

# Designing Blended Learning Courses for the Needs of Diverse Learners

## **Overview**

1. Blended learning
2. Diversity of learners
3. Community of inquiry framework
4. Modified triad approach
5. Principles & strategies
6. Evaluation
7. Resources

## **1. BLENDED LEARNING**

### **Your Definition:**

### **Opportunities:**

### **Challenges:**

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## **Blended Learning Described**

- organic integration of thoughtfully selected and complementary face-to-face and online approaches and technologies.
- an opportunity to fundamentally redesign how we approach teaching and learning in ways that higher education institutions may benefit from increased *effectiveness, convenience and efficiency* (Garrison & Vaughan, 2008).

## **Opportunities:**

### *Students*

Overall, a higher quality learning environment with greater access to faculty and peers:

- Increase in student accountability for ownership of their learning (control and responsibility);
- Increase in opportunities for dialogue with faculty;
- Increase in opportunities for teamwork with peers;
- Improvement in learning outcomes;
- Decrease in drop-out/ failure (DF) rates (Power & Vaughan, 2009).

### *Teachers*

Overall, a more flexible teaching environment:

- Less front-end design (compared to blended courses);
- Ongoing course redesign; ongoing introduction of new teaching material;
- More actual, real-time interaction with students;
- Borderless teaching, reaching more (and potentially better prepared) students;
- More just-in-time interventions (Power & Vaughan, 2009).

### *Administrators*

Overall improvement in cost/effectiveness ratio:

- More flexible teaching and learning environment;
- Lower structure & associated front-end design costs; economies of scale
- More sustainable levels of dialogue;
- Lower drop-out and failure rates; greater quality
- Greater frequency of content refresh (incremental improvements) (Power & Vaughan, 2009).

## **Challenges:**

### *Students*

- General
  - Transition – from a passive to an active & collaborative learning approach
  - Study and time management skills
  - Expecting that fewer classes equates to less work
  - Accepting responsibility for completing individual & team activities
- Technical
  - Obtaining high-speed Internet access
  - Using more sophisticated technologies

### *Teachers*

- Managing risk factors
- Resistance to change
- Managing with scarce support for course redesign
- Developing new skills and learning to use new technology
- Managing potential technology crashes

### *Administrators*

- Vision
- Action plan
- Collaborative leadership
- Incentives
- Sustainability
- Academic Recognition

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## 2. DIVERSITY OF LEARNERS

### Who are they?

- Generational learners
  - Matures (prior to 1946)
  - Baby boomers (1946-1964)
  - Generation X (1965-1980)
  - Millennials (1981-1994)
- Digital natives and immigrants

### **Resources**

Educating the Net Generation – Diane and James Oblinger

<http://www.educause.edu/educatingthenetgen/5989>

Digital Natives, Digital Immigrants – Marc Prensky

<http://www.marcprensky.com/>

### How do we know?

What do we want to know about our students in order to make informed decisions about our courses and how can we obtain this information?

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## Our Students Perspective

### Questions:

- Personal learning goals
- Opportunities and challenges
- Comfort level and access to learning technologies

### Techniques:

- Surveys
- Learning style inventories
- Online/class discussions
- Reflective journals
- Interviews
- Focus groups

## Our Colleagues Perspective

What do the other teachers and administrators responsible for the course think about the existing format?

- Surveys
- Coffee interviews
- Focus group lunches

## Our Perspective (teacher)

What do you want to preserve from your existing course/program format?

What would you like to transform?

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## 3. COMMUNITY OF INQUIRY FRAMEWORK

### Community

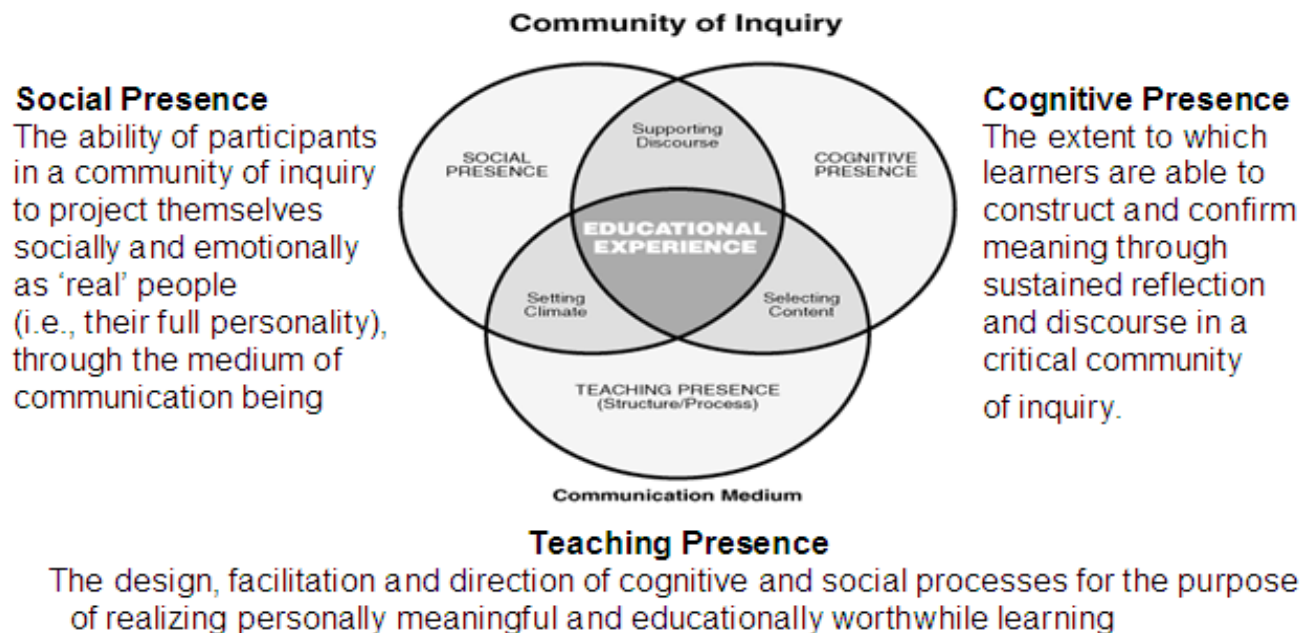
- ... community means meaningful association, association based on *common interest* and endeavor. The essence of community is *communication*, ...  
» (John Dewey)

### Inquiry

- Is problem or *question driven*
- Typically has a *small-group* feature
- Includes *critical discourse*
- Is frequently *multi-disciplinary*
- Incorporates *research methods* such as information gathering and synthesis of ideas”

### Community of Inquiry

- The importance of a community of inquiry is that, while the objective of critical reflection is *intellectual* autonomy, in reality, critical reflection is “thoroughly *social* and communal”.  
» Lipman, 1991



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## Community of Inquiry Categories/Indicators

### Questions

- Is there too much emphasis on social presence (SP) in supporting blended and online communities of inquiry??

- What is the role of teaching presence? How essential is TP?

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### 4. MODIFIED TRIAD APPROACH

<b>Learning Outcomes</b>	<b>Assessment Activities</b>	<b>Before a Synchronous Session</b>	<b>During a Synchronous Session</b>	<b>After a Synchronous Session</b>	<b>Tools</b>
<p>What do you want your students to know when they have finished your course (e.g. key learning outcomes – knowledge, skills and attitudes)?</p>	<p>How will you and your students know if they have achieved these learning outcomes (e.g. opportunities for self, peer, and instructor assessment)?</p>	<p>How will you help students determine what prior knowledge and experience they have with the assessment activity?</p>	<p>How will students synchronously interact and engage with the assessment activity?</p>	<p>What portion of this assessment activity will require “reflective time” for interaction and communication</p>	<p>What tools could be used to help organize, facilitate, and direct these assessment activities?</p>

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## 5. PRINCIPLES & STRATEGIES

### Practical inquiry phases

Description	Category/Phase	Indicators
The extent to which learners are able to construct and confirm meaning through sustained reflection, discourse, and application within a critical community of inquiry.	<ol style="list-style-type: none"> <li>1. Triggering event</li> <li>2. Exploration</li> <li>3. Integration</li> <li>4. Resolution/application</li> </ol>	<ol style="list-style-type: none"> <li>1. Inciting curiosity and defining key questions or issues for investigation</li> <li>2. Exchanging and exploring perspectives and information resources with other learners</li> <li>3. Connecting ideas through reflection</li> <li>4. Applying new ideas and/or defending solutions</li> </ol>

### Design considerations before a synchronous session

Nature of Inquiry	Learning Activities	Tools
<p>Learner</p> <ul style="list-style-type: none"> <li>• Create a <i>triggering event</i></li> <li>• Advanced organizer</li> <li>• Stimulate connections</li> </ul> <p>Teacher</p> <ul style="list-style-type: none"> <li>• Determine learner's prior knowledge or experience with the topic or issue</li> </ul>	<p>a) Reading/Writing</p> <ul style="list-style-type: none"> <li>• Pre-reading assignment or activity on a specified topic or issue</li> <li>• Followed by a self assessment quiz, survey or discussion forum</li> </ul> <p>b) Listening/Writing</p> <ul style="list-style-type: none"> <li>• Auditory/visual presentation of information</li> <li>• Followed by a self assessment quiz, survey or discussion forum activity</li> </ul>	<p>i) Communication</p> <ul style="list-style-type: none"> <li>• Announcement sent to students via an RSS feed through a Social Networking Tool (i.e. Facebook) or News Aggregator Application (i.e. Bloglines)</li> </ul> <p>ii) Posting or linking to pre-reading assignments</p> <ul style="list-style-type: none"> <li>• Social Bookmarking Tools (i.e. Del.icio.us, Edtags)</li> </ul> <p>iii) Digital learning objects</p> <ul style="list-style-type: none"> <li>• Podcasts (i.e. Podomatic)</li> <li>• PowerPoints (i.e. Slideshare)</li> <li>• Videos (i.e. YouTube)</li> </ul> <p>iv) Self assessment quizzes</p> <ul style="list-style-type: none"> <li>• Assessment tools (i.e. Moodle)</li> </ul> <p>v) Anonymous surveys</p> <ul style="list-style-type: none"> <li>• Survey Tools (i.e. getfast.ca)</li> </ul> <p>vi) Discussion Forum</p> <ul style="list-style-type: none"> <li>• Pre-class online discussion regarding questions and issue related to the required reading (i.e. Facebook, Ning)</li> </ul>



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## Design considerations during a synchronous session

Nature of Inquiry	Learning Activities	Tools
<ul style="list-style-type: none"> <li>• Defining the <i>triggering events</i> (key questions)</li> <li>• Beginning to <i>explore</i> the questions</li> </ul>	<p>a) Talking/Listening</p> <ul style="list-style-type: none"> <li>• Dialogue with teacher and fellow learners about the specified issue or topic</li> <li>• Mini-lecture and/or tutorial to address the results of the pre-class quiz or survey</li> <li>• Large or small group discussion or activity</li> <li>• Case study</li> <li>• Initiation of an individual or group project</li> </ul>	<p>i) Displaying quiz or survey results</p> <ul style="list-style-type: none"> <li>• Online – display in the VOIP application (i.e. Horizon Live)</li> <li>• Classroom – computer projection or overhead</li> </ul> <p>ii) Conducting in-class quizzes and surveys to promote dialogue and small group work</p> <ul style="list-style-type: none"> <li>• Online – survey tool and break-out room features in a VOIP application (i.e. Elluminate Live)</li> <li>• Classroom - Personal response systems (clickers) and think, pair, share activities</li> </ul> <p>iii) Displaying digital learning objects and resources</p> <ul style="list-style-type: none"> <li>• Online/classroom – using social media sharing sites (i.e. Flickr, Slideshare, YouTube) and repositories such as merlot.org</li> </ul> <p>iv) Displaying assignments</p> <ul style="list-style-type: none"> <li>• Online/classroom – course blogs or wikis can be used to post assignment handouts, tutorials, resources and links to examples of previous student work</li> </ul>

# Designing Blended Learning Courses for the Needs of Diverse Learners

## Design considerations after a synchronous session

Nature of Inquiry	Learning Activities	Tools
<ul style="list-style-type: none"> <li>Further <i>exploration</i> towards <i>tentative integration</i> with the ability to connect theory to practice application</li> </ul>	<p>a) Reading/Writing</p> <ul style="list-style-type: none"> <li>Anonymous class exit survey</li> <li>What did you learn from the class session?</li> <li>What are you still unclear about?</li> </ul> <p>• Online discussion with student moderation</p> <p>b) Talking/Listening + Reading/Writing</p> <ul style="list-style-type: none"> <li>Individual or group project work, case studies</li> </ul> <p><b>Preparation for next class</b></p> <p>a) Reading/Writing</p> <ul style="list-style-type: none"> <li>Pre-class reading assignment or activity on a specified topic or issue</li> <li>Followed by a self assessment quiz, survey or discussion forum</li> </ul>	<p>i) Anonymous surveys</p> <ul style="list-style-type: none"> <li>Survey tools (i.e. getfast.ca)</li> </ul> <p>ii) Communication</p> <ul style="list-style-type: none"> <li>Announcement section of a course blog or wiki for student “to do” list</li> <li>Group email for the student “to do” list</li> <li>Email for individual student questions or clarification (try to put common questions into a Frequently Asked Questions discussion forum)</li> <li>Online discussion forums in social networking systems (i.e. Facebook) to facilitate student moderated discussions</li> <li>VOIP and Virtual Worlds (i.e. Elluminate Live, Second Life) for synchronous working sessions among student groups</li> </ul> <p>iii) Individual and Group Project Work</p> <ul style="list-style-type: none"> <li>Study groups within social networking systems (i.e. MySpace, Ning)</li> <li>Blogs for reflective journaling (i.e. Blogger)</li> <li>Wikis for collaborative writing projects (i.e. Seedwiki)</li> <li>Mashup tools for data analysis and representation of collaborative projects (i.e. Intel’s Mash Maker)</li> </ul>

## Design considerations for the next synchronous session

Nature of Inquiry	Learning Activities	Tools
<ul style="list-style-type: none"> <li><i>Resolution/ Application</i></li> </ul>	<p>a) Talking/Listening/Writing</p> <ul style="list-style-type: none"> <li>Review of online discussion activities</li> <li>Individual or group presentations</li> <li>Final group thoughts on the topic or issue</li> <li>Initiation of dialogue on the next topic or issue</li> </ul>	<p>i) Display quiz or survey results</p> <ul style="list-style-type: none"> <li>Online – display in the VOIP application (i.e. Horizon Live)</li> <li>Classroom – computer projection or overhead</li> </ul> <p>ii) Display of online discussion forum</p> <ul style="list-style-type: none"> <li>Online discussion forums within social networking systems (i.e. Facebook)</li> </ul> <p>iii) Display assignments and student work</p> <ul style="list-style-type: none"> <li>Links to student blogs and wikis</li> </ul>

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## 6. EVALUATION

### Community of Inquiry Survey Instrument (draft v14)

#### 5 point Likert-type scale

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

#### *Teaching Presence*

##### *Design & Organization*

1. The instructor clearly communicated important course topics.
2. The instructor clearly communicated important course goals.
3. The instructor provided clear instructions on how to participate in course learning activities.
4. The instructor clearly communicated important due dates/time frames for learning activities.

##### *Facilitation*

5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.
6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.
7. The instructor helped to keep course participants engaged and participating in productive dialogue.
8. The instructor helped keep the course participants on task in a way that helped me to learn.
9. The instructor encouraged course participants to explore new concepts in this course.
10. Instructor actions reinforced the development of a sense of community among course participants.

##### *Direct Instruction*

11. The instructor helped to focus discussion on relevant issues in a way that helped me to learn.
12. The instructor provided feedback that helped me understand my strengths and weaknesses.
13. The instructor provided feedback in a timely fashion.

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## *Social Presence*

### *Affective expression*

14. Getting to know other course participants gave me a sense of belonging in the course.
15. I was able to form distinct impressions of some course participants.
16. Online or web-based communication is an excellent medium for social interaction.

### *Open communication*

17. I felt comfortable conversing through the online medium.
18. I felt comfortable participating in the course discussions.
19. I felt comfortable interacting with other course participants.

### *Group cohesion*

20. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.
21. I felt that my point of view was acknowledged by other course participants.
22. Online discussions help me to develop a sense of collaboration.

## *Cognitive Presence*

### *Triggering event*

23. Problems posed increased my interest in course issues.
24. Course activities piqued my curiosity.
25. I felt motivated to explore content related questions.

### *Exploration*

26. I utilized a variety of information sources to explore problems posed in this course.
27. Brainstorming and finding relevant information helped me resolve content related questions.
28. Online discussions were valuable in helping me appreciate different perspectives.

### *Integration*

29. Combining new information helped me answer questions raised in course activities.
30. Learning activities helped me construct explanations/solutions.
31. Reflection on course content and discussions helped me understand fundamental concepts in this class.

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## *Resolution*

32. I can describe ways to test and apply the knowledge created in this course.
33. I have developed solutions to course problems that can be applied in practice.
34. I can apply the knowledge created in this course to my work or other non-class related activities.

## **Results**

- Teaching presence is a *significant* determinate of *student satisfaction, perceived learning, and sense of community* (Akyol & Garrison, 2008; Arbaugh, 2008; Eom, et al., 2006 ; Shea et al. 2004, 2005).
- TP is needed to establish CP and SP; *lowest CP scores* were reported by students who rated *TP as weak* (Shea & Bidjerano, 2009).

## **7. RESOURCES**

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