Introduction
E-LEARNING 1 FOCussed ON CONTENT CREATION AND ID
But…

*If content were king, then universities could all close down in favor of libraries.*
E-LEARNING

http://www.suddenlysmart.com/effective_elearning.htm
• Bush and Mott (2009) have argued that the failure of technology to transform learning stems from a preoccupation with "the tactical implementation of specific technologies which often simply automate the past."

• Mott and Wiley (2009) “software has generally been focused primarily on helping teachers increase the efficiency of the administrative tasks of instruction (e.g., distribute documents, make assignments, give quizzes, initiate discussion boards, assign students to working groups, etc.)”
E-LEARNING

Initially seen as having advantages for access and participation
  • Overcoming time and location

Didn’t live up to its propaganda as
  • Content driven model
  • Technology driven model
  • Assessment in online courses
  • Lack of face-to-face interaction
    • With teacher
    • With peers
  • Isolating
  • Lacking motivation
APPLYING PEDAGOGY TO E-LEARNING

• Pedagogy came late to the party...

• Development over time away from more behaviouristic models towards more situative theories such as
  ▪ Community
  ▪ Inquiry,
  ▪ Community of Practice
  ▪ Social constructivism
    (Mayes & de Freitas, 2007).
E-LEARNING 2

Collaborative and Co-operative e-learning experiences
MODULE OVERVIEW

• Introduction
  ▪ Course objectives
  ▪ Context

• Online Community Learning

• Collaborative e-learning Models

• Assessment
  ▪ Assessment for 21st Century Learning
  ▪ Assessment in Elearning

• Peer Review
ASSIGNMENT!!

But it’s our first night back!
ASSIGNMENT - DESCRIPTION

• Devise and design a technology-based collaborative and/or cooperative learning resource or experience.

• It should be designed to be delivered either wholly online or as part of a blended experience and should be of the duration of 5-10 hours.

• Your selection must be informed by reflection on your teaching, the context of the module, and by appropriate reference to relevant literature.
1. Produce a detailed design document outlining the resource or experience based on the provided template. The expected length is between 5 & 10 pages.

2. A supporting document (500 - 1000 words). This should:
   - Summarise your reflections on the process and
   - detail how your plan was informed by the peer review process that you underwent.
ASSIGNMENT - DEADLINES

• 12pm Thursday 18th February 2016: Submission of draft design document

• 9am Saturday 20th February 2016: Peer review of draft design document.

• 12pm Thursday 10th March 2016: Submission of revised design document and the supporting document.

• 5pm Friday 11th March 2016: Class Presentations
ASSIGNMENT - MARKING

Design document 70%

Supporting Document (Peer Review and Reflection) 30%

• Peer Review 10%
  ▪ Participation in the peer review process
  ▪ Overall Experience
    ▪ What you learnt from reviewing others
    ▪ What you learnt from others review of your own work
  ▪ Your response to the review of your plan
    ▪ Name of Reviewers
    ▪ What actions you took to respond to them in redrafting your design

• Reflection 10%
  ▪ Applying a reflection model of your choice
  ▪ On the entire process not just the peer review

• Presentation 10%
FACE-TO-FACE AND DISTANCE LEARNING ENVIRONMENTS

E-learning and traditional face-to-face learning environments ran alongside each other

- Face-to-face Environment
  - Teacher directed
  - Person to person interaction
  - Synchronous

- Distance learning
  - Self-paced learning
  - Learning material interaction
  - Asynchronous
DISTANCE LEARNING ENVIRONMENTS

Impact of ICTs has been more on distance environment than the face-to-face

- **Fidelity**
  - Rise of multimedia learning objects and experiences
- **Synchronicity**
  - Synchronous communication systems
- **Connectivity**
  - The rise of the social web
INTEGRATION

• Then aspects of e-learning were added into traditional face-to-face learning

• The focus now is on redesigning learning by blending e-learning and traditional face-to-face learning...

Blended Learning
CATEGORIES OF BLENDED LEARNING SYSTEMS

Enabling
- Access
- Convenience
- Same experience, different modality

Enhancing
- Incremental changes
- Online resources for face-to-face course
- Face-to-face session within a distance course

Transforming
- Fundamental redesign of learning
- Transforming learning to new forms not possible without technology

Graham, C., Blended Learning Systems in Handbook of Blended Learning
DEFINITIONS

Blended learning involves the strength of each type of learning environment and none of the weaknesses

- Osgudthorpe and Graham (2003)

Blended learning is any time a student learns at least in part at a supervised brick and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pacing

- Innosight Institute

Blended Learning is the thoughtful fusion of face-to-face and online learning experiences

- Garrison and Vaughan
Most Common Definitions

• Combining instructional modalities (or delivery media)
• Combining instructional methods
• Combining online and face-to-face instruction

**FOR EXAMPLE**

1. Face-to-face introduction to a subject area and class discussion
2. Go online for some basic content or skills acquisition via high quality e-learning content
3. Download some practice exercises onto a mobile device (Results submitted to the tutor)
4. Guided online questions and discussions via discussion board
5. Access synchronous support via web conferencing system to address some misconceptions
FLIPPED CLASSROOM

Image from: http://www.washington.edu/teaching/teaching-resources/engaging-students-in-learning/flipping-the-classroom/
BLENDED LEARNING IS REDESIGNED LEARNING

Current focus is on integrating e-learning into the more traditional face-to-face settings

But Blended Learning can more than just tinkering

- “opens a wide range of possibilities for redesign that goes beyond enhancing the traditional classroom lecture.”
  - Garrison and Vaughan, Blended Learning in Higher Education
FOUR MEANINGS OF BLENDED LEARNING

1. Combining or mixing web-based technology to accomplish an educational goal

2. Combining pedagogical approaches (e.g. constructivism, behaviourism, cognitivism) to produce optimal learning outcome with or without instructional technology

3. Combining any form of instructional technology with face-to-face instructor-led training

4. Combining instructional technology with actual job task

“The point is that blended learning means different things to different people, which illustrates its widely untapped potential.”

OPTIMISATION OF STRENGTHS

Blended Learning combines the properties and possibilities of both (online and face-to-face) to go beyond the capabilities of each separately.

“It recognises the strengths of integrating verbal and text-based communication and creates a unique fusion of synchronous and asynchronous, direct and mediated mode of communication in that the proportion of face-to-face and online activities may vary considerably.”

- Garrison and Vaughan, (2008), Blended Learning in Higher Education,
KEY ASSUMPTIONS OF BLENDED LEARNING

A fundamental redesign, not an additional layer to existing paradigm

- “BL is distinguishable by way the integration of face-to-face and online learning that is multiplicative, not additive”

Assumptions

- Thoughtfully integrating face-to-face and online learning
- Fundamentally rethinking the course design to optimise student engagement
- Restructuring and replacing traditional class contact hours

(Blended Learning in Higher Education, Garrison and Vaughan, 2008)
"The original thing I wanted to do was make the Web a collaborative medium, a place where we can all meet and read and write."

- Tim Berners-Lee
THE ‘COLLABORATIVE LEARNING’ ‘COOPERATIVE LEARNING’ DEBATE

• Some authors have stated that, strictly speaking, the student groups engaging in CSCL environments tend to work more in a cooperative than collaborative manner.

• In many cases, the final product is not the result of real joint construction, but of a juxtaposition of the individual contributions, more or less controlled and directed by one of the group members.
COLLABORATIVE VS. COOPERATIVE LEARNING

Within collaborative learning literature there is much debate on whether certain group activities are truly “collaborative” or instead merely “cooperative”.

Unfortunately there is much confusion surrounding the terms “collaboration” and “cooperation”.

The distinction tends to lie primarily in
1. the role the instructor takes during the group activity and
2. how the students accomplish the task.
COLLABORATIVE VS. COOPERATIVE LEARNING

• Barkley, Cross, and Major (2004) state that cooperative learning principally differs from collaborative learning in that “the teacher retains the traditional dual role of subject matter and authority in the classroom. The teacher designs and assigns group learning tasks, manages time and resources, and monitors students' learning, checking to see that students are on task and that the group process is working well.” (pp. 5-6).

• Whereas in collaborative learning “it is not up to the teacher to monitor group learning, but rather the teacher's responsibility is to become a member, along with students, of a community in search of knowledge” (ibid.).
Collaborative vs. Cooperative Learning

Others believe collaborative and cooperative learning clearly vary by the amount of independence and interdependence exhibited by students in the group.

- Here, cooperative learning is defined as individuals in a group dividing the work so that each solves a portion of the problem.

- Collaborative learning is then “characterized by members of a group working together to complete all aspects of a project, and all members of the group are jointly accountable for the finished product” (Ingram & Hathorn, 2009, p. 318)
COLLABORATIVE VS. COOPERATIVE LEARNING

There are also authors who believe the difference between cooperative and collaborative learning lies in the type of interaction that occurs in student groups.

- These researchers emphasize their belief that in collaborative learning “interaction occurs between the collaborative students which enhances knowledge acquisition” (McInerney & Roberts, 2009, p. 320),
- While in cooperative learning “interaction occurs within the student groups who work or act together as one to achieve a common goal” (ibid., p. 321).
COLLABORATIVE VS. COOPERATIVE LEARNING
COOPERATIVE LEARNING IS COLLABORATIVE LEARNING??

• However, there is no universally adopted meaning of the terms ‘collaborative’ and ‘cooperative’ learning or agreement on precisely what their differences or commonalities are.

• Many authors take a more pragmatic approach, joining authors like Collis and Moonen (2009, p. 327) and Barkley, Cross and Major (2004, p. 4), who use the terms collaborative and cooperative interchangeably.
Researchers like Erkens, Andriessen, & Peters (2003, p. 277) explicitly dispute these distinctions between cooperative and collaborative learning, believing it is futile to avoid conflation of the two terms:

- Some authors distinguish cooperation and collaboration, the first referring to situations in which there is role and task division, while the second is reserved for partners working together on the task at the same time. We propose not to make this distinction, as it confounds task characteristics with task strategy. (p.277)
Collaborative learning can be thought of as occurring for learners in two distinct, but often overlapping, ways:

1. the interaction resulting from discourse, e.g. threaded discussions;

2. and the interaction resulting from the creation of a product through the interchange with others and/or in the accomplishment of a task set forth by the instructor.
COLLABORATIVE LEARNING'S
EPISTEMOLOGICAL FOUNDATIONS

Successful collaborative learning results from learner interaction.

This interaction can include a broad range of activities, including:

- the contribution of each team member’s personal experience, information, perspective, insight, skills and attitudes with the intent of improving the learning accomplishments of others
- team members discussing and explaining content, solving problems, providing feedback, and ensuring mutual success among all members
COLLABORATIVE LEARNING & CONSTRUCTIVISM

• The basis for this belief in learning via collaboration has its foundation in social constructivist theory.

• Social constructivism is closely related to constructivist theory.

• First attributed to Jean Piaget, constructivist theory postulates that the learner generates knowledge through an active process of constructing rather than acquiring knowledge as they make sense of their experiences.
COLLABORATIVE LEARNING & CONSTRUCTIVISM

So Constructivists believe the key to successful instruction is a pedagogy that includes:

- placing learners in direct interaction with information rather than transmitting the information to them, because learning is a proactive and goal-oriented process;

- creating learning activities where students generate something they use to test their ideas with each other, becoming active investigators, seekers and problem solvers;

- engaging learners so that the knowledge they construct is not inert, but rather usable in new and different situations and

- embedding learning in real-world situations in which learners function as a part of a community of practitioners helping to solve real-world problems.
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

• Social constructivists take constructivism a step further by assuming that “learning emerges as an individual interacts with other individuals” (Alavi & Dufner, 2005, p. 192).

• Social constructivism can be seen as “complementary (rather that contradictory) to the constructivist perspective in that it postulates that individual cognition and thinking are socially rooted and are initially shared between people, although they are gradually internalized by individuals” (ibid.).
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

• Much of social constructivist theory can be traced back to the work of Vygotsky (1978) and his seminal concepts of

  ▪ the zone of proximal development,
  ▪ scaffolding
  ▪ intersubjectivity
Vygotsky defines the **zone of proximal development** as:

- the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86)

- To put it another way, it is the difference between a learner trying to understand a new concept alone as opposed to learning it with the help of a teacher or fellow students.
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

Scaffolding involves giving learners a great deal of support initially and then encouraging them to become more independent and responsible for their learning as soon as possible.

Intersubjectivity has been described as the “understanding achieved when people work together to co-construct resolution of a problem” (Conrad, 2009, p. 89), or the creation of “new understandings which are more than the mere combination of two or more points of view” (Ligorio, Talamo, & Pontecorvo, 2005, p. 360).
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

• The student’s “understanding of the world is mediated by and built up through interaction with others, and meanings are negotiated and established through interaction in a wide range of social contexts” (Littleton & Hakkinen, 1999, p. 24).

• This ultimately results in the student internalizing this discourse as the basis for reflection and logical reasoning.
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

• It is through collaborative learning that students recognize knowledge is continually made and remade, shaped, and formed.

• This is because
  ▪ they challenge one another with questions,
  ▪ use the evidence and information available to them, develop relationships among issues, and
  ▪ assume knowledge is something they can help create rather than something to be received whole from someone else.
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

• In order to craft social constructivist pedagogy, it is necessary to foster an environment where learners can build on their knowledge by interacting with each other, their educators, and their learning materials.

• This involves providing students opportunities to actively collect and organize information, and to collaboratively transform that information into cognitive structures.
COLLABORATIVE LEARNING & SOCIAL CONSTRUCTIVISM

• So there are three main characteristics built into social constructivist scenarios:
  1. They use complex, realistic problems;
  2. They use group collaboration, interaction and cooperation
  3. Learners are responsible and set goals, while teachers provide guidance.
BENEFITS OF COLLABORATIVE LEARNING

• Collaborative learning activities are credited with numerous benefits.

• These benefits can roughly be classified into two broad categories: social benefits and academic benefits.
COLLABORATIVE LEARNING: SOCIAL BENEFITS

• Students have reported feelings of greater inclusion and reduced isolation.

• There is evidence of increased student engagement and motivation (to study, complete assignments, etc.)

• Greater feelings of self-esteem and reduced anxiety amongst students.

• An increased positive attitude toward and greater student satisfaction in the learning experience.
COLLABORATIVE LEARNING: SOCIAL BENEFITS

• Collaborative learning can create or improve teamwork skills.

• This is important not least because employers desire college graduates with developed teamwork skills.

  There is now a popular belief that the modern workplace demands from individuals a willingness and ability to coordinate mental effort with others. In particular, working in the new digital economy requires a style of thinking that is comfortable with the social structures of networking and teamworking (Crook, 2009, p. 3).
COLLABORATIVE LEARNING: SOCIAL BENEFITS

- It is believed collaborative learning builds teamwork skills in a variety of ways.

- It affords students a firsthand experience to gain teamwork skills and prepares them to solve problems in a real-world environment by showing them the benefits of group work and initiating them into the real world dynamics of being a team player.
Collaborative learning can also help build valued teamwork skills in less direct ways, including demonstrating how to:

- manage conflict,
- be non-judgmental,
- be sensitive to cultural differences,
- be adaptable,
- negotiate differences,
- build trust,
- learn from one another, and
- share ideas as well as listen to the ideas of others
COLLABORATIVE LEARNING - ACADEMIC BENEFITS

• It is through collaborative engagement that “the likelihood of successful achievement of learning objectives and achieving course competencies increases” (Palloff and Pratt, 2004, p. 8).

• Students exhibit a higher learning rate, improve academically, and achieve more in the post graduate workplace.
COLLABORATIVE LEARNING - ACADEMIC BENEFITS

• Collaborative learning improves student academic achievement through the enhancement of students’ metacognitive awareness and building their critical thinking and problem-solving skills.

• (Busschots et al., 2007; Cockrell, Caplow, & Donaldson, 2000; Conrad, 2009; Fung, 2004; Gokhale, 1995; Goodsell et al., 1992; Ingleton et al., 2000; D. W. Johnson & R. T. Johnson, 2004; Payne et al., 2006; Resta & Laferrière, 2007; Roberts, 2005; P. Smith; V. Taylor, 2005)
COLLABORATIVE LEARNING - ACADEMIC BENEFITS

• It has also been demonstrated that collaborative groups, through their active construction of knowledge, are able to create a **deeper understanding** of course subject matter and mastery of content. (Downing & Holtz, 2008; Gokhale, 1995; Goodsell et al., 1992; D. W. Johnson & R. T. Johnson, 2004; Palloff & Pratt, 2004; Payne et al., 2006; Resta & Laferrière, 2007; P. Smith).

• Busschots et al. (2007) describe this concomitant “construction of knowledge and the development of understanding” being a result of students receiving **instant feedback** from others” which encourages them “to explore their current knowledge and exposes flaws or limitations and to review their ideas” (p. 393).
COLLABORATIVE LEARNING - ACADEMIC BENEFITS

• Collaboration promotes students’ *time/task management skills*, and their ability to *persist* on tasks and *complete* assignments (Ingleton et al., 2000; D. W. Johnson & R. T. Johnson, 2004; Roberts, 2005).

• Collaborative teams also show demonstrable improvements in the *retention* of information, including the long-term retention of what is learned, and the ability to *transfer* this knowledge from one situation to another (Gokhale, 1995; Ingleton et al., 2000; D. W. Johnson & R. T. Johnson, 2004).
COLLABORATIVE LEARNING - ACADEMIC BENEFITS

In summary:

- Enhancement of students’ metacognitive awareness.
- Building of their critical thinking and problem-solving skills.
- Deeper understanding of course subject matter and mastery of content.
- Improved time/task management skills.
- Improved ability to persist on tasks and complete assignments.
- Improvements in the retention of information.
- Improved ability to transfer this knowledge.
COLLABORATIVE CONSTRUCTIONISM

• Alan Shaw (1995) (a student of Papert) envisioned “an expanded view of the constructionistic model” (p. 12), calling it social constructionism.

• In Shaw’s (1995) social constructionism, “a group of subjects serve as active agents in the construction of outcomes and artifacts” (p. 40).

• These outcomes and artifacts can include “social relationships; social events; shared physical artifacts; shared social goals and projects; and shared cultural norms and traditions” (p. 44).
COLLABORATIVE CONSTRUCTIONISM

Since Shaw, others have also written about this expanded view of constructionism, i.e. social constructionism, and its relation to learning.

- Forte and Bruckman made social constructionism the cornerstone of a major classroom activity requiring their students to collaboratively construct a wiki (2007).
- For Dougiamas and Taylor, social constructionism was the foundation for faculty collaborating to build an educational website (2003).
- Sade used social constructionism as the basis for his student co-authored blogs (2005).
COLLABORATIVE CONSTRUCTIONISM

• Other researchers have adopted a variation on the term social constructionism, while maintaining the same meaning, calling it collaborative constructionism.

  ▪ Davies and Carbonaro (2000) created a “constructionist collaborative learning environment” (p. 244) for their student teachers to use so they could have the same experience “that they are encouraged to implement with children in their future teaching careers” (p. 262).

  ▪ Patten et al. (2006) created a collaborative constructionist mobile web application “to support learners in constructing their own understanding of the solutions to sorting problems and problems of categorization” (p. 305).
BRIDGE 21 ONLINE?? BLENDED??

• A learning model based very much on social constructivism and constructionism.

• Face-to-face in its current conception.

• How could we make it work online, or with online elements.
  - Fully online?
  - Blended?
  - Synchronous?
  - Asynchronous?
  - …
WHAT ONLINE SPACES DO YOU LIKE?

• What are your favourite online community spaces?
• What are their design characteristics and features that you particularly like?
• Is there anything about them that you dislike? Why?

• Are there any online community spaces that you particularly dislike?
• What is it about them that you find irritating?
• Available here.
