learning

Standards and benchmarking are important entities in higher education organizations which are being held accountable for the services they provide. Standards are defined in the context of this document as *levels of achievement that can be qualitatively or quantitatively measured*. The use of standards provides a means for the quality and scope of services to be documented

and for the provision of such to be monitored against stated objectives. While standards have been applied for many years to business services, it is only recently that they have been considered in education and training, activities that for many years have paid little attention to any formal approaches to the specification of standards or benchmarks against which standards might be measured.

A document that has been provided for Australian universities as a guide to considering standards and benchmarks for quality assurance purposes is *Benchmarking: A manual for Australian universities* (McKinnon, Walker & Davis, 2000). This guide suggests a number of key areas by which quality teaching and learning might be judged and assessed. The guide provides the following summary benchmarking statements for a number of quality indicators for teaching and learning:

- Learning and teaching plan;
- Course establishment processes;
- Scholarly teaching;
- Teaching environment;
- Effective academic review processes;
- A manual for Australian universities;
- Fitness of courses;
- Student progress ratio;
- First to second year retention trends;
- Equity quantitative success; and
- Student satisfaction.

This framework provides a very sound basis for quality assurance although the selection of the indicators is seen as representative rather than complete. At Edith Cowan University, a more comprehensive framework for describing quality teaching and learning has been developed (Oliver, Herrington, Stoney & Millar, 2003). This framework shown in Figure 1 uses concepts and approaches drawn from MacKinnon, Walker & Davis (2000) describing principles for education provision by Australian Universities. The framework draws its structure from the 3P Model of Learning proposed by Biggs (1989) which identifies presage, process and product as the key elements in the learning process. When these 3 elements are extended from considerations of learners themselves to the overall process of curriculum design and implementation, it provides a sound organizational structure for identifying what appear to be the critical elements supporting quality outcomes. The framework provides the means to characterise quality and teaching and learning and supports a process by which standards describing which teaching and learning can developed and assessed by either internal processes or external evaluators.

	teaching	learning
inputs elements and attributes which describe pre-conditions for successful teaching and learning	<ul style="list-style-type: none"> • course establishment and course review processes • curriculum specifications • course materials & resources • teacher qualifications and currency • strategic plan for teaching and learning • facilities and resources for teaching and learning 	<ul style="list-style-type: none"> • student selection and entry into courses • students' progression through courses
processes elements and attributes which describe on-going conditions for successful teaching and learning	<ul style="list-style-type: none"> • provision of appropriate learning experiences • work, community and professional engagement • assessment procedures • student support 	

<i>outputs</i> elements and attributes which describe post-conditions from successful teaching and learning	<ul style="list-style-type: none"> • continuous improvement in teaching processes • reflective practice and ongoing commitment to continuous improvement in teaching processes 	<ul style="list-style-type: none"> • graduates are employable in various ways • graduates can demonstrate outcomes • course satisfaction and attitudes
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Figure 1: a framework describing quality teaching and learning

Based on the discrete elements in the framework shown in Figure 1, Edith Cowan University has developed a series of descriptors of the attributes describing each element and has also attempted to frame some possible standards by which achievement of goals and objectives might be objectively measured. Figure 2 below shows a sample of these attributes and frameworks as have been developed for the teaching inputs.

a. course establishment and course review processes					
<ul style="list-style-type: none"> • The courses and units offered by the university need to have been developed through deliberate and well organised processes and strategies to ensure they are of the highest quality. • The courses and units offered by the university need to be subject to stringent review and evaluation processes to ensure they retain their high quality <p><i>Quality indicators</i></p> <ul style="list-style-type: none"> • the university's curriculum policies set out how the need for courses is to be established and the connections with university objectives, unit descriptions set out learning objectives directly linked to assessment tasks, be intelligible to students, and clearly provide all essential information, such as course work requirements, marking, arrangements, modes of teaching and expected standards; • the learning environment including access to library, audio-visual and IT support is specified and assured proposals for courses are scrutinised by peers in the developmental stages, external and/or community/professional representatives are engaged in course development and appraisal etc. 					
Standards	1	2	3	4	5
	<ul style="list-style-type: none"> • Courses stem from local initiative without a requirement for meeting other objectives. • Course descriptions are incomplete in some respect or not fully intelligible to students. • Learning environment taken for granted and not systematically supportive of courses. • Course developments without outside inputs. Perfunctory Academic Board scrutiny. • The main appraisal and reporting processes, including the standards achieved, are reviewed at long intervals only through five year or longer Academic Review processes. 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Explicit relationship of at least 75% of courses to university objectives. • Comprehensive course information available for students • Course development mostly internal with quality control processes overseen by the Academic Board. • The main appraisal and reporting processes, including standards achieved, are reviewed at long intervals through academic review processes. • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Explicit relation of every course to university objectives. • Course delivery, and support arrangements are specified and assured. • Course development involves external peer and industry input and defined Academic Board approval and/or re-submission requirements. • Annual or at most biennial appraisal, including industry or external review, reporting of outcomes and improvement processes. • Demonstrable consistency of standards is established.

b. curriculum specifications

<ul style="list-style-type: none"> Curriculum documentation should specify clear learning outcomes. Instructional aims, methods and assessment procedures should be made clear and explicit for all students. Learning outcomes should be specified in terms of discipline knowledge and generic capabilities described as graduate attributes. This information should be available for students at the commencement of each course unit. Curriculum documentation should refer to a range of current resources. Documentation that describes a course unit's curriculum should be made available to all students at the commencement of that unit. This information should identify learning resources that are accurate and current. <p><i>Quality indicators</i></p> <ul style="list-style-type: none"> Unit outlines for all courses that specify intended learning outcomes and instructional activities, Unit outlines with a specification of intended capabilities and performances Unit outlines that specify graduate attributes and generic learning outcomes, Unit outlines that specify accurately relevant and current resources, Constructive alignment between planned learning outcomes, teaching and learning processes and assessment strategies 				
1	2	3	4	5
<ul style="list-style-type: none"> The majority of unit outlines describe aims, objectives and assessment but lack a student centred framework for teaching and learning and show limited coherence between stated aims, objectives and assessment procedures. 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Consistent formats used for 75% of course descriptions and unit outlines 75% of course descriptions and unit outlines are stored systemically 75% of course descriptions specify graduate attributes 75% of unit outlines specify coherently intended learning outcomes, instructional activities, assessments and necessary resources. 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Consistent formats used for 100% of course descriptions and unit outlines 100% of course descriptions and unit outlines are stored systemically 100% of course descriptions specify graduate attributes 100% of unit outlines specify coherently intended learning outcomes, instructional activities, assessments and necessary resources.

Figure 2: descriptions and standards for teaching inputs

A similar set of attributes and standards has been described for teaching outputs, the review and improve phase of the ADRI cycle. A sample of these elements from the ECU teaching and learning standards document is shown in Figure 3.

a. continuous improvement in teaching processes				
<ul style="list-style-type: none"> Quality teaching needs to be informed by feedback loops that provide measures of success and proactive measures to overcome difficulties that are identified A University needs to have some formalised processes to judge the quality of teachers' performances. The measures need to be well documented and with a strong basis for determining quality measures Teachers need to have formal feedback processes to gather information from students concerning their perceptions of the teaching quality Teachers need to be able to demonstrate how the feedback has been used to inform their subsequent teaching practices Teachers need to be able to demonstrate acceptable levels of constructive criticism from students <p><i>Quality indicators</i></p> <ul style="list-style-type: none"> Formal feedback processes are used to gather information on outcomes from all teachers and tutors the feedback data is reviewed and acted on in ways that improve the teaching processes Students are satisfied that they have a voice and that their feedback is used in productive ways to improve teaching quality There are processes in place that address the issues arising from feedbacks in formal and deliberate ways 				
1	2	3	4	5
<ul style="list-style-type: none"> <i>The University has few formal processes in place that monitor teacher performance.</i> <i>Little evidence exists that teaching quality in courses and units is monitored and used to</i> 		<ul style="list-style-type: none"> <i>The University has established formal processes in place that monitor teacher performance eg. UTEI.</i> <i>Student feedback is obtained from 75% of the units at least once per year</i> <i>Formalised processes</i> 		<ul style="list-style-type: none"> <i>The University has well established formal processes in place that monitor teacher performance.</i> <i>Student feedback is obtained from 100% of the units at least once per year</i>

<i>improve performance</i>		<i>demonstrate that this feedback informs subsequent delivery of 75% units</i>		<ul style="list-style-type: none"> • <i>Formalised processes demonstrate that this feedback from all units measured informs subsequent delivery of all units</i>
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Perhaps the most commonly studied component in relation to quality in teaching and learning is that associated with the actual delivery of the programs, In the framework, this component is described as teaching and learning processes. Figure 4 demonstrates some of the attributes of quality in the framework and the standards that have been proposed by which achievement might be judged.

b. reflective processes and ongoing commitments to continuous improvement in teaching processes				
<ul style="list-style-type: none"> Quality teaching is demonstrated when teachers reflect and act on their teaching experiences. Teachers need to reflect critically upon their own teaching using information from a variety of sources to ascertain to what extent they are being successful in helping students learn. Action resulting from reflection can result in improved teaching and learning. Teachers should show a willingness to develop and share their own learning. Many opportunities arise for teachers to share their expertise in the design and development of courses. Research and communication into the processes of teaching and learning are important aspects of professional scholarship. <p><i>Quality indicators</i></p> <ul style="list-style-type: none"> Teachers will demonstrate reflexivity in their approaches to teaching Teachers will share their successes with peers and associates through appropriate communication channels <p>Teachers sharing their knowledge, experience and expertise of teaching and learning with their colleagues through such activities as seminars, forums, professional development and publications etc.</p>				
1	2	3	4	5
<ul style="list-style-type: none"> Few staff in the University demonstrate reflective practice in their teaching activities Few staff in the University participate in formal activities associated with inquiry into effective teaching Few staff in the University maintain portfolios of their teaching 		<ul style="list-style-type: none"> At least 50% of staff in the University demonstrate reflective practice in their teaching activities At least 50% of staff in the University participate in formal activities associated with inquiry into effective teaching At least 50% of staff in the University maintain portfolios/evidentiary samples of their teaching 		<ul style="list-style-type: none"> At least 80% of staff in the University participate in formal activities associated with inquiry into effective teaching and sharing of outcomes At least 80% of staff in the University maintain portfolios/evidentiary samples of their teaching

Figure 3: descriptions and standards for teaching outputs

a. provision of appropriate learning experiences				
<p>teachers should provide students with learning experiences appropriate to unit aims:</p> <ul style="list-style-type: none"> Learning experiences should challenge and motivate students to learn and continue learning. Students learn when they are challenged and motivated. Deep learning of discipline knowledge in the form of information, concepts and skills occurs when tasks stimulate students to employ higher order thinking skills in such contexts as problem solving and research. Learning experiences should be meaningful and encourage action and reflection. Meaningful learning occurs when students connect new learning to existing knowledge and experiences. Integrated and extensive understanding occurs when links are made across different representations and domains of knowledge. Students learn and apply discipline knowledge and graduate attributes such as decision making when they are challenged with rich, complex tasks that offer a multiplicity of perspectives, strategies and resources and result in a range of achievable outcomes. Enabling students to reflect on their learning allows students to develop important metacognitive skills necessary for independent, self-regulated learning. <p><i>Quality indicators</i></p> <ul style="list-style-type: none"> Students are engaged in learning activities that are engaging and stimulating, Instructional activities emphasise student-centred modes of learning, Students are encouraged to engage in rich learning tasks and activities that promote reflection activities emphasise rich learning tasks and reflection, Students are engaged in relevant learning activities, Students are engaged in learning activities that accommodate their prior learning, experiences and abilities etc. 				
1	2	3	4	5
<ul style="list-style-type: none"> The majority of students are engaged in learning in passive modes based on the transmission of facts and procedures 		<ul style="list-style-type: none"> 50% of students are engaged in courses which provide rich learning tasks that include such elements as: opportunities for student-centred learning, collaborative learning, relevant contexts, use of technology as an instructional aid and flexibilities that cater for individual needs and differences 		<ul style="list-style-type: none"> 80% of students are engaged in courses which provide rich learning tasks that include such elements as: opportunities for student-centred learning, collaborative learning, relevant contexts, use of technology as an instructional aid and flexibilities that cater for individual needs and differences

b. assessment procedures				
<p>where assessment tasks rest with the responsibility of the teacher they should be:</p> <ul style="list-style-type: none"> • Valid: Assessment tasks should be valid, explicit, and fair. Students should be assessed with valid tasks that reflect the outcomes described for the course. These tasks should enable students to demonstrate a deep understanding of discipline knowledge as well as application of higher order thinking skills and graduate attributes. Assessment tasks and procedures should be made explicit to all students. Assessments should be varied in ways that will enable all students to demonstrate their achievements. • Educative: Assessment tasks should be educative, authentic and integrated with learning tasks. Assessment tasks should enable students identify learning achievements and deficiencies and provide directions for further learning. Outcomes should be assessed with tasks that are authentic and set in the context of their future use. Assessment should be integrated with instructional activities rather than viewed as a separate process. • Comprehensive: Assessment should be comprehensive, using multiple sources of evidence. Assessment tasks should be comprehensive enough to enable a range of outcomes to be measured. These outcomes should be assessed in a variety of ways providing evidence that is built up over time. <p><i>Quality indicators</i></p> <ul style="list-style-type: none"> • Assessment tasks match intended learning outcomes. These tasks measure higher order thinking skills, deep understanding of domain knowledge and graduate attributes, Assessment tasks are authentic and integrated with instructional activities. • Assessment approaches are varied and measure a range of learning outcomes, Assessment tasks are contextualise, Assessment tasks are designed to measure a range of learning outcomes etc. 				
1	2	3	4	5
<ul style="list-style-type: none"> • <i>The majority of courses involve assessment tasks that are 'end on' to instruction and rely on student repetition of facts and procedures.</i> 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • <i>50% of courses involve assessment tasks that are integrated with instruction and involve tasks that demonstrate higher order thinking skills, deep understanding and graduate attributes.</i> 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • <i>80% of courses involve assessment tasks that are integrated with instruction and involve tasks that demonstrate higher order thinking skills, deep understanding and graduate attributes.</i>

Figure 4: descriptions and standards for teaching and learning processes

The quality standards that have been described above are now being trialled in various Schools at Edith Cowan University as part of quality assurance processes. The standards which have been described for each component have been created with the view that the middle level, level 3, corresponds to a minimum acceptable standard and one below which we would anticipate no School or teaching unit might fall in any quality audit. The trialling process is seeking to examine the benchmark figures which have been set to determine their suitability both as standards and their capacity to be measured in some objective fashion. The framework is a work in progress and is intended to be reviewed and improved and a final decision taken in the future as to how it might be implemented in a strategic fashion as a core component of the ECU quality assurance process.

Quality in online teaching and learning

Within such a quality framework, there are many elements that correspond to any form of course preparation and delivery and there are naturally elements that have specific reference to online teaching and learning. In our setting, it was evident that there were a number of elements within the various sections that held particular interest for determinations of quality in online teaching and learning. While such elements as course establishment processes, curriculum specifications, student progression procedures and graduate outcomes tended to be quite generic, a number of the elements could be clearly identified as having particular impact on the quality of teaching and learning in online settings. Figure 5 shows those elements within the framework that appeared to hold particular relevance to determinations of quality in online teaching and learning.

While it is possible to describe elements within the quality framework that have particular impact on the quality of teaching and learning online, it is important to note that there is nothing particular or unique to online learning that requires any separate or additional elements in the model we had produced. As most people will attest, the quality principles

that underpin successful online teaching and learning are exactly the same as those that underpin successful face to face teaching. While there may be differences in places in the resources and supports that are employed, at the end of the day, it is the same judgements of quality that need to be employed.

	teaching	learning
inputs elements and attributes which describe pre-conditions for successful teaching and learning	<ul style="list-style-type: none"> • course establishment and course review processes • curriculum specifications • course materials & resources • teacher qualifications and currency • strategic plan for teaching and learning • facilities and resources for teaching and learning 	<ul style="list-style-type: none"> • student selection and entry into courses • students' progression through courses
processes elements and attributes which describe on-going conditions for successful teaching and learning	<ul style="list-style-type: none"> • provision of appropriate learning experiences • work, community and professional engagement • assessment procedures • student support 	
outputs elements and attributes which describe post-conditions from successful teaching and learning	<ul style="list-style-type: none"> • continuous improvement in teaching processes • reflective practice and ongoing commitment to continuous improvement in teaching processes 	<ul style="list-style-type: none"> • graduates are employable in various ways • graduates can demonstrate outcomes • course satisfaction and attitudes

Figure 5: a framework describing quality in online teaching and learning

This framework does however highlight a number of areas for exploration and inquiry of quality that sit outside what is normally contained in such inquiry and research. Few determinations of course delivery in the past appear to have targeted such areas as those inputs to online teaching and learning associated with curriculum specifications, teachers' experience and expertise, with student selection and entry into such courses and strategies for continuous improvement. It is likely that within our deliberations at ECU we will discover the need for far stronger strategic and organisational planning for these aspects of online delivery, as distinct from the normal activities associated with ensuring quality in the resources and resource delivery.

The trial period that will be used to implement and review the framework will see programs and courses of all forms being assessed through the standards that have been developed. It will be important to explore the success of the framework and the standards described as generic descriptors of teaching and learning in general and to ensure that they have direct application to all teaching and learning activities. It is our expectation that there will be no need to provide additional and unique elements to cater for online teaching and learning but rather to ensure that descriptors by which the quality standards might be applied are included. It appears that online teaching and learning has helped to inform the development of the framework and that in doing so has secured itself a seamless place within the framework and the descriptors.

Summary and Conclusions

This paper has described a quality framework developed at Edith Cowan University as a means to describe standards for teaching and learning that can provide some objective measures of performance as part of quality assurance processes. The framework has not specifically targeted online teaching and learning but has been developed in a way whereby all forms of teaching and learning might be assured through a similar process. The

framework is now being implemented and reviewed and significant challenges we expect to face include:

- Establishing quantifiable and meaningful metrics for all measures so that they can be assessed and recorded in an objective and reliable fashion;
- Discovering strategies for assessing those measures which are hard to quantify rather than discarding them because they are difficult to implement;
- Coming to a common agreement and common understanding on minimum standards that might be applied across teaching and learning in the whole university;
- Having staff and Schools take ownership of the process and the standards and seeing them as agents for quality assurance and continuous improvement and not instruments of management; and
- Establishing the degree to which the use of such a system actually contributes to the improvement of teaching and learning in the university.

The process is an interesting and challenging activity for the University and is a process that many others will be facing and dealing with. We hope to track our experiences carefully and to ensure that the institution gains whatever advantages and opportunities it can from participation in quality review processes. The use of a formalised framework as described seems one measure that could help to ensure this.

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