


Encouraging deep learning in a blended environment:

*A study of instructional
design approaches*

Carol Guay

Background

- Many institutions converting courses and programs from face-to-face to blended delivery
 - Often begins with posting a course syllabus and supplementary course resources
 - No added educational value in putting these pieces online
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Background

- The single most important aspect of education lies in providing high quality, effective learning experiences, regardless of delivery method.

Central Research Question

- ▶ *Which instructional design approaches for blended learning help deepen the experience of the learner?*

Defining Blended Learning


- ▶ No generally accepted definition for blended learning (Picciano, 2009)
 - ▶ Combination of multiple delivery media designed to complement each other and promote learning and application-learned behaviour (Singh, 2003)
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Defining Blended Learning

For the purposes of this research study:

- ▶ A combination of face-to-face and online learning components used together in a single course, each integral to achieve the required learning outcomes.

Designing for Blended Learning


- ▶ The choice of how to “blend” must adapt according to the subject and the institution
 - ▶ Instructional design frameworks must purposefully integrate student interaction using technology
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Deep vs. Surface Learning


- ▶ Deep learning - focused on the meaning of the learning material
- ▶ Surface learning - focused primarily on the text in the learning materials, not its relationship to other knowledge

(Marton & Saljo, 1976;
Laird, Shoup & Kuh, 2005)

Research Methodology

- ▶ Qualitative research methodology
 - ▶ Grounded theory strategy that derives a general, abstract theory of a process, action or interaction grounded in the view of the participants (Creswell 2009)
 - ▶ Participants are educational professionals with experience converting courses from F2F to blended delivery
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Significance of Study

- ▶ Best practices in instructional design that can be used to deepen the student learning experience in courses using educational technology.
 - ▶ In-depth, rich narrative about the experiences of working with blended learning using educational technology.
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Preliminary Results

- ▶ What does your institution define as blended learning?
 - Will class contact hours be reduced?
 - Or will blended delivery be used in a different way?
 - Are there parameters to work within?

Preliminary Results

- ▶ Analyze course requirements first:
 - What graduate outcomes need to be met?
 - Where does the course fit into the program?
 - What program outcomes are applicable?
 - What is the learner profile?
 - What constraints might the subject matter pose?

Preliminary Results

- ▶ Design from scratch, if possible:
 - Start early – find out what the course structure is currently and what about it works
 - Work with subject matter experts to determine what level of learning is required
 - Encourage the SME to target the highest levels wherever possible in the syllabus – Bloom’s analysis, synthesis and evaluation for example

Preliminary Results

- ▶ Balance the F2F vs. online components to create synergy for the learner:
 - Some concepts are more effective in a face-to-face environment
 - Use online components for advanced preparation and to reinforce concepts
 - Design learning activities to target higher levels of learning


Preliminary Results

- ▶ Design assessment strategies that effectively measure the level of learning the course requires.
 - Guided discovery assignments that require problem solving skills are more likely to measure deeper levels of learning
 - Multiple choice / short answer questions tend to measure a more surface-level of learning

Preliminary Results


- ▶ Multimedia is best used when it helps create learning, not to entertain
- ▶ Can require massive budgets
- ▶ Effective if used sparingly:
 - To illustrate concepts or situations
 - As interactive case studies
 - Tear-aways to illustrate equipment or functions not otherwise apparent

Next Steps

- ▶ First interviews were more general in nature
 - ▶ Themes arising from the first interviews will result in more detailed questions.
 - ▶ Specific focus fostering deeper learning in blended delivery courses
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Thank You

Carol Guay

A vibrant, multi-colored parrot is the central focus, perched on a dark branch. The parrot's feathers are a mix of bright blue, green, red, and yellow. The background is a soft-focus green, suggesting a natural habitat. In the foreground, there is a blurred, colorful pattern of red, white, and green, possibly a piece of fabric or a decorative element. The overall image has a warm, artistic feel.

Experiencing contiguous teaching
and the student impact:
Describing the blended teacher as
bricoleur.

The complexity of blends

More than multiple colors.....

“the organic integration of thoughtfully selected and complementary face-to-face and online approaches” (p.148)

and

“a complex weaving of the face-to-face and online communities so that participants move between them in a seamless manner—each with its complementary strengths” (p. 27)

Garrison & Vaughan, 2008





The approach

Autoethnography is where “the investigator creates an ethnographic description and analysis of his/her own behavior, attempting to develop an objective understanding of the behaviors and work context under consideration by casting the investigator as both the informant 'insider' and the analyst 'outsider' ” (Cunningham & Jones, 2005, abstract).

- ▶ Create research focus
- ▶ Document personal reflection data
- ▶ Document self-observation data
- ▶ Document personal memory data
- ▶ Compare to external data

Chang, H. 2008. Autoethnography as method. Walnut Creek, CA: Left Coast Press.

Cunningham, S.J., Jones, M. 2005. Autoethnography: a tool for practice and education. Proc. of the 6th New Zealand Int. Conf. on Computer-Human Interaction, 1-8.



The application

“ensuring students have time to reflect on meaning and engage in discourse to share understanding”

	Face-to-face	Virtual
Teaching presence	Design Facilitation Direct instruction	Design Facilitation Direct instruction
Social presence	Open communication Affective expression Group cohesion	Open communication Affective expression Group cohesion
Cognitive presence	Triggering event Exploration Integration Resolution	Triggering event Exploration Integration Resolution

Blended teacher as bricoleur

A **bricoleur** is one who creates or crafts from a diverse range of materials and tools which happen to be available.

The **teacher as bricoleur** makes a series of professional judgments about what and how to teach.

Honan, 2004

The **blended teacher as bricoleur** makes a series of professional judgments about what and how to teach using the diverse range of material and tools available....

Honan, E. (2004) Teachers as bricoleurs: producing plausible readings of curriculum documents, *English Teaching: Practice and Critique*, 3(2), 99-112. Available online at: <http://education.waikato.ac.nz/research/files/2004v3n2art6.pdf>





Student response

LEARNING ENVIRONMENT	4.88/5
INSTRUCTOR SUPPORT	4.78/5
EVALUATION	4.33/5
FACILITATION	4.14/5
DIRECT INSTRUCTION	4.16/5



THANK YOU