New Teaching and Learning Paradigms
Leveraging Technology and Leading Change

Larry Hurtubise
Ohio University
Heritage College of Osteopathic Medicine
1. Use technology to provide experiences for learners that are not otherwise possible
2. Focus on fundamental principles of teaching and learning rather than learning specific technologies
3. Allocate a variety of resources to support the appropriate use of instructional technologies,
4. Support faculty members as they adopt new technologies
5. Providing funding and leadership to enhance electronic infrastructure to facilitate sharing of resources and instructional ideas
Agenda

Instructional Design

Leading Change

Medical Education Research
Think of one of the most significant Learning experience you have ever had:

- Describe it
  - What happened
  - Who was involved

- How did it change you?

- How do you apply it today?
Proximity and Significant Learning

Learning to Learn
- In the Course
- About the Subject
- Being Self-Directed

A Taxonomy of Significant Learning
A Self-Directed Guide to Designing Courses for Significant Learning
L. Dee Fink, PhD

http://www.deefinkandassociates.com/resources.html
# Mapping SL to the Competencies

<table>
<thead>
<tr>
<th>Significant Learning</th>
<th>AOA Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundational Knowledge</td>
<td>Medical Knowledge</td>
</tr>
<tr>
<td>Application</td>
<td>Patient Care, OP&amp;P</td>
</tr>
<tr>
<td>Integration</td>
<td>Systems based practice</td>
</tr>
<tr>
<td>Human Dimension</td>
<td>Interpersonal and Communications Skills</td>
</tr>
<tr>
<td>Caring</td>
<td>Professionalism</td>
</tr>
<tr>
<td>Learning to Learn</td>
<td>Practice Based Learning and Improvement</td>
</tr>
</tbody>
</table>
# Backward Design

## The 3-Column Table

| 1. Situational Factors – What are the factors and what influence they will have on your course design decisions? |
|---|---|---|
| **2. Learning Objectives** | **3. Feedback/Assessment Activities** | **4. Teaching/Learning Activities** |
| What do you want students to be able to do? | What will students need to do, for you and them to know whether they have learned that? | What will students need to do, to learn that? |
Situational Factors

What are the factors and what influence they will have on your course design decisions?
Design Considerations

- Suppose you are a designer of furniture and you have been assigned to design a wooden chair.

- What questions would you have?
1. **Situational Factors**

- Specific Context of the Teaching/Learning Situation
- General Context of the Learning Situation
- Nature of the Subject Is this subject primarily theoretical, practical, or a combination?
- Characteristics of the Learners
- Characteristics of the Teacher
What are your situational factors?

- Take a moment and write down an upcoming teaching situation.

- Write down a few of your Situational Factors?
Learning Goals

What do you want trainees to learn?
2. Curricular Goals

What you want trainees to get out of the course.

- What is important for them to learn and retain, 2–3 years after the course is over?
- What kind of thinking or application abilities do you want them to develop?
- How do you want them to keep on learning after the course is over?
AOA Competencies

- Osteopathic Principles and Practices
- Medical Knowledge
- Patient Care
- Interpersonal & Communication Skills
- Professionalism
- Practice Based Learning and Improvement
- System Based Practice
Write learning goals for as many of the core competencies as you can.

<table>
<thead>
<tr>
<th>Learning Goals</th>
<th>Assessment Methods</th>
<th>Teaching &amp; Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osteopathic Principles and Practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Knowledge</td>
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<td>Practice Based Learning and Improvement</td>
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<td></td>
</tr>
<tr>
<td>System Based Practice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Feedback and assessment

What will students do to demonstrate they have achieved the Learning Goals we set for the course?
All assessment is formative
Medbiquitous Assessment Methods

- Clinical Documentation Review
- Clinical Performance Rating/Checklist
- Exam – Clinical Performance
- Exam – Written/ Computer–based
- Oral Patient Presentation
- Portfolio–Based Assessment
- Practical (Lab)
- Research or Project Assessment
- Self–Assessment
- Stimulated Recall
Assessment as an Opportunity for Developing Independent Thinking Skills in Students

By: Katherine Robertson, PhD in Educational Assessment

The liberal arts college where I teach recently underwent review for accreditation. Like many other colleges and universities, we were criticized for our lack of assessment. Faculty resistance, it seems, may be the biggest barrier to implementing institutional assessment measures (Katz, 2010; Weimer, 2013). Both Weimer and Katz accredited faculty resistance to fears that assessment data could be used for “comparison shopping” and “educational consumerism.” While these fears are justified, at my college another fear prevails; the fear that assessment will lead to hand-holding strategies that will discourage independent thought in our students and result in failure to adequately prepare them for professional life.
Assessment

- From the list of assessment methods, choose an assessment methods which align with your learning goals

Remember

- Formative Assessment methods can also be Teaching and Learning methods
Teaching and Learning Methods

What teaching and learning activities can help the trainees succeed in the assessments to achieve learning objectives?
Active learning

- Any instructional method that engages students in the learning process.
  - **Collaborative learning** work together in small groups. Cooperative learning group work where students pursue common goals.
  - **Team-based Learning (TBL)** allows a single instructor to conduct multiple small groups simultaneously.
  - **Case-Based Learning (CBL)** factually based, complex problems are used to stimulate discussion and collaborative analysis.
  - **Problem-based Learning (PBL)** problems are introduced to provide the context and motivation for learning.
Activities that Promote Active Learning

- Debates
- Note sharing
- Problem Sets
- Panel Discussion
- Audience Polling
- Concept mapping
- The Muddiest Point
- Research proposal writing
- Simultaneous reporting of answers
- Generating a Differential Diagnosis
- Discussion pairs – Think–Pair–Share
- Writing responses – the one minute paper
- Solve real–world using knowledge already on hand

Which of these Strategies fits well with your Teaching

Teaching and Learning Methods

- From the list of Activities that promote Active Learning, choose an methods which align with your learning goals and assessment methods

Remember
- Formative Assessment methods can also be Teaching and Learning methods
Scheduling
<table>
<thead>
<tr>
<th>What is the title of the lecture?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name or describe the course or curriculum</td>
</tr>
<tr>
<td>Who are the learners?</td>
</tr>
<tr>
<td>How many in the group?</td>
</tr>
<tr>
<td>What is the time frame allotted for the lecture?</td>
</tr>
<tr>
<td>List the learning objectives for your lecture</td>
</tr>
</tbody>
</table>

**Lecture Outline**

**Active Learning Strategies**

- Introduction
- Body
- Conclusion
The Castle Top

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive lectures</td>
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<td>Reflection review</td>
<td>Capstone CAT project</td>
</tr>
<tr>
<td>Stats practice review</td>
<td>Search lab</td>
<td>Interactive lectures</td>
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Develop a schedule

- Translate the contents of your Three Column Table into a schedule
  - Use the Lecture Planning or the Weekly Plan template

- You may work as an individual or groups
Share your plan

- Share your 3 plan with the participants at your table.

- Nominate one person to share their plan with the group.
Which Active Learning Methods did we use?
What change initiatives will you need to lead to leverage new teaching modalities?
Change Management Models

Diffusion of Innovations
Everett M. Rogers

Leading Change
John P. Kotter
**Change Management Models**

**Kotters 8 Steps**
- Establishing a Sense of Urgency
- Creating the Guiding Coalition
- Developing a Change Vision
- Communicating the Vision for Buy-in
- Empowering Broad-based Action
- Generating Short-term Wins
- Never Letting Up
- Incorporating Changes into the Culture
Year 0
Synchronous Teaching and Learning (STL)

- Readiness Assessment
- STL Orientation
  - Workshop Evaluation
- Peer Observation
- Awareness Events
  - Open House
  - Department Meetings
- Practice Sessions
  - By Course
- Expanding Use Cases
Change Management Models

Rogers Diffusion of Innovation
- Relative Advantage
- Trialability
- Observability
- Communication Channels
- Homophilous Groups
- Pace of innovation/reinvention
- Norms, Roles, and Social Networks
- Opinion Leaders
- Compatibility
- Infrastructure
iPads Special Interest Group

- Interest in iPad
- Early Adopter showcase
- iPad SIG
- Monthly Meetings
  - Includes Faculty, Staff, Students
  - Purchase Apps
  - Share findings
- iPad Use Survey
- Showcase
- National Meeting Presentation
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Reflect on the models

- Place a check next to the strategies that would be effective in your environment.
Medical Education Research

Kotter's 8 Steps
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Compatibility
Infrastructure

Medical Education Research
Instinctive > Reflective > Evidence Based > Scholarly
Proposal of a new “flipped classroom” model
- Students would access brief online videos
  - to learn new concepts on their own time.
- Classroom time facilitated by expert faculty
  - leading dynamic, interactive sessions where students can apply their newly mastered knowledge.

Emphasizes the need to define a core curriculum
- meet learners where they are
- enhance the relevance and retention of knowledge
- facilitate in-depth learning
- fueled by individual students’ aptitude and passion.
Endocrine Block
(Flipped Classroom MER)

- Innovative/Early Adopter Pilot
- High Response Rate on Evals
  - 90% constructive
    - 60% Instructional Design
      - Allignment of goals, assessment, teaching methods
    - 15% Technological Usability
      - One recording method
    - 15% Change Management
      - Innovations need new kinds of support
      - Innovators and Early Adopters can stress support structures
Outcomes

- FD Workshops on Flipping the classroom
- Modification of Support
  - One System for recorded lectures
- Increases Planning with support units
- Letter to the editor at Academic Medicine accepted
- IRB to study changes from this year
Reflect on the models

- Place a check next to the strategies that would be effective in your environment.

- Add a plus where MER would be effective in your environment
Imagine that your course redesign has been successful:

- When will you be able to present it at a meeting?

- What outcomes will you highlight?
  - For Granting Agencies
  - For Curricular Leaders
  - For students

- What data should you collect now?
What was the most important thing you learned today?

It might be different for each of you.
References

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- Nibert M. Boyers Model of Scholarship
  - http://www.facultyguidebook.com/test/2_5_1.htm
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