Blended learning: A transformative process?

Michael Smythe

Nelson Marlborough Institute of Technology

Michael.Smythe@nmit.ac.nz

Abstract: *Blended learning within a flexible-learning framework offers a unique opportunity to fully integrate pedagogy and technology with teaching and learning. It may also lead to "significant enhancements of curricula and pedagogy, optimised work integrated learning experiences and an internationalised approach to learning, teaching and curriculum design" (Griffith Blended Learning Strategy: 2008-2010). This paper considers the contention that blended learning can be introduced to teachers and learners as part of a transformative redesign process (Sharpe, 2006: Littlejohn and Pegler, 2007; Garrison and Vaughan, 2008). A literature review investigated how the term 'blended learning' is currently being used in higher education. The contentious nature of blended learning definitions is discussed and key dimensions of blended learning summarised. The literature review also explored the essential pedagogical approaches applied to blended learning practices. A range of quality considerations are discussed, including an examination of rubrics currently in use and proposes a new rubric for evaluating blended courses. A case study of an ongoing project to convert a programme to blended delivery is presented. This is used to illustrate a range of practical considerations when attempting to apply quality assurance within a teaching and learning environment and outlines lessons learnt from a rubric evaluation.*

Blended learning described

What is meant by the term blended?

A literature review established the difficulty that others have had in reaching a consensus around a definition of the term blended learning. Although it first appeared in the literature around 1999 it is challenging to find a widely accepted meaning of blended learning despite the pervasiveness of the term in higher education. Irrespective of any concerns over its definition, the use of the term blended learning has become widely accepted and is ubiquitous in all forms of education and training.

> *Blended learning is a practical framework that can be used to encapsulate a range of effective approaches to learning and teaching. It encourages the use of contemporary technologies to enhance learning, and the development of flexible approaches to course design to enhance student engagement*. (Queensland University of Technology, 2011)

Blended learning at its simplest is nothing more than employing a variety of media and methods, most often a mix of online and face-to-face learning. However this combination is subject to a range of permutations in technologies, pedagogies and contexts (Graham, 2006; Garrison & Vaughan, 2008).

A survey of the research literature has provided a number of dimensions to blended learning that are found to be common within most tertiary educational institutions (Oliver and Trigwell, 2005; Sharpe et al., 2006). Table 1 outlines these core dimensions.

Dimension	Description
Modes of delivery	The combination of traditional learning with web-based online approaches
Technology	The combination of media and tools (technologies) employed
Pedagogy	The combination of a number of pedagogic approaches irrespective of learning technology use
Chronology	Synchronous (real-time) and asynchronous approaches

Table 1: Dimensions of blended learning

In essence, blended learning is a term that deals with combining education with communication technology. From the literature review, it is evident that the term 'blended learning' is ill-defined, inconsistently used and means different things to different people. However, research does suggest that the lack of a consistent definition may in fact be part of the term's strength as it "...allows staff to negotiate their own meaning for it within the context of their institution, course or student group" (Sharpe et al., 2006).

Blended learning interpretations

The complex nature of blended learning is illustrated by the wide variety of interpretations within higher education and the diversity of implementations of ICT embedded within existing programmes. The use of the term blended learning has been further complicated by the variations of ICT literacy within the general staff and student body, and the arrival of a plethora of new unproven learning technologies that offer great potential for education (such as social networking and e-portfolios). This complexity has significant implications for blended learning designs.

Applications and practices of blended learning vary widely and are customised to suit the different needs and knowledge of individuals and organisations. These applications are often compromised by the absence of a standard or straightforward framework to scaffold blended learning to suit a range of needs and subjects. This highlights the need for emphasis on 'whole of course' redesign and the critical role of learning design in blended learning.

The most common use of blended learning is the provision of supplementary resources for traditional courses using an institutional virtual learning environment such as Moodle (Sharpe et al., 2006). Blended learning is roughly at the mid-point of a continuum in the use of technology in teaching and learning that begins with face-to-face instruction and ends with totally online, asynchronous instruction.

The transformative potential of blended learning

An increasing number of institutions support the idea that blended learning should be introduced as part of a transformative redesign process that rebuilds courses as opposed to a just adding on technology to existing content (Sharpe, 2006: Littlejohn and Pegler, 2007; Garrison and Vaughan, 2008).

It is apparent that to take advantage of this opportunity for redesign, a definition of blended learning needs to reference sound pedagogical approaches and practices, thereby providing a framework to support academic staff to achieve best practice in blended learning. It is not the 'blend' that makes the difference it is rather emphasis on the fundamental redesign of content in the light of new knowledge and technologies.

Although blended learning lacks a coherent body of research that unequivocally demonstrates learning benefits over online or traditional modes of instruction, there is a growing body of evidence to support the view that blended learning can result in an increase in student learning, an improvement in learning outcomes and greater student satisfaction (Graham, 2006; Sharpe et al., 2006; Vaughan, 2007; Garrison & Vaughan, 2008). This is generally attributed to students being more engaged in their learning.

As blended learning primarily deals with the integration and application of technology to learning, blended courses require new design strategies to present content, interact with students, and assess course outcomes. It is therefore essential not to just acknowledge the 'learning' in blended learning but also aspects of instruction, teaching, and therefore pedagogies. Sharpe et al. (2006) identified the importance of course level designs as one of three characterisations of blended e-learning, stating that "staff repeatedly identified engaging in course redesign as critical to their success". Amongst the most important features of course redesign were the use of student feedback and designs which make explicit their underlying pedagogic principles.

Quality issues in blended learning

It has been said that "quality is a complex and difficult concept, one that depends on a range of factors arising from the student, the curriculum, the instructional design, technology used, and faculty characteristics" (Meyer, 2002). For the purposes of this report quality refers to an efficient and effective course development process and to a lesser extent, effective pedagogy.

Flexible delivery and online education especially, has been subject to frequent criticism and often compared unfavourably to traditional teaching along with implications of it being inadequate and of lower quality. In response, various authors propose guidelines for evaluating quality online education programs.

Research into online and blended learning has examined quality issues from several perspectives. For example, effective online learning is described in a range of theories such as situated cognition, cognitive load theory (Meyer, 2002) and Web-based instruction (Gillani & Relan, 1997) while Chickering and Ehrmann's (1996) seven principles of good teaching were adopted for online course design and delivery in the 1990s. These pedagogic theories and principles became essential guidelines for academics and course designers and have found their way into quality assurance rubrics.

In addition to pedagogy-oriented research, quality assurance has become critical at the course, programme and institutional levels. Despite efforts in defining and examining quality issues concerning online courses, a systematic, determining methodology to measure and ensure quality in blended courses is often lacking. Often, aspects not obvious to instructors or learners are ignored, such as instructional design, course development, and the use of technology. To define the quality of an online course, therefore, requires a comprehensive framework to identify these issues and appropriate guidelines, as well as to devise an instrument and method for measuring the hidden aspects of quality. A comprehensive rubric is one tool that can be used to support this framework.

Using rubrics to evaluate quality

What is a rubric?

Traditionally, a rubric is a scoring guide that sets out specific performance criteria. It defines precise requirements for meeting those criteria, and often assigns numerical scores to each level of performance. This provides evaluators with an effective, objective method for evaluating skills that do not generally lend themselves to objective assessment methods.
A rubric for online instruction is designed to provide a common set of evaluation criteria for a diverse set of institutions evaluating the readiness of an online course. It is not designed to measure the quality of online facilitation during the delivery of a course.

How are rubrics designed to be used?

A rubric is designed to be used as part of a comprehensive institutional e-Learning strategy. With a strategy in place, a well designed evaluation rubric can be used as an instrument in blended and online course design as well as to provide guidance while developing courses, and act as a tool for periodic evaluation and improvement. This can be achieved by building in good-practice standards into the rubric which are well supported by the literature.
Rubrics in general, attempt to provide a framework to address the question -

What does a quality blended course look like?

However, rubrics are generally not intended to answer questions such as -

How do we know a course is working in practice?
How effective are the instructor's facilitation skills?

Rubrics at the course-level are designed to be used in the following ways;

Use	Purpose
Self-evaluation tool	To provide a framework for new courses
	To inform reworking of an existing course
Evaluation tool	As a means to assist in the development of 'quality' online courses
Exemplars	To identify best practices in online courses and recognise those that are creating quality courses

To be useful a rubric should not only be based on empirical-research but integrate a range of pedagogical knowledge and principles. It should also able to be used in a variety of situations, within an array of review methodologies and operate as a free standing document to be used in both formal and informal contexts.

Rubric review

The most popular rubrics used in higher education for the quality evaluation of e-Learning are those developed by 'The Centre for Excellence in Learning and Teaching' (CELT) at California State University and the Quality Matters rubric (Maryland Online, Inc., 2009). Although there is relatively little research providing evidence as to the effectiveness of rubrics there is considerable empirical research supporting the use of the pedagogy nested within some of these rubrics (Quality Matters, 2008).

The CELT rubric developed at California State University covers a broad range of criteria and is designed to self assess online course material as well as provide a means for rewarding quality online teaching and is widely used across a range of higher educational institutes. The Quality Matters rubric is a proprietary rubric developed with a USA Department of Education grant, and is designed to be used as part of a systematic approach to online evaluation which includes peer review. This rubric uses similar criteria and dimensions as the CELT rubric. Most published rubrics include quality criteria in one or more of the following areas:

- Institutional support
- Course organization and layout
- Learner resources and support
- Learner engagement/interaction
- Usefulness and use of technology
- Evaluation and assessment
- Instructional Design

The NZ experience

The CELT rubric in particular forms the basis for most of the rubrics used currently in evaluating online courses in higher education, including that used by a range of NZ-based institutes. For example, the NMIT Learning Design and Facilitation Rubric (NMIT Flexible Learning, 2011), that used by Lincoln University (FLI, Faculty of Commerce, Lincoln University, 2011) and the Seitzinger rubric (Seitzinger et al., 2009) are derived from the earlier design by CELT.

The principles outlined in the New Zealand e-Learning guidelines (e-Learning Guidelines, 2006) is aligned closely with the CELT rubric. These guidelines were developed partly to provide evidence-based effective practice guidelines and case studies. Since these reflect contemporary thought and empirical research they provide a sound basis for designing e-learning materials in a NZ setting and should be integrated into any proposed rubric. These guidelines expand the guidelines beyond pedagogical issues to redefine quality as learning and service experiences.

A cross-section of rubrics that are in common use in both blended and online situations were selected for review. These rubrics are compared in table 2 below.

CELT, CSU,	Maryland Online	University of Illinois	Westchester	NMIT	Blended Learning Rubric	Seitzinger	Virtual Learning Collaborative	Lincoln University
Online focus	*Online focus*	*Online focus*		*Online focus*	*Blended focus*			*Blended focus*
Student Support	Course Overview & Introduction	Instructional Design	Organisation. & Design	Student Support	Student Support & resources	Learner Support & Resources	Course Outcomes	Layout
Layout & Design	Learning Objectives	Communication, Interaction, & Collaboration	Objectives	Layout & Design	Course organisation - Interface Design	Online Organisation & Design	Course Technologies	Content – Resources
Instructional Design	Assessment and Measurement	Student Evaluation & Assessment	Content	Instructional Design	Course organisation - Visual Design	Instructional Design & Delivery	Construction	Content - Engagement
Teaching with ICT	Resources & Materials	Learner Support & Resources	Interaction	Facilitation	Instructional Design	Assessment & Evaluation of Learning	Resources	Student-centred - Assessment
	Learner Engagement	Web Design	Assessment		Assessment & Evaluation of learning	Innovative Teaching with Technology	Interaction	Student-centred – Tutor practice
	Course Technology	Course Evaluation	Resources		Use of Technology		Maintenance	
	Learner Support		Use of Technology				Assessment	
	Accessibility						Development & Support	

Table 2: Comparison of commonly applied rubrics from a range of tertiary institutions

Proposed blended learning rubric

This paper proposes a rubric for discussion that is intended to assess course readiness prior to course delivery (Please refer to Appendix 1: Blended Learning Rubric). This rubric can be used in a range of contexts including a tool to aid course creation and for self-evaluation of existing courses. It is not intended to measure the quality of online facilitation during delivery but will aid in the creation of effective delivery methodologies.

This rubric aims to:

- Integrate the New Zealand e-Learning guidelines
- Be student centered
- Be activity based
- Allow for a range of learning theories
- Connect with any existing institutional flexible learning strategy
- Place learning design at the centre of instruction
- Emphasize learning ahead of technology
- Be adaptable to support a range of individual and institutional needs
- Create a relative simple tool optimized for self-evaluation

Using a course development process that integrates the use of a rubric should result in blended courses that are well-organised, provide sufficient learner support, focus on the learners rather than content and are pedagogically sound.

Rubric criteria

Rubrics can be unwieldy and time-consuming due to their use of verbose criteria which are often subjective resulting in variable and compromised evaluations. The proposed rubric aims to include self-evaluation questions that can be answered quickly and objectively – many with a 'yes' or 'no'. Elements relating to facilitation have been deliberately left out to create a more flexible document.

Case study in rubric use: The Viticulture Blended Project

Project description

In 2010 it was proposed to convert the NMIT Diploma in Viticulture and Wine to blended delivery. This is a two-year, level 5 diploma comprising 16 papers, of which 13 are delivered directly by the Viticulture school at Marlborough campus. This project was initiated as a way of creating a more sustainable programme and resolving a number of academic integrity issues. An additional benefit was the opportunity to upgrade a programme that contained both structural and academic flaws and to create courses that were a better match with the needs of industry and the current student profile. A pilot programme was offered in 2010 which proved a valuable insight into some of the problems that were to be encountered later in the project.

At the time of writing (August 2011), 7 of the 13 courses are, or have been taught in blended mode, with 4 more on target to go live by semester 1, 2012. Approximately 2000 development hours have been used to date, 700 of these hours by academic staff and 1200 hours on content and administration including project management. This works out to a rough average of 200 hours per course.

Project goals

There are 2 commonly accepted ways in which the term blended learning is being used. The most widespread adaptation of blended learning is the use of a virtual learning environment (VLE) or Learning Management System (LMS) in supporting traditional instruction. This is often referred to as supplementary mode (Sharpe et al., 2006; Garrison and Vaughan, 2008) which is effectively a technology 'add-on' with the LMS acting as a repository for course files and communication.

The initial goal of this project was to go beyond supplementing an existing delivery model and to transform the course design and as a result transform the teaching and learning process. Over time, partially due to lack of resources, this initial goal became subservient to the need to get all teaching content on to the LMS and create a basic platform for delivery. However, emphasis was still given to providing a framework to support academic staff to achieve best practice in blended learning as opposed to just adding-on new technologies to traditional teaching.

Quality Evaluation Issues

A rudimentary quality evaluation using a rubric was undertaken with a view to answering the question – *Did we create a quality course?*
This considered quality only from the perspective of course development and instructional design (Chaney et al., 2009). This meant that other quality aspects such as the quality of teaching and learning were excluded. Since the Blended Learning Rubric (Appendix 1) incorporated a number of pedagogical and learning design good practice principles, it was used as the main instrument to evaluate quality.

Rubric evaluation

It is clear that although a rubric is a blunt instrument in assessing quality, it offers considerable advantages in that it is simple, able to be applied without too much knowledge and would be relatively quick – *was this the case in practice?*

Since an initial run through using the rubric typically took less than an hour it more than satisfied the need for speed. However, it soon became apparent that although most questions in the rubric could be a simple yes or no, some were not quickly or easily answered. There were a number of 'process-type' questions that could be best answered by looking at a course over time from the perspective of the student, measures of student workload being one example.

Case Study reflections

Did the rubric enable us to answer to the question – *Did we create a quality course?*
This is difficult to determine when only using the rubric, but the answer is a qualified 'yes', qualified because the rubric is only capable of providing part of the answer. On average most courses achieved at least 'baseline' in over 60% of the 46 questions in the rubric. However, for some of the questions results were only able to be determined after observing a course over time, suggesting the use of the rubric at both the start and part-way through a course may be beneficial. Also in its current state it is not ideal for tutor self-evaluation as it requires some knowledge of interface design, instructional design and assessment.

For future use, consideration needs to be given to separating 'yes' or 'no' type questions from process-type questions. In addition the use of a point system (such as that using by the Quality Matters rubric) is also under consideration. This is mainly due to the realisation that

this rubric did not provide the ability to rate a course with a single grade or number so that an indicative 'pass' or 'fail' grade could be given. In summary, the use of such a rubric is an effective tool provided that courses can be observed over time and users have sufficient knowledge. The best use of such a rubric may be firstly as a quick self-evaluation tool to aid development, and secondly as an evaluation instrument undertaken by someone of appropriate expertise.

Has the teaching and learning process been transformed in this project?

As others have commented, (Garrison and Vaughan, 2007; Sharpe et al., 2006), it is easy to see the transforming potential of blended learning but it is elusive and difficult to capture, and even harder to measure. Although a platform for fundamental changes in delivery has been established, ultimately change in teaching and learning in this programme will come down to individual staff and to the students themselves. It is also apparent that blended learning is only one aspect of changing teaching and learning, while the effect on the learning process and student satisfaction is very much the 'elephant in the room'.
Though teaching staff have moved closer to more contemporary student-directed instruction methods, some remain stubbornly glued to lecture-type approaches. However, student evaluations and verbal student feedback has been mostly positive and LMS activity demonstrates increasing student use and engagement over the 12-months since the project began.

This project started with the ambitious aim of transforming the teaching and learning process. Although at this stage it is too early to say if this is achievable, courses have been redesigned and therefore some progress has been made towards that goal.

Through the use of action research in future it is intended to capture student and teacher perceptions along with any changes in learning. Consequently at the completion of this project we may in a better position to comment on the transformative potential of blended learning.

Recommendations for policy and practice

The key points to be derived from this study that may be relevant to blended learning policy and practice are:

1. Blended learning offers institutions a unique opportunity to fundamentally alter and enhance teaching and learning
2. To contribute to significant change in teaching and learning any higher-level definition should encompass a pedagogical component
3. Strict agreement around the term blended learning does not appear to be a critical factor and variations at programme level may even prove to be beneficial
4. One of the defining characteristics of blended learning is the use of blended learning as part of a strategic statement in enhancing learning and teaching activities
5. The role of pedagogy has a critical role to play in using blended learning as part of a transformative redesign process within education
6. There is no systematic, determining methodology to measure and ensure quality in blended courses but rubrics are capable of operating as an effective tool
7. Changes in teaching and learning are difficult to measure and require applied research methods

Conclusions

Blended learning within a flexible-learning framework, offers a unique opportunity to fully integrate pedagogy and technology with teaching and learning. It may also lead to "significant enhancements of curricula and pedagogy, optimised work integrated learning experiences and an internationalised approach to learning, teaching and curriculum design" (Griffith University, 2008). Consequently it is clear that blended learning offers considerable potential to transform the teaching and learning process despite the difficulty it presents in measuring elements relating to 'quality' or 'success'.

From the literature review it is evident that most education institutions agree that quality evaluation in a blended or online delivery mode is just one aspect of an institutional strategy towards flexible learning (Sharpe et al., 2006). Also that decisions regarding the use of evaluation tools and specific blended learning approaches within the curriculum design should be guided by a range of institutional documents such as blended protocols, good practice principles and the like written into a wider policy. A number of institutions such as Queensland University of Technology (2011) and Griffith University (2008) are adapting blended learning as part of a strategic statement in enhancing learning and teaching activities. As a result it is apparent that this is rapidly becoming one of the defining characteristics of blended learning.

To build and maintain quality standards in a flexible learning environment it is suggested that any evaluation tool needs to be part of an integrated course of action that includes attention to institutional capability, course development processes and most importantly, practitioner skills and knowledge.

References

California State University (2009). *Chico. Rubric for Online Instruction.* Retrieved 5 May 2011 from http://www.csuchico.edu/tlp/resources/rubric/rubric.pdf

Chaney, B.H., Eddy, J.M., Dorman, S.M., Glessner, L., Green, B.L., and Lara-Alecio, R., (2009), *A Primer on Quality Indicators of Distance Education, Health Promotion Practice,* Vol. 10 (2): 222-231.

Chickering W. and Ehrmann S. C., (1996). *Implementing the Seven Principles: Technology as Lever*. Retrieved 19 July 2011 from http://www.tltgroup.org/programs/seven.html

Connecticut Community Colleges (2006). *Effective Teaching Practices for Web-Enhanced, Hybrid and Online Classes.* Retrieved 19 June 2011 from http://www.commnet.edu/academics/blackboard/faculty/docs/Effective_Teaching_Practices_for_Web_enhanced_hybrid_online_classes_1a.pdf

Educause (2009). *EDUCAUSE Learning Initiative Discovery Tool: Blended Learning Workshop Guide. Unit 6: Quality Assurance.* Retrieved 19 June 2011 from http://net.educause.edu/ir/library/pdf/ELI80076.pdf e-Learning Guidelines (2006). *Guidelines for the support of e-learning in new Zealand tertiary institutions,* Retrieved 11 May 2011, from http://elg.massey.ac.nz/Guidelines-questions.pdf

FLI, Faculty of Commerce, Lincoln University (2011). Blended *Learning Course Site Review*. Unpublished internal document.

Garrison, R., & Vaughan, H. (2008). *Blended learning in higher education: Framework, principles and guidelines*. San Francisco: Jossey-Bass.

Gillani, B.B. & Relan, A. (1997). *Incorporating interactivity and multimedia into web-based instruction*. In B. H. Khan (Ed.), Web-based instruction. Educational Technology Publications: New Jersey.

Graham, C. (2006). *Blended learning systems. Definitions, current trends and future directions*. In C.Bonk & C. Graham *The handbook of blended learning: Global perspectives, local designs*. San Francisco: John Wiley and Sons.

Griffith University (2008). *Griffith Blended Learning Strategy: 2008-2010*. Retrieved May 11, 2011, from http://www.griffith.edu.au/gihe/pdf/Blended-learning-strategy-FINAL.pdf

Krause. K. (2007). *Blended Learning Strategy.* Retrieved 21 July from http://www.griffith.edu.au/about-griffith/plans-publications/pdf/blended-learning-strategy-january-2008-april-edit.pdf

Littlejohn, A., & Pegler, C. (2007). *Preparing for Blended e-Learning*. London: Routledge.

Meyer, K. A. (2002). *Quality in distance education: Focus on on-line learning.* Retrieved 19 June 2011 from http://www.westga.edu/~distance/ojdla/spring141/shelton141.html

Maryland Online, Inc. (2009). *Quality Matters Rubric Standards 2008-2010 edition with Assigned Point Values.* Retrieved 19 May 2011 from http://www.qmprogram.org/files/RubricStandards2008-2010.pdf

Minnesota State University (2001). *Guidelines for Academic Online Courses*. Retrieved 10 May 2011 from http://www.mnsu.edu/ext/faculty/guidelines.html

NMIT Flexible Learning (2011). *Learning Design and Facilitation rubric.* Unpublished internal document.
NZ ELG. (2011). *Guidelines for the support of e-learning in New Zealand tertiary institutions.* Retrieved 11 June 2011 from http://elg.massey.ac.nz

Oliver, M. & Trigwell, K. (2005) *Can 'Blended Learning' Be Redeemed*?. E-Learning and Digital Media, Volume 2 Number 1 2005. Retrieved 19 April 2011 from http://www.wwwords.co.uk/pdf/freetoview.asp?j=elea&vol=2&issue=1&year=2005&article=3_Oliver_ELEA_2_1_web

Quality Matters (2008). *QM Lit Review.* Retrieved 14 July 2011 from http://www.qmprogram.org/files/rubric/litReview.pdf

Queensland University of Technology (2011). *Protocols: Blended Learning.* Retrieved 11 June 2011 from http://www.ltu.qut.edu.au/curriculum/documents/PLC_blended_learning.pdf

Seitzinger, J., Jamieson, J., Forlong-Ford, S. (2009). *Design by Numbers – a Rubric to Aid Online Course Design.* Retrieved 22 May, 2011 from http://www.naccq.ac.nz/conferences/2009/91-98.pdf

Sharpe, R., Benfield, G., Roberts, G. and Francis, R. (2006). *The undergraduate experience of blended e-learning: a review of UK literature and practice undertaken for the Higher Education Academy.* Retrieved 3 July, 2011, from http://www.heacademy.ac.uk/assets/York/documents/ourwork/research/literature_reviews/blended_elearning_full_review.pdf

Shelton, K. (2011). *A Review of Paradigms for Evaluating the Quality of Online Education Programs* Online Journal of Distance Learning Administration, Volume IV, Number I, Spring 2011. Retrieved 19 June 2011 from http://www.westga.edu/~distance/ojdla/spring141/shelton141.html

The Sloan Consortium (2011). *A quality scorecard for the administration of online education programs*. Retrieved 3 July, 2011, from http://sloanconsortium.org/quality_scoreboard_online_program

University of Illinois (2010). *QOCI Rubric & Checklist.* Retrieved 19 May 2011 from http://www.ion.uillinois.edu/initiatives/qoci/rubric.asp

Vaughan, N. (2007). *Perspectives on Blended Learning in Higher Education.* International Journal on E-Learning, 6(1), 81-94. Chesapeake, VA: AACE. Retrieved 26 August from http://www.editlib.org/p/6310.

Virtual Learning Collaborative – Michigan Community College (2011). *Online Course Development Guidelines and Rubric.* Retrieved 12 June 2011 from http://www.mccvlc.org/%7Estaff/Course-Guidelines-Rubricv1.2.html

Wallace L. (2009). *Implementing Blended Learning: Policy Implications for Universities.* Retrieved 19 June 2011 from http://www.westga.edu/~distance/ojdla/winter134/wallace_young134.html

Westchester Community College (2007). *Guidelines for Best Practices in Online Courses.* Retrieved May 14, 2011 from http://www.sunywcc.edu/programs/distance_learning/faculty/dl_manual/pedagogical_guidelines.pdf

Appendix 1: Blended Learning Rubric

This rubric is a tool designed to assist in the design, redesign, and, or evaluation of blended courses. It is an adaptation of a number of different rubrics and has re-used elements of an existing NMIT Flexible Learning Rubric as indicated (NMIT).

Student support and resources Support and Resources refer to program, academic, and, or technical resources available to learners.	***Baseline**	****Exemplary**
• Contact information complete and easy to find		
• Introductory materials are clear and comprehensive including links to information for learner support , technical support offered and institutional resources		
• Opportunities for program and course orientation are provided (Existing NMIT rubric)		
• Tutor responsibilities are clearly outlined including response times and availability (NMIT)		
• Instructions make clear to students how to commence their study		
• Instructions make clear required technology skills/competencies and resources including ICT		
• Course instructions articulate or link to an explanation to; o how NMIT's academic support system can assist the student in effectively using the resources provided o how NMIT's student support services can help students reach their educational goals		
• Course instructions answer basic questions related to research, writing, technology, etc., or link to tutorials or other resources that provide the information		
Course organisation This refers to the structure of course content as well as physical layout and design	**Baseline**	**Exemplary**
• Course content is consistent with any planning documents such as 'Statement of Work'		
• Course is well organised according to approved learning design plan & style guide (NMIT)		
• Course Outline is available in approved NMIT format, including a range of standard content such as student preparation, prerequisite knowledge, course purpose		
• Teaching resources organised and available to students within a module / topic structure		
• All course content taught in face-to-face mode ONLY is clearly indicated to all students, along with pointers to appropriate alternative sources to such content		
• All course materials are properly referenced and comply with Copyright practice (CLL)		
Interface Design: • Images are of appropriate physical and file size		

• Text is checked for spelling, grammar, chunking where appropriate, scanned quality • Consistent use of colours and fonts (NMIT) • Navigation throughout the course components of the course is logical, consistent, and efficient. • Course links are self-descriptive and meaningful • Visual design is functional and is consistent with corporate brand and applies style guidelines • Full use is made of headings, bullet points and keywords to aid navigation (NMIT)		
Instructional Design: Learning Objectives	**Baseline**	**Exemplary**
• Learning objectives (LO) are available to students and described from a learner perspective		
• LO are appropriate for the level of the course		
• The learning activities are aligned with, and promote the achievement of the stated learning objectives		
• Instructions to students on how to meet the learning objectives are unambiguous and clearly explained		
• Relationship between the instructional materials and the learning activities is clearly explained to the student		
Instructional Design: Student engagement	**Baseline**	**Exemplary**
• Course is learner-centred. Learner has choice in activities, negotiation of learning goals, time and type of participation		
• Instructional materials have sufficient breadth, depth, and currency for the student to learn the subject		
• Course offers a range of opportunities for interaction & communication between student and tutor, peers, content, technology (NMIT)		
• The requirements for student interaction are clearly stated and supported by timely feedback		
• Student workload is realistic (NMIT)		
• Language level and voice is appropriate (NMIT)		
• Literacy & numeracy are embedded where appropriate (NMIT)		
• Course applies a mix of pedagogical approaches that encourage higher order thinking skills that are appropriate for the learner and course e.g. Active learning, problem-based learning, metacognition		
• Mix of learning activities and formats cater for a variety of learning styles including: o Lecture notes, PowerPoint slides, handouts, other media (e.g. CDs, DVDs, audio)		
Assessment & Evaluation of learning	**Baseline**	**Exemplary**
• A range of assessment activities are used and are appropriate for the course and level		
• Assessment is designed *for* learning rather than of learning		

• Assessment activities are closely aligned to LO		
• Formative and, or practice activities are provided for students to self-assess their work/progress		
• Students have ability to access progress/achievement record		
• Descriptive criteria such as marking guides are provided		
• There is opportunity for students to give feedback on course content and delivery		
Use of technology	**Baseline**	**Exemplary**
• Uses a wide range of tools and media appropriate to the course and audience		
• The tools and media support the learning objectives, and are appropriately chosen to deliver the content of the course		
• Development of digital literacy is encouraged throughout the course through use of Web, online databases etc		
• The tools and media support student engagement and guide the student to become an active learner		

* **Baseline** = some or narrow range of information

** **Exemplary** = extensive range of information