Flipping the Classroom

Improving Learning Outcomes with Technology

Teri Finneman, Terry Foraker, Cindy Francies, Sam L.K. Pillai, Barry Still
Instructional Systems Design, ISLT 9471, FS_2014

UNIVERSITY OF MISSOURI
### Group Roles and Responsibilities

#### Project Roles:

| **Teri Finneman** | • Subject Matter Expert  
• Learning Objectives  
• Needs Assessment  
• Learner Analysis  
• Contextual Analysis  
• Materials for Training Program  
• Implementation Plan  
• References  
• Appendix assist as needed  
• Valuable contributor to all sections |
| **Terry Foraker** | • Valuable contributor to all sections  
• Broad Goals and Big Ideas  
• Task Analysis  
• Types of Learning Experiences or Instruction  
• Materials for Training Program or Learning System  
• Appendix B  
• Project Formatting |
| **Cindy Francies** | • Project Leader  
• Task Analysis  
• Types of Learning Experiences or Instruction  
• Will contribute to Appendix B, Table of Contents, and References as necessary.  
• Valuable contributor to all sections  
• Implementation Plan, Including Schedule  
• Project Formatting |
| **Sam L.K.Pillai** | • Needs Assessment  
• Contextual Analysis  
• Formative & Summative Evaluation  
• Appendix A. Needs Assessment Instruments and Evaluation Materials  
• Valuable contributor to all sections |
| **Barry Still** | • Subject Matter Expert  
• Broad Goals and Big Ideas  
• Learning Objectives  
• Formative & Summative Assessment  
• Materials for Training Program or Learning System  
• Implementation Plan and Schedule |
Valuable contributor to all sections

This project is designed to deliver face-to-face learning supplemented by independent practice to University of Missouri faculty who are interested in creating flipped classrooms.

Our instruction will be provided via a two-day seminar. The first Saturday seminar will be conducted face to face at the University of Missouri. The seminar will include instruction via PowerPoint, handouts, and hands-on experience with online teaching tools. Participants will also work together in groups to brainstorm ideas. Participants will then have the following four weeks to implement learned strategies into their current classrooms to experiment with flipped classrooms. They will return for the second day of the seminar to continue to learn, brainstorm, and share with their colleagues.
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SECTION 1: DESIRED RESULTS

Broad Goals and Big Ideas

The learner will:

- Gain insight into the idea of the flipped classroom
- Understand what the flipped classroom looks like in practice (what it is, and what it isn’t) and how it changes what happens both inside and outside of class
- Understand how to use the tools that I need to flip my classroom
- Develop a support network to help me through my struggles as I flip my classroom for the first time
- Improve learning in my classroom
- Begin to think broadly about the learning that goes on in my classroom as I teach it today and consider how flipping my classes may allow me to teach better

In the landscape of education today, instructors are being asked to teach more, be it content or skills, in order to prepare students for their chosen careers. However, the amount of time allotted to accomplish all of this extra teaching has not changed to match. Instructors have to start thinking differently about teaching and learning in the classroom. How can we use our most valuable asset, time, in the most productive ways?

One way that we have identified and research is beginning to support is a technique called flipping. In a flipped classroom, lectures are pre-recorded and assigned as homework. So, students spend their time outside of class doing the passive learning. Inside the classroom, a student-centered approach is employed so that students are actively engaged with the content, the instructor, and one another, allowing for better learning to occur. With the passive lecture out of the way, students are free to ask questions, and instructors are given the opportunity to engage students with problem-based learning, peer-assisted learning, or any number of other teaching strategies based on the constructivist theory of learning.

The biggest hurdles with flipping classrooms are related to technology (How do I make/edit/post/etc. video lectures?) and new instructional paradigms (What am I supposed to do with the students if I’m not lecturing to them?) We believe that given the opportunity, the necessary tools, and the training, many instructors will take the chance to provide students with a more engaging way to learn.

Our objective is to deliver face-to-face instruction to University of Missouri faculty who are interested in creating flipped classrooms. This instruction will consist of two Saturday seminars covering a period of four weeks. The first session will be conducted on the University of Missouri campus. Instruction will make use of PowerPoint, handouts, and hands-on experience with online teaching tools. In addition, participants will form discussion groups to brainstorm ideas for creating effective flipped classrooms. In the four weeks following, participants will gain firsthand experience with flipped classrooms by implementing the strategies that they have learned. The second Saturday session will give participants an opportunity to relate their flipping experiences and learn
more about how to engage students in the classroom and assess their usage of the online components.

**Learning Objectives**

**Goal 1:** Learners will be able to identify and define a flipped classroom, and explain the benefits that it presents to students and faculty.

1. Following a lecture on flipped classrooms and a lecture on VoiceThread, learners will be able to define a flipped classroom in a VoiceThread with 100 percent accuracy.
2. Following a lecture on flipped classrooms and a lecture on VoiceThread, learners will be able to name three benefits of flipped classrooms in a VoiceThread with 100 percent accuracy.
3. Following a lecture on myths of flipped classrooms and a lecture on how to create a video lecture, learners will be able to create a video lecture and identify the facts behind three myths with 100 percent accuracy.

**Goal 2:** Learners will be able to design an effective course following the flipped classroom model.

1. Following a lecture on building online learning communities, learners will be able to write a discussion board post discussing four aspects important in building an online learning community with 100 percent accuracy.
2. Following a lecture on effective course design in a flipped classroom, learners will be able to create a syllabus for a course of their choice that incorporates pedagogical components of flipped classrooms that will be assessed based upon a rubric.

**Goal 3:** Learners will be able to enhance online learning by making effective use of various Blackboard technologies.

1. Following a lecture and given a computer that meets or exceeds minimum requirements for hardware, software, and connectivity, learners will be able to successfully create and upload a video of a lecture via the Tegrity tool within Blackboard.
2. Following a lecture and given a computer that meets or exceeds minimum requirements for hardware, software, and connectivity, learners will be able to successfully design and post a VoiceThread in Blackboard.
3. After the first session of training, learners will try out at least one week of flipped classroom instruction with their students in between seminar sessions and will be assessed based on peer discussion of their experiences.

**Goal 4:** Learners will be able to create a classroom environment that enables their students to implement what they have learned on their own and engage in group discussions, participate in class projects, and receive individualized attention as needed.
1. After a lecture on effective course design, learners will be able to name three classroom instructional strategies that actively engage students in the physical classroom and will be assessed in small-group discussions.
2. After a lecture on effective course design, learners will create a lesson plan to detail what students and the instructor will do in their physical classroom after students view a lecture on their own, which will be assessed based on interviews.
3. After the training, learners will be aware of new instructional strategies to engage students in their physical classrooms and use them at least once more during the semester, which will be assessed based on a post-instruction evaluation.

**Goal 5:** Learners will be able to assess the performance of their students in the flipped classroom environment.

1. Given a basic understanding of how to implement the technical tools available in the Blackboard environment, learners will be able to successfully design student assessments that correlate with course objectives, which will be assessed based on observation.
Needs Assessment

To address the needs of the learners, a Needs Assessment has been developed. The assessment is intended to discover the level of participants’ knowledge and skills in the Flipping Method, as well as to collect optimal and actual data from department heads. We will also seek critical input from students and flipped classroom experts.

We will use three instruments to gather information: online surveys, focus groups, and interviews. A variety of information will be collected to help us develop appropriate training, as noted in the chart below. The reasons why we need to know particular information are also included in the chart below.

Target Audience
This training is targeted at University of Missouri faculty with little or no prior experience with flipping classrooms. They may be tenured, tenure-track, professional practice, or instructors from any of the academic departments.

We have divided our training into two face-to-face sessions as this is the learning environment most familiar to our learners. However, we also have incorporated time to experiment with flipping a classroom in between seminars so that we are able to address any further learner needs during the second seminar session.

Strategy
Conducting this needs assignment will help us to fine tune our seminar training in order to determine what will be most beneficial to our participants and to align with department expectations and best practice standards regarding flipped classrooms.

Participants
Faculty, department chairs, flipped classroom experts, students

Data Collection
Sample Size
We will have 15 faculty learners attend our training and will ask our faculty-related questions to them via focus groups, while directing our department questions to their specific department chairs via interviews. In addition, we will aim to interview at least five flipped classroom experts to receive answers on training-specific questions. Finally, we plan to do surveys with at least a few dozen students to gauge student opinion on flipped classrooms.

Scheduling
We will collect our data at least two months in advance in order to have time to analyze our data and adjust our instruction.
Tools

We are using a survey, interviews, and focus groups to collect data. An online survey with students in the participants’ departments will be conducted using Survey Monkey. When the survey questionnaire is ready in draft form, a pilot test will be conducted. Once the pilot test goes through its observation and processing routines, final modifications will be made to the questionnaire. After this process, the full-scale survey will take place. As for the department chairs and flipper experts, since qualitative analysis is needed, interviews are the chosen tool. This is because interviews allow personal contact, the sharing of ideas, engagement in dialogue, and problem solving. As for the participants in the seminar, the focus group technique will be used. Specifically, single-moderator, mini-focus groups will be used. There will be one moderator to make sure that everything is flowing smoothly and that all topics are covered. The focus groups will be small having four to five members per group.

For data analysis, triangulation (online survey, focus groups, and interviews) would be the key because using three instruments would yield a more valid study. The online surveys will be done through freely available online survey tools and analyzed online. The focus groups and interviews will be conducted through a set of questions designed specifically for the audience at hand and the results will be textually analyzed to determine common themes.

See Appendix A.1 for needs assessment instruments.
## Needs Assessment: Flipped Classroom

<table>
<thead>
<tr>
<th>Types of Information</th>
<th>What do you need to know?</th>
<th>Why do you need to know this?</th>
<th>Information Sources</th>
<th>Types of Procedures (Instruments)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optimals</strong>&lt;br&gt; <em>How do we find out what ought to be occurring?</em></td>
<td>What are department expectations for flipped classrooms? (i.e. do chairs expect participants to flip ALL of their classrooms after training? Just one course? Just sample flipping?)&lt;br&gt;What level of proficiency must participants have in flipping classes at the end of the course?&lt;br&gt;How well must participants be able to elucidate the concept of the flipped classroom?&lt;br&gt;How effective must participants be in using technology to enhance learning?&lt;br&gt;How proficient must participants be in creating a classroom environment for the flipped classroom that enables their students to function effectively?&lt;br&gt;What level of academic achievement should the participants’ students have when evaluated after using the flipped classroom?</td>
<td>We need to know if the seminar goals and objectives are being met.</td>
<td>Department chairs&lt;br&gt;Flipper experts</td>
<td>Interviews</td>
</tr>
<tr>
<td><strong>Actuals</strong></td>
<td>How many faculty members currently flip their classrooms?</td>
<td>We need to know what percentage of</td>
<td>Faculty participants</td>
<td>Focus groups</td>
</tr>
</tbody>
</table>
| **The way it is now.**  
**What people know and do. What is occurring?**  
**How do we find out what is actually occurring?** | **What are the performance levels of students in flipped classrooms compared to those in conventional ones?**  
Have faculty members had any previous training in flipped classes?  
What level of knowledge do faculty members have about flipped classes? | **faculty flip and what percentage do not. We need to know what difference flipped classrooms have made. We need to know where faculty are both cognitively and behaviorally.** | **Department chairs** | **Interviews** |
|---|---|---|---|---|

| **Determining Causes**  
**Why is there a problem? What’s causing it?** | **Why aren’t more faculty using flipped classrooms now?**  
Do faculty have adequate technical, department, and pedagogical support to effectively switch to flipped classes?  
How many (percent) of faculty have never heard of the flipped classroom concept or don’t know much about it?  
How concerned are faculty about perceived deficiencies or problems in student learning if a flipped strategy is used?  
How concerned are faculty about perceived time constraints of revising their courses to be flipped classrooms? | **To determine if the cause is instructional, environmental, or motivational** | **Department chairs** | **Interviews** |

| **Feelings** | **How do participants feel about switching to flipped classrooms?** | **Need to determine what participants** | **Participants** | **Focus Group** |
| Opinions about the problem or competence. | Do participants feel that they have the prerequisite knowledge to be able to successfully use this method of instruction? How do students feel about switching to flipped classrooms? Do participants feel that flipping classes will make a difference? | feel about the flipped classroom. Need to determine whether students feel the method is beneficial to their learning and worth the time | Students | Survey |
| Possible Solutions | What are some excellent websites and training videos that focus on for the flipped classroom concept? How can the flipped classroom concept be promoted more effectively at MU? What is the best approach to use to train learners in the flipped classroom concept? | To discover sources of information that shed light on successful use of this technique. To determine if there are other approaches that are more effective | Flipper Experts | Interview |
Task Analysis

Procedural Analysis
A detailed procedural analysis has been developed for the process of creating and compiling a Tegrity-based video lecture to be delivered via the Blackboard system available at the University of Missouri. This is consistent with Goal 3.1. This detailed analysis is available in Appendix A.2.1.

Topic Analysis
A comprehensive topic analysis has been performed to outline a variety of techniques for teaching in an online environment. This outline is available in Appendix A.2.2.
SECTION 2: EVIDENCE OF ACCEPTABLE RESULTS

Formative Evaluation
Formative evaluation will occur throughout the development and implementation of the seminar so as to help us hone our final seminar into a high-quality product that can be used to effectively train faculty to flip their classes. During the development phase, experts in the field will be brought in at various times to evaluate our design decisions and offer feedback to improve it. During the implementation phase, testing will be done with individual and small groups of learners to determine the appropriateness of both content and timing.

Key questions to consider:
- How well does the seminar prepare learners to flip their classrooms?
- Do the designed content and learning experiences match the training objectives?
- Is the time allotted for instructional content appropriate?
- What improvements need to made to the instructional design?
- How can content be improved?
- Do learners feel comfortable enough to flip their classes?
- Are the seminar days organized in a logical and appropriate fashion?

Approach 1: Meeting with an Instructional Design Expert
After a rough draft of the seminar including objectives, schedule, content, and materials has been completed, an instructional design expert will be brought in to provide feedback on how to improve the instruction and design so far. The expert will be given all of the materials mentioned and allowed time for review. After the expert has reviewed the rough draft, a meeting will be scheduled to allow the expert and the design team to interact. In the meeting, the expert will give his/her feedback to the team, and they will in turn be able to make sure that they understand the feedback and recommendations. Several questions will also be developed to make sure that the team is able to collect the feedback that they are interested in.

Approach 2: Focus Group with Trial Participants
After the final draft of the seminar is completed, potential faculty will be contacted on a one-on-one basis and asked to participate in a trial run of the seminar and provide feedback to help improve its overall effectiveness. At the outset of the trial seminar, the participants would be asked to make notes of things that could be improved. At the end of each of the two seminar days, one of the designers would come in and facilitate the group to get feedback and ask specific questions of the seminar day. The instructor would also be a part of this focus group, because his/her feedback would also be valuable for the designers.

See Appendix A.3 for formative evaluation instruments.
Summative Evaluation

A summative evaluation will be conducted at the end of Seminar 2, followed by an extended summative evaluation (confirmative evaluation) a semester later. The purpose of these summative evaluations is to measure the degree to which the major outcomes of the course have been attained. To this end, the effectiveness and efficiency of the learning, attitudes and reactions, and both short- and long-term outcomes of the training will be measured.

Four approaches will be used to examine the issues mentioned above. The first will be a survey of the participants at the end of the second seminar. The second to fourth approaches will take place a semester later. There will be a focus group activity with the participants, an interview with department chairs, and a survey of the students in flipped classrooms.

Once the data is analyzed and recommendations are made, we will make the necessary revisions and improvements to increase the course’s future effectiveness.

Key questions to consider:

- One semester following the training, how many classes have learners flipped?
- As a result of the training, how proficient have learners become at flipping classes?
- Have there been unintended consequences for the department as a result of the training that were unforeseen by the design team?
- Have the skills and knowledge gained at the training been helpful in their classes?
- How do learners feel about the training as a whole?
- What is the cost of on-going flipping? Is it worth it?
- Are there other improvements that are still needed for the training?
- Do the learners want to encourage friends and colleagues to flip classes?
- Do the learners have enough resources to support flipping of classes on an on-going basis?
- Has flipping become more popular on campus after the training?
- How has the learning culture of the university towards flipping changed after one semester?

Approach 1: Focus Group with Participants (after Seminar 2)
This approach would enable measurement of short-term goal achievement. This will be a single-moderator focus group of 5 participants. As a focus group allows for qualitative analysis, it would provide valuable post-training feedback from the participants’ experience with the training as a whole. Through this, interactive tool responses about attitudes, problems, and important issues could be gleaned from the participants.

Approach 2: Survey Questionnaire with Participants (after one semester)
Another data collection method will be a survey of the participants after one semester. This survey would be designed to collect feedback on a longer term. The questions in the survey will be based on the key questions, seeking to gauge the effectiveness and efficiency of the training
after one semester. Longer-term benefits of the training and attitudes toward the training will also be gauged.

**Approach 3: Personal Interview with Department Chairs (after one semester)**
The personal interview, which is one of the best tools for accurate data-gathering because of its face-to-face nature, will be done with the department chairs. This interview will seek to gauge continuing expenses, attitudes, consequences, and actions from the leadership of the university toward flipping and flippers.

**Approach 4: Survey of Students in Flipped Classrooms (after one semester)**
Because the student population is large, a survey questionnaire can provide a more accurate sample of the population. Here, the survey will be standardized or customized accordingly, depending on the variedness of the audience sub-groups. The students’ performance, confidence level, and attitudes towards on-going attendance of flipped classes will be gauged here.

See Appendix A.4 for summative evaluation instruments.
SECTION 3: Learning Experiences and/or Instruction

Learner Analysis

Our Flipped Classroom seminars will provide professional development to faculty at the University of Missouri-Columbia. Our learner analysis will help us target our instruction so that faculty will find the seminars useful and gain confidence in their ability to implement a flipped classroom in their own teaching. In pre-seminar and post-seminar surveys (See Appendix A.5.1 and A.5.2) issued to seminar participants, we will collect the following data:

General Characteristics—broad identifying variables

- Department
- Age
- Race/Ethnicity
- Number of years of classroom teaching experience
- Prior experience with flipped classrooms
- Faculty level: tenured, tenure-track, professional practice, instructor
- Number of classes generally taught per semester

Specific Entry Characteristics—Prerequisite skills and attitudes to benefit from training

- Level of English proficiency
- Access to a Blackboard course site
- Level of knowledge of Blackboard tools
- Prior use of Blackboard tools in course instruction
- Level of Internet access at work and home
- Likelihood of implementing a flipped classroom after training
- Access to adequate technical tools to implement flipped classroom:
  - Hardware
  - Software
  - Peripherals: microphone, camera

Learning Styles—How individuals approach learning/process information

- Comfort level with learning new technology
- Comfort level with peer feedback
- Preferred learning style: lectures, independent study, group activities
Personal and Social Characteristics

- Any learning or physical disabilities?
- Why signed up for the training? (department mandated, personal development, etc.)
- Attitude toward flipped classrooms
- Learner goals for the training
- Motivation to implement new teaching methods
- Future teaching goals

Design Assumptions

- We expect our faculty will have either master’s degrees or Ph.Ds.
- We expect that we will instruct faculty who do not require ADA accommodations.
- We expect that our faculty will come from a number of subject expertise areas.
- We will design our workshop under the assumption that our learners have limited or no knowledge about the topics covered.
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<th><strong>Orienting Context</strong></th>
<th><strong>Data Collection for Information</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Learner Factors</strong> <em>background, need, characteristics, attitudes, culture, skills, spoken language, reading skills</em></td>
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</tbody>
</table>

- What department does the faculty learner teach in?
- What is the age of the faculty learner?
- What is the race/ethnicity of the faculty learner?
- How many years of classroom teaching experience does the faculty learner have?
- What prior experience does the faculty learner have with flipped classrooms?
- What is the faculty designation of the learner: tenured, tenure-track, professional practice, instructor?
- How many courses does the faculty learner generally teach per semester?
- Does the faculty learner speak fluent English?
- What is the motivation for the faculty learner to take the flipped classroom training?
- What is the faculty learner’s attitude toward flipped classrooms?
- What are the faculty learner’s goals after completing the flipped classroom training?
- Does the faculty learner have any learning or physical disabilities?

Pre-seminar survey
<table>
<thead>
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<th><strong>Instructional Context</strong></th>
<th><strong>Data Collection for Information</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Learner Factors</strong> &lt;i&gt;comfort with instruction, adequate skills, match to characteristics, change in needs&lt;/i&gt;</td>
<td></td>
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<tr>
<td>How skilled is the faculty learner with Blackboard?</td>
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<tr>
<td>Does the faculty learner have access to a Blackboard course site?</td>
<td></td>
</tr>
<tr>
<td>Does the faculty learner have access to the Internet at work and home to be able to complete the seminar?</td>
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<tr>
<td>Does the faculty learner have access to an adequate computer to be able to access the technology tools taught in the course?</td>
<td></td>
</tr>
<tr>
<td>What is the faculty learner’s comfort level with learning new technology?</td>
<td></td>
</tr>
<tr>
<td>What is the faculty learner’s comfort level with peer feedback?</td>
<td></td>
</tr>
<tr>
<td>What is the preferred learning style of the faculty learner: lecture, independent study, group activities, all of the above, or a combination of the above?</td>
<td>Pre-Seminar Survey</td>
</tr>
</tbody>
</table>
**Transfer Context**

<table>
<thead>
<tr>
<th>Learner Factors</th>
<th>Data Collection for Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ongoing needs, commitment, capabilities, emerging needs, troubleshooting, awareness of other resources</td>
<td>Post-seminar survey</td>
</tr>
<tr>
<td>Does the faculty learner feel additional training in flipped classrooms is necessary?</td>
<td></td>
</tr>
<tr>
<td>How familiar and knowledgeable is the learner with troubleshooting problems with the Blackboard tools?</td>
<td></td>
</tr>
<tr>
<td>How aware is the learner of additional flipped classroom resources available online?</td>
<td></td>
</tr>
<tr>
<td>How committed is the learner to implementing a flipped classroom?</td>
<td></td>
</tr>
<tr>
<td>What is the learner’s confidence level in being able to implement a flipped classroom?</td>
<td></td>
</tr>
<tr>
<td>What are the learner’s future teaching goals?</td>
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Contextual Analysis

A contextual analysis was designed for the participants of the Flipping A Classroom Seminar. This analysis was divided into the orienting, instructional and transfer contexts. All three were then further divided into the immediate environmental factors and the organizational factors.

Data collection will be carried out through the following methods:
1. Informal interview with technology personnel.
2. Informal interview with participants.
3. Interview with department chairs
4. Observation of facilities.

Design Assumptions:

1) Technology tools and facilities necessary for conducting the seminars will be made available by the university.
2) Participants have a minimal support structure in their respective departments should they need help with flipping issues.
3) The learning culture at the respective departments may either have a positive or negative effect on flipping.
4) There is some level of openness in the departments to alternative methods of teaching.
5) The immediate environment of the participants plays an important role in motivating and encouraging application of learned skills.

See Appendix A.6 for the Contextual Analysis instruments.
<table>
<thead>
<tr>
<th>Orienting Context</th>
<th>Data Collection for Information</th>
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<tbody>
<tr>
<td><strong>Immediate Environmental Factors</strong></td>
<td>For Questions 1-3: <strong>Informal interviews with the technology personnel</strong> to ascertain the level of readiness in terms of technology and amenities. For Questions 3-4: <strong>Informal interview with participants</strong> to determine what kind of support they have in the immediate environment.</td>
</tr>
<tr>
<td>1. What kind of equipment (hardware, software) and amenities are available to the participants for flipping?</td>
<td></td>
</tr>
<tr>
<td>2. Are the available technologies/amenities adequate for this new method of instruction?</td>
<td></td>
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<tr>
<td>3. If participants need help with flipping issues, who/where can they go to?</td>
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<tr>
<td>4. Do participants have ‘environmentally favorable’ factors like support from other faculty members (peer group) and their superiors?</td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Factors</strong></td>
<td>For Questions 1-5: <strong>Interview with department chairs</strong> to determine the kind of support that the participants have from their organization.</td>
</tr>
<tr>
<td>1. Do participants have financial support for the training from their departments?</td>
<td></td>
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<tr>
<td>2. Are there any other incentives that participants are getting for the training?</td>
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<tr>
<td>3. What kinds of resources have been made available specifically for this training?</td>
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<tr>
<td>4. Does the department’s ‘culture’ support an innovation like flipping?</td>
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<tr>
<td>5. Has the department had any prior experience in flipping?</td>
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<tr>
<td>Instructional Context</td>
<td>Data Collection for Information</td>
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<tr>
<td><strong>Immediate Environment Factors</strong></td>
<td></td>
</tr>
<tr>
<td>1) Do the classrooms have the level of comfort that allow participants to focus their resources to the task at hand?</td>
<td>Questions 1-3: <strong>Observation</strong> of the sensory conditions and seating in the instructional areas, and make necessary adjustment for overall comfort of participants.</td>
</tr>
<tr>
<td>2) Do the seating arrangements encourage collaborative learning?</td>
<td></td>
</tr>
<tr>
<td>3) Is the equipment (computers, screens, overhead projectors, microphones, loudspeakers) for the seminar adequate for both seminars?</td>
<td></td>
</tr>
<tr>
<td>4) Is the timing/scheduling of the seminars such that a high turnout could be expected?</td>
<td>Questions 4: <strong>Informal interview with department chairs</strong> to confirm the best time to have the seminars so that there would not be any clashes with other programs or holidays.</td>
</tr>
<tr>
<td><strong>Organizational Factors</strong></td>
<td></td>
</tr>
<tr>
<td>1) Does the ‘corporate culture’ of the university/department support collaborative learning (which this innovation implies)?</td>
<td>Questions 1-4: <strong>Interview with department chairs</strong> find out the kind of corporate culture that exists, and the kind of support available.</td>
</tr>
<tr>
<td>2) Has the university/department had negative experiences with instructional innovations?</td>
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<tr>
<td>3) Would permission and support be given to participants who would apply the flipping method in their classes post-training?</td>
<td></td>
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<tr>
<td>4) Are there organizational incentives for instructional innovations?</td>
<td></td>
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<tr>
<td>Transfer Context</td>
<td>Data Collection for Information</td>
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</tr>
</tbody>
</table>
| **Immediate Environment Factors** | For Questions 1-3: **Interview with department chairs** to ascertain the kind of support that is available for transfer of learned skills.  
For Questions 4-5: **Informal interview with participants** to determine the peer-support environment. |
| **Transfer opportunities**  
1) Does the immediate environment of the participants motivate and encourage the application of learned skills over an extended period of time? |  |
| **Situational cues**  
2) Will there be a feedback system to remind and instruct participants to make the transfer of learned skills an on-going affair?  
3) Is technical support available for technology-based issues in developing or implementing a flipped classroom? |  |
| **Social Support**  
4) Is there on-going supervisor support for transfer of learned skills?  
5) Is there on-going peer support for transfer of learned skills? |  |
| **Organizational Factors** | Questions 1-7: **Interview with department chairs** to determine the organizational environment and learning culture. |
| 1) How open is the department to alternative teaching methods? |  |
| 2) What educational resources (classroom space, technology, etc.) are available in the department to support flipped teaching? |  |
| 3) Are there specific incentives to promote transfer of learned skills? |  |
| 4) Will there be organizational expenses associated with initiating and maintaining flipped teaching? |  |
| 5) Does the organization cultivate a peer- and superior-support network for successful continuous learning? |  |
| 6) Will the seminar participants be provided with academic time in order to develop a flipped curriculum? |  |
| 7) Is the department aware of the benefits of flipping classes? |  |
Types of Learning Experiences and/or Instruction

Our objective is to deliver face-to-face instruction to University of Missouri faculty who are interested in creating flipped classrooms. This instruction will consist of two Saturday seminars covering a period of four weeks. Both sessions will be conducted on the University of Missouri campus. Instruction will make use of PowerPoint, handouts, and hands-on experience with online teaching tools. In addition, participants will form discussion groups to brainstorm ideas for creating effective flipped classrooms.

In the four weeks following, participants will gain firsthand experience with flipped classrooms by implementing the strategies that they have learned. The second Saturday session will give participants an opportunity to relate their flipping experiences and learn more about how to engage students in the classroom and assess their usage of the online components.

See Appendix B.1 for the Table of Learning Experiences and Instructional Strategies.
Materials for Training Program or Learning System

See Appendix B for the instructional artifacts.

- VoiceThread How to PowerPoint
- Tegrity Lecture PowerPoint
- Effective Course Design PowerPoint
- Effective Course Design Handout
- Topic Analysis Handout
- How to Build Online Communities Handout
- Evaluating a Flipped Classroom Handout

Implementation Plan, Including Schedule and Logistics

Implementation Plan

Seminar Day 1

We will begin the seminar with introductions among the instructors and the learners in order to get to know one another. This will include asking the learners why they wanted to take the course.

We will then provide a brief overview of our broad goals and learning objectives for our learners as well as go over the seminar schedule with them. Our first unit of instruction will then follow.

What Is a Flipped Classroom and How Do Students Benefit?

The lecture will begin by asking the question, “What do you think a flipped classroom is?” We will then give the students 3-5 minutes to talk amongst themselves at their table and then bring the group back together and allow them to share.

The Lecture

We will then give them the definition of a flipped classroom: According to the Flipped Learning Network, flipped learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter.

But what does that mean? There are two arenas here: the things that happen in the classroom, and the things that happen outside of the classroom. Let’s start with outside the classroom, since it does come first in the flipped classroom. Outside the classroom, the definition says that
“direct instruction moves from the group learning space to the individual learning space.” What this generally means for most college faculty is that the lecture becomes the homework. You pre-record your lectures and post them for your students on Blackboard (or any other video hosting site). They watch them before they come to class.

Back inside the classroom, the definition says, “and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter.” This statement can mean a lot of things. For example, you may choose to engage your students in:

- Problems-Based Learning
- Peer-Assisted Learning
- Working into class what was previously considered homework problems and having students use clickers to check for understanding
- Group Projects
- etc.

Basically you take that material that they were exposed to at home and apply it in class.

We will then ask our participants to meet in small groups to discuss what part of the lecture is most meaningful to them as well as what questions they may have. We will allow time for group discussion and a few questions before resuming the lecture.

We will then ask the participants to consider the following: OK, this sounds interesting, but why should I do it? How does it benefit my students’ learning? The research is still coming in on this one, but some preliminary studies have cited the following benefits for students:

- Increased Engagement
- Real-Time Instructor Feedback
- More Meaningful Homework
  - Students practice during class under the guidance of the instructor
- Improved Student-Instructor Relationships

**Myths of Flipped Classrooms**

After taking a short break in between sessions, we will begin this session by having participants share their concerns about flipping their classrooms. We will write these all on the board so that we are able to address every concern by the end of the session.
The Lecture

We will then give a brief lecture addressing the most common myths of flipped classrooms and provide the accompanying facts. For example, Inside Higher Ed lists 6 Myths of Flipped Classrooms:

- Proponents of the Flipped Classroom Methodology Dislike Lectures
- Flipping Your Class Means Getting Rid of Lecturing
- Flipping Your Class Will Mean That Students Will Stop Coming to Class
- Flipping Your Class Will Require Lots of Technical Knowledge
- Flipping Your Class Will Require Huge Amounts of Time
- Students Will Not Like the Flipped Class, and Your Teaching Evaluations Will Suffer

The Center for Digital Education also discusses myths that could be incorporated into the lecture:

- Myth No. 1 Is That All Content Should Be Delivered Through Video.
- Myth No. 2 Is That Videos Are Full-Length Class Periods.
- Myth No. 3 Is That The Instructor Is No Longer Relevant In Class
- Myth No. 4 Is That Class Time Is The Same.

As we discuss each myth and its related answer, participants will be able to speak up with additional commentary/questions since we want to ensure that their concerns are addressed. If any of their initial concerns written on the board were not answered during the prepared lecture, we will spend time at the end discussing these additional concerns.

Hands-On Activity

We will then break up into small group discussion (3 per group) to allow participants time to brainstorm ideas. We will provide these guiding questions for discussion:

- What are your initial ideas for which class you would like to flip and how you would go about it?
- How do you think your students will benefit from this new approach to teaching compared to your current practice?
- How do you think you will benefit from this new approach to teaching compared to your current practice?

We will then come back together as a class to spend the remaining time of the session sharing their ideas from their small group discussions.

We will then break for lunch.
Overview of Technologies to Enhance Online Learning: VoiceThread

Following lunch, we will begin our afternoon technology instruction. Although we will be in the same room as the learners, they will primarily receive instruction about VoiceThread via a VoiceThread lecture. This approach is beneficial as they will see what it is like to learn via the same technology that they may use with their own students.

The Lecture

The instruction will begin with a brief regular face-to-face lecture to show learners a finished VoiceThread. It is useful for beginners to understand what a finished product looks like so they know what it is and what they will be expected to do. For this brief demonstration, we will use a real VoiceThread lecture/student discussion from a colleague’s course (Slide 2 in Appendix B.2). We will then continue this session’s lecture via a VoiceThread.

The VoiceThread will be played once in its entirety in front of the whole class. The lecture will include an overview of why VoiceThread is a great teaching tool and then provide step-by-step directions for how to create a VoiceThread.

After that, the learners will receive a hard copy handout of the slides (See Appendix B.2) as well as an emailed link to the lecture VoiceThread to serve as reference points for when they do their in-class hands-on practice.

Hands-On Activity

After signing up for a VoiceThread account, learners will begin their in-class practice by answering the questions on the VoiceThread lecture via the audio, video, and text buttons within VoiceThread.

Question 1 via audio: Define a flipped classroom.

Question 2 via video: Name three benefits of flipped classrooms.

Question 3 via text: Name two benefits of using VoiceThread for teaching.

After this practice as a student, learners will then create their own VoiceThread as instructors and spend the rest of the practice time working on a VoiceThread lecture they could use with their own students.

Briefly, at the end of the VoiceThread training time, we will show the learners how to post a VoiceThread link in Blackboard.

We will then take a brief break.
Overview of Technologies to Enhance Online Learning: Tegrity

The Lecture

The next section will begin with a brief introduction to recording lectures to use when participants flip their classes. There are services that allow you to upload videos, such as YouTube, Vimeo, etc., and there are products that you can buy that let you record your computer screen (screencast) as well splicing it together with live video, such as Camtasia Studio, Snagit, or even Quicktime (if you’re on a Mac) but Blackboard has a baked in solution for both called Tegrity. Tegrity allows you to simultaneously record both your computer screen and an external video source, such as a video camera or a webcam.

After this brief introduction, we will show an example of a Tegrity video from an actual course, and then introduce them to the main interface of Tegrity and show them how to create and upload a video. (See PowerPoint handout in Appendix B.3). A handout of the PowerPoint will be provided to the learners for reference.

Hands-on Activity

We will then ask the participants to practice using Tegrity. They will use their laptops to at first login to Blackboard and open Tegrity, play around with the interface to get a feel for it, and then they will be asked to create a short Tegrity video that meets the following requirements:

1. Create a quick PowerPoint that names three myths of the flipped classroom.
2. Create a Tegrity recording to show their Powerpoint and dispel the three myths by providing the truth in verbal form.
3. Upload the video to the seminar Blackboard group.

Final Questions/Homework

We will conclude our seminar for the day by taking any final questions and explaining their flipped classroom homework. In the next four weeks, participants should experiment with what they have learned in this training by flipping one week of instruction for one of their courses. They should be prepared to discuss how their effort went at the beginning of our second day of training.
Seminar Day 2

We will begin our second day of training by breaking up our learners into groups of three to discuss how their flipped classroom experiment went. Each of us instructors will split up so that one instructor is listening in on each group and providing guidance. Each learner will be asked the following: What class did you flip? What went well? What would you do differently? How did your students react? Do you need any more review of the Seminar Day 1 training?

Once we have heard feedback from all of the learners, we will begin our second day of instruction.

Effective Course Design

The lecture portion of this section will begin with the instructor showing videos depicting classes that have successfully transitioned to the flipped model. The video segment will be followed by a short classroom discussion with the instructor asking participants to share what instructional techniques impressed them, and how they feel their classes could benefit from incorporating them.

The Lecture

We will present a lecture on designing courses that involve engaging, interactive online content that enables processing of knowledge and stimulates thoughtful reflection and feedback.

Online activities to be discussed can include:

1. Online Video Lecture (Benefits, how to use, questions to ask before and after the video)
2. Concept mapping (What it is, manual vs. digital, how it represents knowledge and displays conceptual interrelationships, cognitive processes involved)
3. Scenario (Cognitive skills developed, format and content of scenario, learner solution input)
4. Pre-Class Quiz (When given, purpose, content and format, benefits)

(See the Topic Analysis in Appendix A.2.2 for further details regarding the above online activities)

The next section of the lecture will focus on instructional strategies which have been proven to actively engage students in the physical classroom and which can be used to reinforce and enhance individual online learning.

In-class activities to be discussed can include:

1. Small group presentations
2. Role-play (good for scenarios)
3. Classroom discussion applying concepts to current events
4. Hands-on learning experiences
5. Involvement with community (where appropriate)

Participants will be given a handout (included in Appendix B.4) giving a more detailed description of these online and classroom-based activities.

For the final section of the lecture, we will demonstrate how to create a course syllabus that includes lesson plans for both online learning and classroom activities, reflecting the organization unique to the flipped model.

**Hands-On Practice**

We will direct each participant to name three classroom instructional strategies that have been shown to actively engage students in the physical classroom, and discuss them in small groups where they will assess each other’s responses.

We will then give participants time to create a syllabus for a course of their choice incorporating both online and in-class activities for flipped classrooms; the physical classroom activities are to take place after students have attended their individual online learning sessions. We will emphasize that they are to use these strategies at least once more during the semester.

We will then break for lunch.

**How to Build Online Learning Communities**

Following lunch, we will begin this session by asking participants how they think community can be built in an online setting and will write their suggestions on the board.

**The Lecture**

We will then give a brief lecture discussing this concept and provide a handout (See Appendix B.5: How to Build handout) with tips for creating a strong online learning community. During the session, we will advise participants that they may want to buy Palloff and Pratt’s *Building Online Learning Communities* book for further reference. We will highlight content from many of the key chapters within this book, including “Making the Transition and Establishing Presence,” “The Importance of Community,” “Community Online,” “The Element of Social Presence,” Coalescence and Belonging Online,” “Community in the Virtual Classroom,” and “Participation and Desired Outcomes in the Online Classroom.”
After going through the lecture and handout, we will ask participants if they have any further suggestions or questions before moving on to our next session. Participants will then be asked to write a discussion board post discussing four aspects important in building an online learning community.

**Student Assessment in a Flipped Setting**

The lecture will begin by asking participants what format their student assessments normally take. (Expected answers: True/false, multiple choice, matching, fill in the blank, short answer, essay). We will then ask participants to consider how assessments could go beyond those common formats. How could they assess students based on observable behaviors in the classroom?

**The Lecture**

We will present a lecture on various assessment techniques: both online knowledge testing and in-person, “real time” testing of ability. We will pay particular attention to the advantages and disadvantages of each one, followed by class discussion of when to use each form of assessment. We will perform a demonstration of the assessment tools in Blackboard and will explain how to use each one.

We will then take a brief break before beginning the hands-on portion of this topic.

**Hands-On Activity**

Following the lecture, we will instruct each participant to select one Blackboard assessment tool and one classroom-based assessment technique to implement in a class that they teach. We will then direct each participant to take a class syllabus that they have already created and revise it to include each assessment (Blackboard for a pre-test in the online session, and in-class for the classroom-based session). These assessments will be developed to ensure that students have achieved class learning objectives. Participants will then create an actual assessment and will submit it for review, with particular attention given to whether or not it addresses learning objectives as set forth in their class syllabus.

**Evaluating the Flipped Classroom**

We will begin with an introduction: What is evaluation? It is “the process of using measurement and assessment to make judgments about something” (Morrison et.al., pg 252). There are three
basic ways to evaluate instruction: formative, summative, and the extended summative, or confirmative evaluation.

There’s an anecdotal way of looking at evaluation: “When the cook tastes the soup, that’s formative assessment; when the customer tastes the soup, that’s summative assessment” (Paul Black, Emeritus Professor of Science Education, King’s College London).

Next, we will give a talk on how to plan an evaluation for the flipped classroom. We will use the eight steps suggested by Gooler (1980) as our guide for the talk.

*Note: A print-out of these points will be given to the participants in print form and via email. The handout can be found in Appendix B.6.*

The eight steps are:

1. **Purpose**
   - Why are you conducting the evaluation?
2. **Audience**
   - Who are the target recipients of the evaluation results?
3. **Issues**
   - What are the major questions/objectives of the evaluation?
4. **Resources**
   - What resources will be needed to conduct the evaluation?
5. **Evidence**
   - What type of data will be needed to answer the evaluation questions?
6. **Data-gathering techniques**
   - What methods are needed to collect the evidence needed?
7. **Analysis**
   - How will the evidence collected be analyzed?
8. **Reporting**
   - How, to whom, and when will the results of the evaluation be reported?

Once the talk is over, we will have a Q and A session with the participants.

*Class Wrap Up/Final Questions*

We will conclude our instruction by giving a brief overview of all of the material we covered in the seminar and by asking the participants if they have any final questions. Following our final seminar day, we plan to evaluate our training through focus groups with participants.
## Schedule

### Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>9-9:30</td>
<td>Introductions/Seminar Overview</td>
</tr>
<tr>
<td>9:30-10</td>
<td>What Is a Flipped Classroom and How Do Students Benefit?</td>
</tr>
<tr>
<td>10-10:15</td>
<td>Break</td>
</tr>
<tr>
<td>10:15-10:45</td>
<td>Myths of Flipped Classrooms</td>
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<tr>
<td>10:45-11:15</td>
<td>Small Group Discussion</td>
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<tr>
<td>11:15-11:30</td>
<td>Full Group Discussion</td>
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<tr>
<td>11:30-12:30</td>
<td>Lunch</td>
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<tr>
<td>12:30-2</td>
<td>Overview of Technologies to Enhance Online Learning: VoiceThread</td>
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<tr>
<td>2-2:15</td>
<td>Break</td>
</tr>
<tr>
<td>2:15-4</td>
<td>Overview of Technologies to Enhance Online Learning: Video</td>
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<tr>
<td>4-4:30</td>
<td>Final Questions/Homework Assignment</td>
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</tbody>
</table>

### Day 2 (Four Weeks Later)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>9-9:30</td>
<td>Discussion of Homework: How did the Flip Experiment Go?</td>
</tr>
<tr>
<td>9:30-10</td>
<td>Effective Course Design</td>
</tr>
<tr>
<td>10-11</td>
<td>Effective Course Design Work Time</td>
</tr>
<tr>
<td>11-11:30</td>
<td>Effective Course Design Discussion</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30-1</td>
<td>How to Build Online Learning Communities</td>
</tr>
<tr>
<td>1-1:30</td>
<td>Student Assessment in a Flipped Setting</td>
</tr>
<tr>
<td>1:30-1:45</td>
<td>Break</td>
</tr>
<tr>
<td>1:45-2:30</td>
<td>Student Assessment Activity</td>
</tr>
<tr>
<td>2:30-3</td>
<td>Evaluating the Flipped Classroom</td>
</tr>
<tr>
<td>3-3:30</td>
<td>Class Wrap Up/Final Questions</td>
</tr>
</tbody>
</table>
Logistics

Pre-seminar Requirements

1. **4-6 Months in advance:**
   a. Appropriate space will be investigated and booked
   b. Drafts of all materials (handouts, lessons, electronic materials) will be prepared
   c. Meet with instructional design expert for formative evaluation

2. **3-4 Months in advance:**
   a. Interviews with department chairs will be conducted
   b. Interview with technology personnel will be conducted
   c. Small group trial runs and focus groups with participants

3. **2-3 Months in advance:**
   a. Registration begins
   b. Interviews with participants
   c. Review materials and finalize based on data collection results

4. **1-2 Months in advance:**
   a. Distribute, collect and tabulate Learner Analysis Pre-Seminar Survey
   b. Order all printed materials
   c. Arrange for student Blackboard demo sites
   d. Order computer and a/v rentals as required

5. **2-Weeks in advance:**
   a. Reconfirm space
   b. Order all printed materials
   c. Send reminder e-mail to all participants

6. **Day Before each seminar:**
   a. Visually inspect room and validate configuration, computer and a/v requirements

7. **Day of Seminar 2**
   a. Focus group activity following seminar

8. **Day after seminar:**
   a. Send Post-Seminar Survey; schedule reminder emails

9. **1-2 months post-seminar**
   a. Tabulate and summarize results
   b. Schedule review meeting with department leadership to discuss next steps/future plans

10. **A semester later:**
    a. Survey of participants
    b. Data tabulated and shared with the instructional system design team
Seminar Requirements:

This seminar will take place over two Saturdays approximately one month apart in classroom facilities at the University of Missouri, Columbia. The month break will allow participants time to practice techniques learned in the seminar.

The facilities should meet the following requirements:

- The classroom should be Smart-Board enabled with a digital projector with a multi-media grade Windows 7 or Mac computer with a built-in web-cam and internal or externally connected microphone. A conventional whiteboard will also be available. Gigabit network speed is required with unfiltered internet access. A current edition of Microsoft Office and Adobe Creative Suite software should be installed.
- There should be one computer per participant with the same hardware, peripherals, connectivity, and software. The seminar will be designed for 15 participants and one instructor.
- The classroom should be configured to encourage group work with groups no larger than two-to-three participants each.

Participants should be provided with:

- Handouts from all lectures
- Electronic access to all slide decks
- Demonstration Blackboard environments with the full suite of tools (Tegrity, VoiceThread, etc.) Participants have instructor access.
References


Educational Technologies at Missouri (n.d.) “Installing the Mac Tegrity Recorder.” [http://etopics.missouri.edu/questions/305/Installing+the++Mac+Tegrity+Recorder](http://etopics.missouri.edu/questions/305/Installing+the++Mac+Tegrity+Recorder)


SECTION 5: Appendix A

A.1 Needs Assessment Instruments and Evaluation Materials

DEPARTMENT CHAIRS: Interview

1) What are your expectations after your faculty receive flipped classroom training?
2) What level of academic achievement do you expect students to have when evaluated after using the flipped classroom?
3) How many of your faculty members currently flip their classrooms?
4) What are the performance levels of students in flipped classrooms compared to those in conventional ones?
5) Have faculty members had any previous training in flipped classes?
6) Why aren’t more faculty using flipped classrooms now?
7) Do faculty have adequate technical, departmental, and pedagogical support to effectively switch to flipped classes?
8) How many (percent) of faculty have never heard of the flipped classroom concept or don’t know much about it?
9) How concerned is your department about perceived deficiencies or problems in student learning if a flipped strategy is used?
10) How concerned is your department about perceived time constraints of faculty revising their courses to be flipped classrooms?

STUDENTS SURVEY:

Our survey for students can be viewed here: https://www.surveymonkey.com/s/W9KRKLJ.

In addition, here is what the survey looks like:
FLIPPED EXPERTS: Interview

1. How well do you expect participants be able to elucidate the concept of the flipped classroom?
2. What level of proficiency do you expect participants to have in flipping classes at the end of an initial training course?
3. How proficient must participants be in effectively using technology to enhance learning?
4. How proficient must participants be in creating a classroom environment for the flipped classroom that enables their students to function effectively?
5. What level of academic achievement should students have when evaluated after using the flipped classroom?
6. What are some excellent websites and training videos that focus on the flipped classroom concept?
7. How can the flipped classroom concept be promoted more effectively at MU?
8. What is the best approach to use to train learners in the flipped classroom concept?

**LEARners (Participants) - Focus Group Questions**

1. How do participants feel about switching to flipped classrooms?
2. Do participants feel that they have the prerequisite knowledge to be able to successfully use this method of instruction?
3. Do participants feel that flipping classes will make a difference?
4. What level of knowledge do faculty members have about flipped classes?
5. Why aren’t more faculty using flipped classrooms now?
6. Do faculty have adequate technical, departmental, and pedagogical support to effectively switch to flipped classes?
7. How concerned are faculty about perceived deficiencies or problems in student learning if a flipped strategy is used?
8. How concerned are faculty about perceived time constraints of revising their courses to be flipped classrooms?

**A.2 Task Analysis Materials**

**A.2.1. Procedural Analysis: Creating and Compiling a Lecture in Tegrity**

1) **Download and install the Tegrity recorder.**
   a) If on a Macintosh:
      i) Login to the computer with an account that has administrative privileges
      ii) Login to Blackboard; select the course where you are an instructor
      iii) Click on “Tegrity Classes”
      iv) Click on “Start a Recording”
         (1) If you have launched the recorder since the July 2014 upgrade, proceed to
         2: Make a Tegrity Recording
         (2) If you haven’t launched the recorder since the July 2014 upgrade:
            a) You will be redirected to a page called “Tegrity - Download Mac Recorder”
            b) Click the link in item 1. to Download the Tegrity Recorder Installation
            c) When the download is complete, Click the TegrityRecorder.pkg to begin the install
            d) On the Introduction screen, click ‘Continue’
On the Installation Type screen, click ‘Continue’
(f) Type your password, click “OK”
(g) On the Summary screen, which will indicate a successful install click “OK”
(h) Proceed to item 2.

b) If on a Windows Computer:
   i) Login to Blackboard; select the course where you are an instructor
   ii) Click on “Tegrity Classes”
   iii) Click on “Start a Recording”
   iv) If an Internet Security dialogue box appears, click “Allow”. If not, proceed to item v.
      1) If a second Internet Security dialogue box appears, click “Allow”. If not, proceed to item v.
      2) If a third Internet Security dialogue box appears, click “Allow”. If not, proceed to item v.
   v) When the progress bar reaches 100%, a splash screen will open indicating that the Tegrity recorder is launching
   vi) When the Tegrity Recorder window launches, the install is complete

2) Make a Tegrity recording
   i) Login to your course via Blackboard
   ii) Click on “Tegrity Classes” from the course menu
   iii) Click on “Start a Recording”
      1) From the Tegrity Recorder window, select the class you wish to upload the video to and type the title for the lecture
      2) Test the audio by clicking the “Test Audio” button
         (a) The Tegrity Recorder Test dialogue will open
         (b) Click “Start Test”
         (c) If your microphone isn’t connected, you will not see the audio level (green bar) move. Return to this step when the microphone is connected
         (d) Speak in a normal voice and observe the audio level
            (i) If the audio level occasionally peaks in red or yellow, is will be fine. Go to step 3.
            (ii) If it is consistently in red, it will not be usable audio; adjust the volume slider accordingly
         (e) Check the Instructor Camera box if you want your students to see you speaking during the recording
      3) When you are ready to record, click the “Record” button
         (a) Select your options by clicking the left-pointing arrow on the left side of the control panel that appears
            (i) The movie recorder toggles between recording your live actions vs. recording what is happening on your screen
            (ii) The annotate on screen tool provides options for line with, style, color, selection and deletion of annotations
            (iii) The whiteboard tool provides options for a blank whiteboard, or one with lines or a grid
(iv) The red circle will be bright red while recording is in progress, and a dull red when stopped or paused
(v) The pause tool (2 thick vertical lines) will pause your recording. If you press it, a pause message appears on screen. Press it again when ready to resume.
(vi) The stop tool (a square) will stop the recording
(vii) A volume meter shows the current volume level
(viii) The Tegrity logo appears with a red circle over it when recording is in progress
(ix) The control panel can be collapsed when not needed
(b) Complete your video lecture, changing your options as needed
(c) Click the “Pause” button to pause during recording
(d) Click the square “Stop” button to stop the recording
(4) You’ll see a dialogue box asking you if you want to Upload, Preview, or Delete. Choose the appropriate option and click “Yes”
(5) You’ll see a message appear that your video will be available soon while it is processing
(6) That message will disappear and the video will be available when the rendering is complete.

3) Delete a Tegrity recording (if needed):
   a) Click the checkbox of the video you wish to delete
   b) Hover over “Recording Tasks”
   c) Left-click “Delete Video”
   d) Click “OK” on the confirmation dialogue box that appears

4) Edit an uploaded Tegrity recording:
   a) Click the checkbox of the recording you wish to edit
   b) Hover over “Recording Tasks”
   c) Left-click “Edit Recording”
   d) In the window that opens:
      i) To cut a section of video:
         (1) Use the control buttons below the video to find relevant times
         (2) Enter the start and stop times of sections you’d like to cut
         (3) Click the “Cut” button
      ii) To edit a chapter:
         (1) Click “Edit a Chapter”
         (2) Select the relevant chapter from the drop-down list
         (3) Change the title and add keywords as needed
         (4) Click “Apply”
      iii) To import a video clip into your recording:
         (1) Click “Import video clip”
         (2) Enter the time where you want the clip to be inserted
         (3) Click “Select”; browse and select the .mp4 file you wish to insert. The path to the video will appear in the box
         (4) Click “insert video”
iv) To add a searchable keyword:
(1) Click “Add a Searchable Keyword”
(2) Type your keyword in the box below
(3) Click “Apply”

v) To change the Instructor Picture:
(1) Click “Change Instructor Picture”
(2) Click “Select” and browse for the picture
(3) The path to the picture will appear in the box
(4) Visually inspect the preview as this action cannot be undone
(5) Click “Change Instructor Picture”

vi) To add a Closed Captioning File:
(1) Click “Add Closed Captioning”
(2) Click Select and browse for the file. The path to the file will appear in the box
(3) Click “Add Closed Captions”

vii) To remove a Closed Captioning File:
(1) Click “Remove Closed Captioning”
(2) Click the Remove Closed Captioning button
A.2.2 Topic Analysis: Techniques for Teaching in an Online Environment

1) Online Video Lecture
   a) Why to use video
      i. Stimulate interest
      ii. Set the tone of a lesson
      iii. Illustrate complex topics
      iv. Accommodate various learning styles by engaging multiple senses
         1. Sight
         2. Sound
      v. Preserve in-person class time for more interactive activities
      vi. Promote media literacy
      vii. Aid comprehension and retention of material
   b. How to use video
   c. Before the session, assign relevant videos for students to watch or ask students to search for online videos pertaining to the concepts to be discussed
      i. Assign a quiz or survey for students to complete after viewing the video and prior to the online session
   d. Record lectures
      i. Create video lectures using Tegrity (see procedural analysis)
         1. Full lectures or shorter “microlectures”
            a. Microlectures can be filmed for review of lecture material
            b. Shorter videos aid retention better
         2. Can be reused for future sessions of the course with different students
   e. Incorporate active-learning techniques
      i. Ask preliminary questions prior to showing video
         1. “What do you already know about the topic?”
         2. “What do you think will happen?”
      ii. Ask questions after video
          1. “How did the video confirm or contradict your prediction?”
          2. “What did you learn that you didn’t know before?”

2) Concept Mapping
   a. Formalism for representing structural knowledge
      i. Shows interrelationships between concepts
      ii. Models how we represent and apply knowledge
      iii. Supports critical thinking
      iv. Promotes higher-order learning procedural knowledge
         1. Represents cognitive structures
   b. Paper/pencil or computer-based
c. Based on schema theory
   i. Networks (semantic networks) of interrelated concepts
   ii. Visually represented by nodes (concepts) connected by links (interrelationships)

3) Scenario
   a. Designed to improve learner skills
      i. Decision making
      ii. Critical thinking
      iii. Problem solving
         1. Should lack obvious or clear-cut answer
   b. Presents dilemma with a realistic problem
      i. Real or fictitious
         1. Can be obtained online or in books
         2. Can be made up by instructor
      ii. Elements of conflict
         1. Learner should empathize with characters
            a. Facilitated by vivid description of situation, physical environment
   c. Engages learners
      i. Requires application of previous learning to current problem
      ii. Learners post their reflections and proposed solutions in a wiki or blog
         1. Incorporate learned principles as support for their position
            a. Cite sources (reading materials, online/class discussions, etc.)

4) Pre-Class Quiz
   a. Given at the end of online session to assess understanding
      i. Focuses on key concepts discussed in session
      ii. Presents opportunities to demonstrate understanding through application of concepts in scenarios
   b. Helps prepare learner for the classroom
      i. Know what concepts to study for reinforcement or greater understanding
   c. Helps instructor know what activities/content to focus on in the classroom
      i. What to clarify
         1. Individually or as a class
      ii. What to reinforce
         1. Activities to aid with understanding and retention
A.3 Formative Assessment Instruments

Approach 1: Interview
Introduction: “Thank you for taking the time to review the materials that we have put together to train faculty members to flip their classes. Your feedback and recommendations are an important step for us in determining how we can improve the design of our seminar. We felt that it would be important for us as a team to meet with you so that we would be able to make sure that we understand your feedback and can ask you any follow-up questions.”

The expert would have time to give his/her feedback and recommendations, and the team would then have time to ask some follow-up questions.

The following questions would be asked if they have not already been addressed in the initial feedback from the expert.

Questions:
1. Does the design of the seminar match the learning objectives we have provided?
2. Does the time we have allotted for the seminar match the content that’s being taught and the learning experiences we have designed?
3. Is the overall design sound?
4. Is the seminar overall organized logically? Are the days organized logically?
5. How might we make changes to the design of the instruction?
6. Are there things that we have missed in our planning that need to be addressed?
7. Do the materials we provide match the content of the seminar appropriately?

Approach 2: Focus Group
Introduction: “Thank you for allowing us to get your thoughts and opinions on today’s seminar. The feedback that we gather here today will help the design team make changes to improve the overall instruction of the seminar.

This focus group will be looking at two aspects of today’s session: 1) how the session could have been presented in a better way as to make the best use of your time, 2) how the materials that you were provided could be changed to be more easily understood. Please be honest and sincere in your responses; your comments will help the team improve. Do you have any questions before we begin?”

Questions for Session 1:
1. Do you feel equipped to use both VoiceThread and Tegrity in your classes?
   b) Please explain why or why not.
2. Looking at today’s materials, what did you come across that didn’t make sense or that you feel could use some clarification?
3. What did you think about the pacing of today’s session? How could it be improved?
4) With regards to learning how to use VoiceThread and Tegrity, what could have been done differently to improve your understanding of how they work or how to use them in your class?

5) What was lacking in today’s session that you still need in order to practice flipping your classes well?

6) Other questions, comments, or concerns about today?

Questions for Session 2:

1. Looking at today’s materials, what did you come across that didn’t make sense or that you feel could use some clarification?

2. What did you think about the pacing of today’s session? How could it be improved?

3. Today’s content was focused on what to do in your class after flipping and evaluating student learning in the flipped classroom. What do you still need in order to feel comfortable with flipping your classes?

4. What was lacking in today’s session that you still need in order for you to choose to flip all of your classes?

5. Other questions, comments or concerns about today?

6. Thinking about the two-day training session as a whole, how could the organization or content be improved?

A.4 Summative Assessment Instruments

Approach 1: Focus Group (with participants) Questions:

We greatly appreciate you taking the time to be a part of this focus group. Your feedback will be valuable in determining the effectiveness and efficiency of the training you have just completed. It will also help us make revisions for the improvement of future training sessions.

The session will be held on a weekday evening. Do you have any questions before we get started?

1. What is your opinion of the training as a whole?

2. How has your opinion changed about flipping after completing the course?

3. Are you satisfied with the content of the training to effectively prepare you for flipping?

4. Were you comfortable with the pacing of the whole training?

5. What changes do you think could be made to content and pacing?

6. Do you feel confident that you can now identify and define a flipped classroom, and explain its benefits to your students?

7. Can you now design an effective course following the flipped classroom model?

8. Are you confident that you can enhance online learning by making effective use of various Blackboard technologies?

9. Can you now create a classroom environment that enables your students to implement what they have learned on their own by engaging in group discussions, participating in class projects, and receiving individualized attention as needed?
10. Are you able to assess the performance of your students in the flipped classroom environment?

Approach 2: Survey Questionnaire with Participants (after one semester):

Click below to go to the Google Form:
https://docs.google.com/forms/d/1HNna9093nSA1AN4y7BisZunZQbYfpNes9aZ1pUCZKwo/edit#

A.5 Learner Assessment
A.5.1 Pre-seminar Survey
A screenshot of the distributed survey is shown below.

The full survey is available at:
https://docs.google.com/forms/d/1SUozph2O61tN0b1osDiOeV64Jv3BjcnWwXjQ-1FzxKc/viewform
A.5.2 Post-Seminar Survey

A screenshot of the distributed survey is shown below.

The full survey is available at:
https://docs.google.com/forms/d/1SUozph2O61tN0b1osDiOeV64Jv3BjcnWwXjQ-1FzxKc/viewform
Flipping the classroom: Learner Analysis
Post-Seminar Survey

Thank you for replying to this survey. Your responses are anonymous and will help us improve our service to the University of Missouri teaching community

* Required

**How confident are you in your ability to flip a classroom?**
Choose the response that most closely aligns to your feelings

☐ I’m not sure I know where to start
☐ I have some idea, but I’m not sure I can do it on my own
☐ I feel reasonably confident
☐ I can’t wait to get started

**How comfortable are you in your ability to use and troubleshoot Blackboard tools?**
Choose the response that most closely aligns to your feelings

☐ I need a lot of support.
☐ I like the idea of using them, but might need a lot of technical support
☐ If I allocate time to practice, I can figure them out
☐ I like exploring and working with the tools

**Are you aware of online resources related to flipping classrooms?**
Select your level of awareness

1 2 3 4 5

☐ I don’t know of any  ☐ ☐ ☐ ☐  I’ve used helpful resources
A.6 Contextual Analysis.

I. Informal interview with technology personnel.

1) What kind of equipment (hardware, software) and amenities are available to the participants for flipping?
2) Are the available technologies/amenities adequate for this new method of instruction?
3) If participants need help with flipping issues, who/where can they go to?
4) Will existing technology staff be available to handle increased demand for services?

II. Informal interview with participants.

1) If you need help with flipping issues, who/where can they go to?
2) Do you have ‘environmentally favorable’ factors like support from other faculty members (peer group) and your superiors?
3) Is there on-going supervisor support for transfer of learned skills?
4) Is there on-going peer support for transfer of learned skills?

III. Informal interview with department chairs

1) Do participants have financial support for the training from their departments?
2) Are there any incentives for participants to take part in the training and apply what they learned?
3) Has the department had any prior experience in flipping?
4) What kinds of resources have been made available specifically for this training?
5) Does the department’s ‘culture’ support an innovation like flipping?
6) Is the timing/scheduling of the seminars such that a high turnout could be expected?
7) What educational resources (classroom space, technology, etc.) are available in the department to support flipped teaching?
8) Will there be organizational expenses associated with initiating and maintaining flipped teaching?
9) Does the department cultivate a peer- and superior-support network for successful continuous learning?
10) Will the seminar participants be provided with academic time in order to develop a flipped curriculum?
11) Has the university/department had negative experiences with instructional innovations?
12) Are there organizational incentives for instructional innovations?
13) Will there be a feedback system to remind and instruct participants to make the transfer of learned skills an on-going affair?
14) Is technical support available for technology-based issues in developing or implementing a flipped classroom?
15) How open is the department to alternative teaching methods?
16) Are there specific incentives to promote transfer of learned skills?
17) Is the department aware of the benefits of flipping classes?

IV. Observation of facilities.

1) Do the classrooms have the level of comfort that allow participants to focus their resources to the task at hand?
2) Do the seating arrangements encourage collaborative learning?
3) Is the equipment (computers, screens, overhead projectors, microphones, loudspeakers) for the seminar adequate for both seminars?
### Section 6: APPENDIX B

**Materials, Schedules, Outlines**

**Materials**

#### B.1 Table of Learning Experiences and Instructional Strategies

<table>
<thead>
<tr>
<th>Behavioral Objectives for Learners</th>
<th>Type of Learning</th>
<th>Instructional Strategy</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 1</strong>: Learners will be able to identify and define a flipped classroom, and explain the benefits that it presents to students and faculty.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Following a lecture on flipped classrooms and a lecture on VoiceThread, learners will be able to define a flipped classroom in a VoiceThread with 100 percent accuracy.</td>
<td>Procedure/Application</td>
<td>Recall, demonstration, practice</td>
<td>Participants will learn about flipped classrooms and will experience using VoiceThread.</td>
</tr>
<tr>
<td>1.2 Following a lecture on flipped classrooms and a lecture on VoiceThread, learners will be able to name three benefits of flipped classrooms in a VoiceThread with 100 percent accuracy.</td>
<td>Procedure/Application</td>
<td>Recall, demonstration, practice</td>
<td>Participants will learn about flipped classrooms and will experience using VoiceThread.</td>
</tr>
<tr>
<td>1.3 Following a lecture on myths of flipped classrooms and a lecture on how to create a video lecture, learners will be able to create a video lecture and identify the facts behind three myths</td>
<td>Procedure/Application</td>
<td>Explanation, demonstration, recall, practice</td>
<td>Participants will learn about the myths of flipped classrooms and the facts which correct the myths, and will gain experience creating video lectures with Tegrity.</td>
</tr>
</tbody>
</table>
with 100 percent accuracy.

### Motivational

Ask the learners for their thoughts on how they could make more effective use of class time (Anticipated responses: group activities, helping students one-on-one, application of concepts). Explain that the principle of the flipped classroom allows students to read the material and “attend” online lectures on their own time, thus preserving the classroom periods for application of concepts studied, clarification of concepts, and individual help where understanding is still incomplete.

### Initial Presentation

First, the instructor will present a lecture on flipped classrooms, emphasizing the benefits of flipped classrooms for both instructors and students. Second, the instructor will present a lecture and demonstration of using VoiceThread to communicate via text, audio, and video messages. Third, the instructor will present a lecture on myths of online teaching and learning and a lecture on how to create a video lecture using Tegrity.

### Generative Strategy

Have the learner define a flipped classroom and enumerate the benefits thereof, using VoiceThread. The learner will then create a video lecture using Tegrity and will identify the facts behind three myths of online learning.

### Goal 2: Learners will be able to design an effective course following the flipped classroom model.

<table>
<thead>
<tr>
<th>2.1 Following a lecture on building online learning communities, learners will be able to write a discussion board post discussing four aspects important in building an online learning community with 100 percent accuracy.</th>
<th>Concept/Recall</th>
<th>Explanation</th>
<th>Participants will demonstrate understanding of online learning communities by discussing four important elements of online communities in a discussion board post.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2 Following a lecture on effective course design</td>
<td>Principle/Application</td>
<td>Explanation</td>
<td>The participant will create a syllabus</td>
</tr>
</tbody>
</table>
a flipped classroom, learners will be able to create a syllabus for a course of their choice that incorporates pedagogical components of flipped classrooms that will be assessed based upon a rubric.

<table>
<thead>
<tr>
<th>Motivational</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Recall</em> Practice</td>
</tr>
<tr>
<td>containing elements of flipped classrooms and will submit it for assessment.</td>
</tr>
</tbody>
</table>

**Motivational**

Show videos portraying classes which have successfully transitioned to the flipped model, with an emphasis on building effective online communities. Ask participants to share what techniques impressed them, and how they feel that their classes could benefit from incorporating them.

**Initial Presentation**

First, the instructor will present a lecture on building online communities, emphasizing common techniques used in creating an effective, cohesive community. Then, the instructor will lecture on designing courses that involve engaging, interactive online content that enables processing of knowledge and stimulates thoughtful reflection and feedback. Finally, the instructor will demonstrate how to create a course syllabus that includes both online learning and classroom activities, reflecting the organization unique to the flipped model.

**Generative Strategy**

Have participants post, in a discussion board set up for the class, four elements essential to a successful online learning community, and then discuss what they included in their postings as a class. Then, have learners develop a syllabus for one of their classes following the flipped model, with the understanding that they will be assessed according to a clearly defined rubric.

**Goal 3: Learners will be able to enhance online learning by making effective use of various Blackboard technologies.**

<table>
<thead>
<tr>
<th>Goal 3: Learners will be able to enhance online learning by making effective use of various Blackboard technologies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure/Application</td>
</tr>
<tr>
<td>Explanation Demonstration Practice</td>
</tr>
<tr>
<td>Participants will create videos using the Blackboard Tegrity tool and will upload them.</td>
</tr>
</tbody>
</table>
upload a video of a lecture via the Tegrity tool within Blackboard.

<table>
<thead>
<tr>
<th>Procedure/Application</th>
<th>Explanation</th>
<th>Demonstration</th>
<th>Practice</th>
<th>Participants will post VoiceThread messages in Blackboard.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Following a lecture and given a computer that meets or exceeds minimum requirements for hardware, software, and connectivity, learners will be able to successfully design and post a VoiceThread in Blackboard.</td>
<td>Procedure/Application</td>
<td>Procedure/Application</td>
<td>Procedure/Application</td>
<td>Procedure/Application</td>
</tr>
<tr>
<td>3.3 After the first session of training, learners will try out at least one week of flipped classroom instruction with their students in between seminar sessions and will be assessed based on peer discussion of their experiences.</td>
<td>Procedure/Application</td>
<td>Procedure/Application</td>
<td>Procedure/Application</td>
<td>Procedure/Application</td>
</tr>
</tbody>
</table>

**Motivational**

Show a Tegrity-produced video to participants to demonstrate how it can enhance the online lecture portion of a flipped classroom. Ask participants how it can make the learning process more engaging for the student, and the teaching process easier for the instructor.

**Initial Presentation**

Using a laptop and a projector, the instructor will display Tegrity and will demonstrate how to use it to create a video lecture by recording the lecture in real-time and will then play back the recording for participants to see the result. The instructor will then demonstrate how to create audio and video messages using VoiceThread. Finally, the instructor will show how participants can create a flipped lesson plan based on the syllabus which they created and implement it for at least one week with their students.

**Generative Strategy**
Following the lecture, have participants create both a short Tegrity video lecture and either an audio or video VoiceThread message. Then, ask participants to look at the syllabus which they created and to turn one of the weeks referenced in the syllabus into a lesson plan for a “flipped week” with their students.

**Goal 4: Learners will be able to create a classroom environment that enables their students to implement what they have learned on their own and engage in group discussions, participate in class projects, and receive individualized attention as needed.**

<table>
<thead>
<tr>
<th>4.1 After a lecture on effective course design, learners will be able to name three classroom instructional strategies that actively engage students in the physical classroom and will be assessed in small-group discussions.</th>
<th>Principle/Recall</th>
<th>Explanation Demonstration Recall</th>
<th>Participants will describe instructional strategies that actively engage students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2 After a lecture on effective course design, learners will create a lesson plan to detail what students and the instructor will do in their physical classroom after students view a lecture on their own, which will be assessed based on interviews.</td>
<td>Principle/Application</td>
<td>Explanation Demonstration Recall Practice</td>
<td>Participants will create lesson plans for classroom instruction.</td>
</tr>
<tr>
<td>4.3 After the training, learners will be aware of new instructional strategies to engage students in their physical classrooms and use them at least once more during the semester, which will be assessed based on a</td>
<td>Procedure/Application</td>
<td>Recall Practice</td>
<td>Participants will learn about and use new instructional strategies in the physical classroom.</td>
</tr>
</tbody>
</table>
**Motivational**

Ask participants to consider, based on what they have learned about the flipped classroom, what the ideal physical classroom session would look like. How would the time be used? What activities would enable the students to apply what they learned in their individual online sessions? How would learning be better reinforced than it is in the traditional classroom?

**Initial Presentation**

The instructor will present a lecture on instructional strategies which have been proven to actively engage students in the physical classroom. Next, the instructor and participants will discuss effective in-class activities that can be used to reinforce and enhance individual online learning. The instructor will then ask participants to plan new instructional strategies to engage students in their physical classrooms.

**Generative Strategy**

Have each participant name three classroom instructional strategies that actively engage students in the physical classroom, and discuss them in small groups where they will assess each other’s responses. Then, have learners create a lesson plan detailing learning activities that will take place in their physical classroom after students have attended their individual online learning sessions, with the understanding that they are to use these strategies at least once more during the semester.

**Goal 5: Learners will be able to assess the performance of their students in the flipped classroom environment.**

5.1. Given a basic understanding of how to implement the technical tools available in the Blackboard environment, learners will be able to successfully design student assessments that correlate with course objectives, which will be assessed based on observation.

<table>
<thead>
<tr>
<th>Procedure/Application</th>
<th>Recall Practice</th>
<th>Participants will develop assessments to measure student mastery of course material, with observable metrics based upon determined course objectives.</th>
</tr>
</thead>
</table>
Motivational

Ask participants to think of some ways that assessments could go beyond the standard multiple choice and true/false question format. How could they assess their students based on observable behaviors?
B.2 Voice Thread Lecture

VoiceThread: How to

Research: Gao and Zhang
- Important to be clear about posting expectations: both content, timing, and amount
- All comments in one area preferred
- Visual and audio learning/social capital appreciated
- Supports multimedia content

How it Works With Students
- Example of a VoiceThread used by a journalism course: https://voicethread.com/myvoicethread/9550863172/9550139

Benefits of Voice Thread
- Full participation.
- Reflection.
- Timing.
- Review.
- Snow days or sick days
- Voice work.
- Presentations.
- Personalization.

Register at voicethread.com

Sign in at voicethread.com
Home page

Uploading

Uploading

Naming

Adding the lecture

Adding the lecture
Adding the lecture

Things to note

Sharing
Sharing

References


Practice time: audio

- Define a flipped classroom.

Practice time: video

- Name three benefits of flipped classrooms.

Practice time: text

- Name two benefits of using VoiceThread for teaching.
B.3 Capturing Your Lecture
B.4 Effective Course Design
Building Online Learning Communities

Keys to the learning process are the interactions among students themselves, the interactions between faculty and students, and the collaboration in learning that results from these interactions.

Basic steps to build an online community:

- Clearly define the purpose of the group. What do you want students to achieve in the space?
- Define norms and a clear code of conduct. In other words, outline your policy regarding respect, tone, posting expectations, etc.
- Facilitate subgroups. Break up students into smaller groups in order to provide opportunities for all students to be involved.

Roles and functions of the instructor:

- Create a learning community that is intellectually exciting and challenging
- Encourage learners to perform to the best of their abilities in all aspects
- Keep the learning community centered
- Use a variety of learning activities
- Stress the interrelatedness of the curriculum
- Establish objectives for the learners

Signs that your online class has become a community:

- Active interaction and collaboration among students
- Sharing of resources among students
- Expressions of support and critical evaluation among students


B.6 Evaluating a Flipped Classroom Handout
EVALUATING A FLIPPED CLASSROOM

The eight steps of evaluation suggested by Gooler[^1]:

1. **Purpose**
   Why are you conducting the evaluation?

2. **Audience**
   Who are the target recipients of the evaluation results?

3. **Issues**
   What are the major questions/objectives of the evaluation?

[^1]: Source reference
4. **Resources**
   What resources will be needed to conduct the evaluation?

5. **Evidence**
   What type of data will be needed to answer the evaluation questions?

6. **Data-gathering techniques**
   What methods are needed to collect the evidence needed?
7. **Analysis**
   How will the evidence collected be analyzed?

8. **Reporting**
   How, to whom, and when will the results of the evaluation be reported?

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Here’s a list of links for further reference in your study of instructional evaluation:

Formative evaluation- overview

Reasons for formative evaluation

Reasons for summative evaluation

The difference between formative as summative evaluation
http://www.cmu.edu/teaching/assessment/basics/formative-summative.html