Blended Learning

F. Jeannine Everhart, PhD
TEACH Session
October 22, 2018
Learning Objectives

• Compare and contrast in class, online, flipped, and hybrid teaching methods
• Discuss the benefits and challenges to using blended learning teaching methods
• Describe common blended learning techniques
• List steps to assist in migrating a course from a traditional to a blended format
Instructor

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- Assistant Professor, JCHS
- Program Director, Doctor of Health Sciences
Some Course Delivery Methods
In Class

• Pros
  • Teacher always there
  • Easy to have interactive questions
  • Easy to form group activities

• Cons
  • Time constraints
  • Location constraints
  • Learning modalities?
Online

• Pros
  • Convenient
  • Challenges student to use interactive tools
  • Easy integration into a Learning Management System (LMS)

• Cons
  • “Death by Powerpoint”
  • Unengaging instructor can kill the learning experience
  • Group projects can be difficult
  • How to get interactive questions/comments?
Blended/Hybrid

“Blended learning (also known as hybrid learning) is a method of teaching that integrates technology and digital media with traditional instructor-led classroom activities, giving students more flexibility to customize their learning experiences.”

“In general, blended learning refers to the following:
- Some learning happens online in a format where the student has control over the path and pace at which they engage with content
- Some learning happens in an instructor-led classroom
- Online and in-person learning is complementary, creating a truly integrated learning environment”
“Flipped” Classroom

• Type of blended learning
• Lectures are viewed outside of class time (i.e., online)
• Students meet with instructor for group work and activities.
Flipped VS Traditional

**Flipped**
- Teacher instructs lesson at home (video / podcast / book / website)
- Students work in class.
  - Deeper understanding of concepts, applications, and connections to content are made.
  - Students receive support as needed.

**Traditional**
- Teacher instructs
- Students take notes
- Students follow guided instruction
- Teacher gives assessment
- Students have homework

Trends in Blended Learning
Blended Learning

Benefits
- Convenience/self-pace
- In class can be customized
- Lectures are recorded for review
- Change of scenery reduces boredom
- Appeal to part time and distant students
- May cut costs

Challenges
- Requires engagement and effort for instructor
- Must be “tech comfortable”/Learning curve
- Update as tech changes
- Difficult to design a class well
- Need IT resources
Some Tools

- Podcasts (any voice recording)
- Screen capture (such as screencast-o-matic)
- “Pre-made” materials – articles, videos, etc.
- Asynchronous discussion (such as Voice Thread)
- Online Synchronous Collaboration (Zoom, Blackboard Collaborate)
- Clickers (Kahoot [0159981])
- Embedded assessments (Nearpod, iSpring)
<table>
<thead>
<tr>
<th>Module</th>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>8/16-8/17</td>
<td><strong>Thursday 8/17: Meet at JCHS</strong></td>
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<td>8/16-8/17</td>
<td><strong>Introduction to HSC 300</strong></td>
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<td>- *** Before class on 8/17 ***</td>
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<td>- Read the Syllabus</td>
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<td>- Read Chapter 1 (pages 1-12) in your textbook, <em>Research Techniques for the Health Sciences, Fifth Edition</em></td>
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<td>- During class we will discuss the syllabus, Chapter 1, and the Chapter 1 assignment</td>
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<td>8/18-8/23</td>
<td><strong>What is Research?</strong></td>
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<td>- Complete the syllabus Quiz: Due 11:59pm on 8/23</td>
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<td>- View weekly videos (posted in Blackboard, Module 1, Week 2)</td>
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<td>- Complete Chapter 1 Quiz (#1): Due 11:59pm on 8/23</td>
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<td>- Submit Chapter 1 Assignment: Due 11:59pm on 8/23</td>
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<td>8/24-8/30</td>
<td><strong>Thursday 8/31: Meet at JCHS</strong></td>
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<td>8/24-8/30</td>
<td><strong>Developing the Research Proposal</strong></td>
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<td>8/24-8/30</td>
<td>*** Before class on 8/31 ***</td>
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<td>8/24-8/30</td>
<td>- Read Chapter 2 (pages 13-25) in your textbook</td>
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<td>8/24-8/30</td>
<td>- View Chapter 2 Lecture Slides (posted in Blackboard, Module 1, Week 3)</td>
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<td>8/24-8/30</td>
<td>- View weekly videos (posted in Blackboard, Module 1, Week 3)</td>
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<td>8/24-8/30</td>
<td>- Complete Chapter 2 Quiz (#2): Due 11:59pm on 8/30</td>
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<td>8/24-8/30</td>
<td>During Class we will have a lecture on Chapter 2, and we will:</td>
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<td>8/24-8/30</td>
<td>- Walk through Chapter 2 Assignment</td>
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<td>8/24-8/30</td>
<td>- Discuss key concepts regarding upcoming Chapter 3</td>
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<td>8/24-8/30</td>
<td>- Talk about the Exam format</td>
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But, does it work?

RCT by Stockwell et. al (2015)$^2$ showed that

- Students who received a video assignment were more likely to attend class than students who received a textbook assignment.
- Students who solved problems in class performed better than students who only listened to a lecture.
- Video assignments were more satisfying to students than textbook assignments.
A. 172 students invited to participate in IRB-approved study, sign informed consent
   111 participating students randomized into four groups using a 2 x 2 study design

B. Male Female P-value High Low P-value
   Group 1: 15 12 0.998 19 8 0.990
   Group 2: 15 13
   Group 3: 15 13
   Group 4: 15 13
   *Randomization ensured no significant differences in male/female and high/low prior exam scores (Chi-square test)

C. Class attendance
   Did not attend Attended
   Pre-class assignment
   Video Textbook
   Group 1 18 37
   Group 2 9 47
   P=0.04

D. Study group
   Median exam score
   Group 1: Textbook, lecture 61
   Group 2: Video, lecture 67
   Group 3: Textbook, problem solving 73
   Group 4: Video, problem solving 80

   Study group
   Median Exam Score
   Groups 1+2: Lecture 63
   Groups 3+4: Problem solving 74
   Groups 1+3: Textbook 66
   Groups 2+4: Video 67
   P=0.03

   Study group
   Satisfaction (1 = low, 5 = high)
   Groups 1+2: Lecture 4.1
   Groups 3+4: Problem solving 4.1
   Groups 1+3: Textbook 2.9
   Groups 2+4: Video 4.3
   P<0.0001

Impact on exam score and attendance measured
Implementing Blended Learning³

Three Design Approaches

(1) Low-impact blend: adding extra activities to an existing course

(2) Medium-impact blend: replacing activities in an existing course

(3) High-impact blend: building the blended course from scratch.
Low Impact: adding activities

1) Add a simple online activity that instructor and students can easily manage
2) Activity should have a specific purpose
3) Activity should be well integrated into the course
4) The course should not be overloaded with tasks and activities.
5) For teachers with no experience in designing for blended learning. It is easy to implement and has a low risk of failure.
Medium Impact: Replacing activities³

(1) Apply the replacement approach incrementally.
(2) Determine the mix of face-to-face with online according to the flavor and needs of the class.
(3) Refine and revise according to evaluations, experience and feedback.
(4) Best with teachers already very experienced in the course material.
(5) Intuitional support is important for success.
High Impact: Build from Scratch³

(1) Teachers experienced with low/medium approaches

(2) Teachers should be prepared to invest considerable time in the design.

(3) Teachers should consider including a variety of delivery medium in their blend. Will likely require faculty development and training

(4) Institutional support is a key factor
Questions?
References

