Toward a framework for evaluating blended learning

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Blended learning for some is the future of education itself (Brown & Diaz, 2010). However blended learning lacks a coherent body of research that unequivocally demonstrates learning benefits over traditional modes of instruction. Yet there is a growing volume of evidence to support the view that blended learning can result in improvements in student learning outcomes and enhance student satisfaction (Dziuban, Hartman, Cavanagh & Moskal, 2011; Garrison & Vaughan, 2008; Graham, 2006; Sharpe, Benfield, Roberts & Francis, 2006; Vaughan, 2007). The means to evaluate its effectiveness is frequently lacking since there are a relatively limited range of tools and methods that support staff in designing blended learning curricula. This paper describes one component of a possible framework for evaluating blended learning – the use of a course design rubric. A new rubric is outlined that attempts to represent a range of good practice in blended learning design derived from the literature and evidence-based research.

Keywords: blended learning, quality evaluation, rubric.

Introduction

The use of blended learning has been targeted by many education institutions as a way to integrate pedagogy and technology with teaching and learning. It is also considered a method to provide a more flexible and sustainable educational model for educational institutions by reducing students' time and space commitment (Dziuban, Moskal & Hartman, 2005).

The 2011-2013 NMIT (Nelson Marlborough Institute of Technology) Investment Plan included a target of 50% of courses using a form of blended learning by 2013. One element that was identified to successfully implement this strategy at a programme and course level is the adoption of an effective method to evaluate the quality of blended learning. After completing an extensive literature review it was considered that a new, customised course design rubric was needed as part of a broader framework for the evaluation of blended courses.

Blended learning dimensions

Although there is little consensus around a definition of the term blended learning it has become widely accepted and is ubiquitous in all forms of education and training. 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 (Garrison & Vaughan, 2008; Graham, 2006). These permutations, or dimensions to blended learning, are found to be common within a number of tertiary educational institutions such as;

- **Modes of delivery** - The combination of traditional learning with web-based online approaches
- **Technolog**y - The combination of media and tools (technologies) employed
- **Pedagogy** - The combination of a number of pedagogic approaches irrespective of learning technology use
- **Chronology** - Synchronous and asynchronous approaches

(Oliver and Trigwell, 2005; Sharpe et al., 2006)

Evaluating quality in blended learning

The issue of quality in teaching and learning environments is a subjective and multifarious concept, dependent on a range of factors relating to students, the curriculum, faculty, technology and learning design (Meyer, 2002). Chickering and Ehrmann's (1996) seven principles of good teaching often forms a basis for the quality evaluation of many blended learning courses and their impact on students. The Sloan-Consortium quality framework (The Sloan Consortium, 2011) is another structure often used to evaluate online courses in particular, but is also used for blended environments and is built around the 'Five Pillars of learning' - effectiveness, faculty satisfaction, student satisfaction, access and cost effectiveness (Shelton, 2011).

Despite these efforts in defining and examining quality issues concerning online courses, a defining instrument to evaluate quality is one of the key challenges for blended learning since it incorporates both traditional and online instruction methods. Aspects not obvious to instructors or learners, such as instructional design, course development, and the use of technology are commonly ignored. In order to define the quality of a blended course, therefore, requires a comprehensive framework to identify these issues along with appropriate guidelines, as well as to devise an instrument and method for measuring the hidden aspects of quality.

Although there is no systematic, determining methodology to measure and ensure quality in blended courses, course design rubrics are capable of operating as an effective tool to support a quality framework. This framework needs to include a combination of quality assurance processes in addition to pedagogy-oriented approaches such as evaluation of course development and instructional design.

Using rubrics to evaluate quality in blended learning

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 items that do not generally lend themselves to objective assessment methods. A rubric for online instruction can be designed to provide a common set of evaluation criteria for a diverse set of situations evaluating the readiness of an online course.

How are rubrics designed to be used?
A course design 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. It can also act as a tool for periodic evaluation and improvement. This can be achieved by building in good-practice standards into a rubric which are well supported by the literature. Rubrics at the course-level are designed to be used in the following ways;

Table 1: Uses for evaluation rubrics

Use	Purpose
Self-evaluation tool	- To provide a framework for new courses - To inform reworking of an existing course
Institute-wide 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 accepted 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. Course design rubrics in general attempt to provide a frame to answer the question - *What does a quality blended course look like?*

Rubric origins

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 (2009) and the Quality Matters rubric (Maryland Online, Inc., 2009). Both of these are designed to be used as part of a systematic approach to online evaluation which includes peer review that use similar criteria and dimensions. Although there is relatively little research providing evidence as to the effectiveness of rubrics there is some empirical research supporting the use of the pedagogy nested within a number of these rubrics (Quality Matters, 2008). Most published rubrics include quality criteria that evaluate learning, learner support, course organization, assessment, design and the use of technology.

The New Zealand 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, the FLI rubric used by Lincoln University (FLI, Faculty of Commerce, Lincoln University, 2011), and the EIT rubric (Seitzinger, Jamieson, & Forlong-Ford, 2009) are all derived from the earlier CELT version.

The principles outlined in the New Zealand e-Learning guidelines (NZ ELG, 2011) are 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.

A new blended learning rubric

This paper outlines a new Blended Learning evaluation rubric (BLeR) that is intended to assist in the design, redesign, and, or evaluation of blended and online courses. The rubric can be used in a range of contexts

including as a tool to aid course creation and for self-evaluation of existing courses. It is also possible to obtain some measure of the quality of course facilitation and therefore aid in the creation of effective delivery methodologies. In summary, this new rubric aims to:

- Allow for a range of learning theories but embed a number of good practice principles
- Connect with any existing institutional flexible learning strategy
- Place learning design at the center of instruction
- Emphasize learning ahead of technology
- Be adaptable to support a range of individual and institutional needs
- Reference the New Zealand e-Learning guidelines (NZ ELG, 2011)
- Create a relative simple tool optimized for self-evaluation

It is intended that using a course development process which integrates the use of such a rubric should result in well designed courses that are organised, provide sufficient learner support, focus on the learners rather than content and are pedagogically sound.

Figure 1: NMIT Blended Learning Rubric (BLeR) screen sample (Page 1 of 4)

Integrating blended learning within existing evaluation processes

Most blended learning evaluation rubrics take a process-orientated approach where a 'whole-of-course' view is used to assess learning design (but not to assess how well this design is being applied). Blended courses contain course-related documents and activities in e-format along with evidence of student engagement and participation. This affords the opportunity to assess the learning process over time rather than as a snapshot by the use of a rubric. In addition it may also be possible to evaluate a range of other factors such as the student experience and their relationship to the curriculum.
Blended delivery has two main teaching components - a classroom-based one and the online or 'e-bit'. The assessment of teaching practice in a classroom-based lesson is often subject to existing evaluative processes which can be complemented by an additional process such as a rubric, to evaluate the online part of the teaching and learning equation. Both processes can be reconciled by using the same or very similar criteria, while the facilitation aspect can be either evaluated as part of an amended teaching observation process or integrated within a rubric.

The use of the BLeR rubric in practice

To date, the BLeR has been tested across a limited range of diploma and degree level courses at NMIT during 2011 and 2012. A number of changes have been applied as a result.

- The rubric has been modified to include a more explicit scoring system after feedback from management and academic staff
- A more prescribed set of criteria to evaluate course facilitation have been added to broaden the range of uses for the BLeR
- A number of criteria have been simplified to lessen the need for evaluators to have extensive experience in online teaching and expertise in a range of theoretical areas

To date the rubric has encouraged the use of a team approach to course development and enabled a wider community of interest in blended learning to emerge.

Discussion

Blended learning offers the potential to completely rework the teaching and learning relationship thereby becoming part of a potentially transformative redesign process (Sharpe et al., 2006). The strategy of using the introduction of blended learning to rebuild courses, as opposed to just adding on technology to existing content, is becoming one of the defining characteristics of blended learning (Garrison and Vaughan, 2008; Littlejohn and Pegler, 2007; Sharpe et al., 2006).

It is apparent that to take advantage of this opportunity for redesign, blended learning needs to reference sound pedagogical approaches and practices that work together, to leverage educational technology and ensure the best conditions exist for learning. Technology itself is considered to be pedagogically neutral (Nichols, 2003). Consequently there needs to be an emphasis on pedagogy to prevent unsustainable technology-driven blended learning initiatives.

It is recommended that one of the foundations of a framework to achieve best practice in blended learning is the appropriate use of an evaluation rubric such as the BLeR. This provides the ability to underpin the transformative potential of truly sustainable blended learning.

From the preliminary use of the BLeR, it appears that such rubrics are capable of operating as an effective tool alongside a range of other initiatives to lead and encourage evolution in teaching and learning through the introduction of blended learning.

Looking forward

The key points to be derived from this study that could be relevant to policy and practice for tertiary institutes considering the adoption of blended learning are:

1. The role of pedagogy has a critical role to play in using blended learning as part of a transformative redesign process. One way this can be applied is through the use of a course design rubric that incorporates the use of pedagogy.
2. To build and maintain quality standards in a flexible learning environment an evaluation instrument needs to be part of an integrated course of action that includes attention to institutional capability, content development processes and most importantly, practitioner skills and knowledge.
3. 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 and good practice principles written into a wider policy.

References

Brown, M. & Diaz, V. (2010). *Blended Learning: A Report on the ELI Focus Session.* http://net.educause.edu/ir/library/pdf/ELI3023.pdf

California State University (2009). Chico. *Rubric for Online Instruction,* http://www.csuchico.edu/tlp/resources/rubric/rubric.pdf

Chickering W. & Ehrmann S. C., (1996), *Implementing the Seven Principles: Technology as Lever.* http://www.tltgroup.org/programs/seven.html

Dziuban C , Hartman, J., Cavanagh, T. & Moskal P. (2011). *Blended Courses as Drivers of Institutional Transformation*. DOI: 10.4018/978-1-60960-479-0.ch002

Dziuban, C., Moskal P. & Hartman, J. (2005). Higher education, blended learning, and the generations: Knowledge is power: No more. In J. R. Bourne and J. C. Moore (Eds.), *Elements of Quality Online Education: Engaging Communities*. (pp. 85-102). Needham: The Sloan Consortium.

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. https://doi.org/10.1002/9781118269558

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

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

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

Meyer, K. A. (2002). *Quality in distance education: Focus on on-line learning.* http://www.westga.edu/~distance/ojdla/spring141/shelton141.html [viewed 13 Mar 2012].

Nichols, M. (2003). *A Theory for eLearning*. DEANZ discussion paper, http://deanzdiscuss.massey.ac.nz/mark_nichols_march2003.html [viewed 6 Feb. 2012].

NZ ELG. (2011). *Guidelines for the support of e-learning in New Zealand tertiary institutions,* 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. http://www.wwwords.co.uk/pdf/freetoview.asp?j=elea&vol=2&issue=1&year=2005&article=3_Oliver_EL EA_2_1_web [viewed 29 Jan. 2012].

Quality Matters (2008). QM *Lit Review.* http://w*ww.qmprogram.org/files/rubric/litReview.pdf*

Seitzinger, J., Jamieson, J., Forlong-Ford, S. (2009). *Design by Numbers – a Rubric to Aid Online Course Design,* http://www.naccq.ac.nz/conferences/2009/91-98.pdf [viewed 22 April 2012].

Sharpe, R., Benfield, G., Roberts, G. & Francis, R. (2006). *The undergraduate experience of blended e-learning: a review of UK literature and practice undertaken for the Higher Education Academy,* 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 IV*(I).

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

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

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