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TeaM 3J:

Melissa Ferry, Terri Golden, Jaclyn Hawkins, Jennifer Lanza, Jenna Ward

University of Akron

## Instructional Design Final Paper

### **Analysis Phase**

Changing technology is always affecting the resources and ideas teachers can use in the classroom. Our subject matter expert would like to keep her college students up to date on new information about how technology is affecting instruction. In a technology course, the content of the class could probably be updated and changed every semester if time allowed for planning. However, sometimes there is not always time to add in extra modules or lessons into a course that is already running smoothly. This is a situation where there are new topics to learn about that should be included in the course according to topic, but there is not time in the semester to add lessons in without overwhelming the students. Some students may want to learn about these topics, which puts them at a disadvantage.

The subject matter expert would like to give her students an opportunity to learn about a new topic in education that she does not have time to add into her class. She wants to give them a learning module that they can access through Springboard to enable them to learn about the new concept of Flipped Classrooms. This will give students the opportunity to learn about this new idea that may transform the way we teach in the future even though it is not a required part of the course.

#### Learning goals:

- Students will watch an introduction video on Flipped Classrooms.
- Students will learn more about Flipped Classrooms by reading provided articles, websites, and blogs.
- Students will demonstrate their understanding of Flipped Classrooms by participating in a discussion board with peers.

- After instruction, students should be able to demonstrate their understanding of Flipped Classrooms by taking a quiz.

The first needs realized for this project were felt needs and anticipated/future needs. This was felt by the SME, Dr. Ward. She wanted to provide the students with the information on flipped classrooms because it is an emerging trend in technology education. This topic is a future need because it will be created now, and probably become part of the coursework within a few years. As technology becomes more available to students at home and to teachers in school, the use of flipped classrooms will become more popular and useful. Teachers will need to be educated on what they are and how to run them. With some research, we found a few other colleges that are teaching their education students about Flipped Classrooms. For this project, we found no supporting evidence of normative needs or critical incident needs.

Phase I Planning: The target audience are Instructional Technology master's students. A decision was made to collect data on four types of needs: comparative, felt, expressed, and anticipated/future. This was decided because the Subject Matter Expert felt that instruction was necessary to address the problem. Data will be collected from current master's students via an online survey.

Phase II Collecting Data: Data will be collected through the IT Master's portal with a survey of graduate students. The survey will be online for the students to complete at their own convenience.

Phase III Data Analysis: For this part we can rank the content that we are going to emphasize in our PowerPoint/ lesson based on what the sample population needs or wants to learn more about.

Phase IV Final Report: Summary of our survey, a total of 15 Teachers participated in the survey: 25% of the Teachers surveyed are Math and Social Studies Teachers; 16% are Librarians and Special Education Teachers, 58% are English Teachers, and 50% are Technology Teachers; 50% of the Teachers surveyed are High School Teachers, 42% are Middle School Teachers, 28% are Junior High School Teachers, 28% are Elementary School Teachers, and 7% are Preschool Teachers and University Instructors; 26% of the Teachers surveyed have taught for 5 years or less and 74% have taught more than 5 years.

Survey Results reveal teachers: have over 53% of students are absent at least 5 days out of a school year; 100% of teachers surveyed have to review instruction of lessons previously taught; All Students fail to understand new information taught the first time; 100% of the Teachers wish they could include multimedia in their lessons; 87% of Teachers sometimes do not have enough time to teach the lessons they plan and 13% of Teachers never have enough time to teach the lessons they plan; 100% of teachers include an activity with their lessons; and 80% of Teachers sometimes include a video with their lesson.

Our learner analysis shows that our primary audience is IT Master's and Education students of SME. Our secondary audience can include school administrators, and other outside educators. The general learner characteristics of our audience is that they are adult learners, graduate students in Instructional Technology, and have at least some teaching experience (minimum of student teaching) up to and including teachers with many years of teaching experience. The entry characteristics of our learners include prerequisite skill and knowledge including being familiar with how to navigate through Springboard. They should also have experience in or have observed a traditional classroom. Our learners should also be motivated to learn about a new emerging topic in education.

## **Design Phase**

Our Final task was to create an additional learning module, for students studying Instructional Technology, about Flipped Classrooms. In order to accomplish the final task our team needed to complete other tasks first. In order to begin our process we needed contact our SME, Dr. Ward to discover more about the situation and the specifics of the problem that she gave us. We next had to have a group meeting where we discussed the problem and how we could solve it. We discovered that we would be able to create a survey that will be sent out to students that are already in the Instructional Technology program. Once the survey was created we sent it out and awaited the results. The questions that we asked the students were in relation to their own teachings and their classrooms. The questions focused on whether or not they could benefit from doing a Flipped Classroom. While we were awaiting the results for the survey we had to do more research on Flipped Classrooms by looking at websites, watching videos, and reading blogs. We were able to find a plethora of information about Flipped Classrooms. Once the survey was completed it was important that we collect all of the data and analyze it using what we have learned about Flipped Classrooms. With the information from the survey and the information that we found about Flipped Classrooms we were able to create a learning Module for students in the Instructional Technologies program who wanted to learn more about Flipped Classrooms.

During our initial analysis, we determined that the Learning Theory of our project fit most closely with the Cognitive Theory. This theory focuses on how people think and process information, as well as how they remember and forget information (Morrison, Ross & Kemp 350, 2007). Our team had an interest in the theory of the “Flipped Classroom” because it is a new, innovative way to help students learn. Instead of coming to class to listen to a teacher

lecture, the students watch the lecture and take notes on their own time before class. This way, by the time they get to class, they have had initial exposure to the material and they are ready to make blog posts, conduct group discussions, or participate in an activity. We modeled our learning module after the Flipped Classroom, because students will be learning the information on their own and then completing the accompanying assignments.

As a team, we collected many resources and videos to support our topic. We will begin our lesson by having students watch an introductory video. This follows the principle that “when new information can be connected in memory to prior knowledge, the chances for meaningful learning will increase” (Morrison, Ross & Kemp, 352, 2007). Since our target audience is a group of teachers, we wanted to show them a video of a lesson that they can relate to. This way, they’re drawn in and connected to our topic from the very beginning. We also connected to this principle by providing multiple articles, websites, and blogs. By providing multiple resources, we are allowing our students to deeply process the information, therefore increasing the probability that it will be transferred to long-term memory (Morrison, Ross & Kemp, 351, 2007).

The next phase of our learning module requires students to participate in a discussion board with their peers. Our team felt that this was an important step to include because we want our participants to relate the information they’re learning to their own teaching profession. By constructing posts about their current practices, they will be reflecting on their personal experiences. This is another principle in the Cognitive Theory.

In conclusion, the Cognitive Learning Theory has proven to be extremely helpful in the creation of our learning module on the Flipped Classroom. It helped us plan our learning objectives because we focused on how students learn best, what it takes to transfer information into memory, and it showed us the importance of reflecting on personal experiences. By

incorporating all of this into one module, we feel that our students will learn what the Flipped Classroom is, and how it is implemented in the classroom setting.

Objectives:

During our initial analysis, we determined the learning goals of the learning module as the following:

- Students will watch an introduction video on Flipped Classrooms.
- Students will learn more about Flipped Classrooms by reading provided articles, websites, and blogs.
- Students will demonstrate their understanding of Flipped Classrooms by participating in a discussion board with peers.
- After instruction, students should be able to demonstrate their understanding of Flipped Classrooms by producing a mini lesson video.

Our task analysis helped us formulate the following objectives from those goals for the graduate students that participated in our learning module.

- The graduate students will observe the basic problems with teaching in the traditional way by watching a video, with 100% participation.
- The graduate students will read and review a Power Point on Flipped classrooms to learn the basics of Flipped Classrooms, how they work, and why they are beneficial.
- The graduate students will research about Flipped Classrooms by reading provided links to articles, websites, and blogs to find out specific strategies used in Flipped Classrooms.

- The graduate students will demonstrate their understanding of Flipped Classrooms by engaging in a discussion board, meeting all discussion posting requirements including comparing traditional vs. Flipped Classrooms.
- The graduate students will respond to at least two peers' discussion posts about Flipped Classrooms to examine and either argue or support the peers post by
- The graduate students will complete a mini lesson for a Flipped Classrooms with at least 80 percent accuracy.

The objectives were organized into this order for the learning module to best deliver the content of Flipped classrooms. The graduate students first watched a short video on Flipped Classrooms vs. traditional classrooms. This was to create interest in the graduate students to want to learn more about Flipped Classrooms. Included in the module was a Power Point slideshow that gave the students basic information about Flipped Classrooms, how they are used, and why they are beneficial and becoming popular in education today. They were next instructed to read and research provided articles, websites, and blogs to learn specifics of Flipped Classrooms and see how different Flipped Classrooms can be from each other. In order for the graduate students to demonstrate their understanding of Flipped Classrooms, they then each wrote an initial discussion post to the discussion prompt. The students also responded to at least two other students' postings, to add to their thoughts, and to argue or support the ideas identified. The last part of the learning module was a mini lesson for a Flipped Classroom through Springboard which allows the students to show that they have learned the concepts and applications of a Flipped Classrooms in education.

**Instructional Strategy:****Objective 1**

The graduate students will observe the basic problems with teaching in the traditional way by watching a video, with 100% participation.

**Initial Presentation:** Common problems with delivering instruction in the traditional classroom are presented in the introduction video on the team wiki (frequent interruptions, distractions, students not paying attention, repeating instruction, students bored from content being too low or too high).

**Generative Strategy:** Supplying the students with the initial information about Flipped Classrooms in the introduction video will present the learner with the concepts. They will then be motivated to learn more about Flipped Classrooms.

**Objective 2**

The graduate students will read and review a Power Point on Flipped classrooms to learn the basics of Flipped Classrooms, how they work, and why they are beneficial.

**Initial Presentation:** Team PowerPoint on Flipped Classroom (maybe include here specific details about Flipped Classrooms that will be in the PowerPoint)

**Strategy:** Students can go through the PowerPoint at their own leisure to learn more introductory information about Flipped Classrooms.

**Objective 3**

The graduate students will research about Flipped Classrooms by reading provided links to articles, websites, and blogs to find out specific strategies used in Flipped Classrooms.

**Initial Presentation:** Students read results of survey. Students read scholarly articles, links to discussions/blogs, and web links, on Flipped Classroom practices in Education.

**Strategy:** Students will learn through research/discovery about the different ways Flipped Classrooms can be implemented in the classroom, including the pros and cons of using Flipped Classrooms.

#### **Objective 4**

The graduate students will demonstrate their understanding of Flipped Classrooms by engaging in a discussion board, meeting all discussion posting requirements including comparing traditional vs. Flipped Classrooms.

**Initial Presentation:** Based on survey results, articles and blogs read, and videos watched, students will create an initial discussion post on Springboard (DB).

**Strategy:** Question #1: Is classroom instruction the best choice for all your students? Or is it beneficial for your students to come to class already prepared from information provided as homework? Please provide a reference to this information nugget. (Tell us where you got the info!) **REPLY to AT LEAST 2** of your colleagues finding common areas of interest when you can!

Question #2: Do your students prefer to hear a lecture during class time or do an activity during class time? When might you use Flipped Classroom instruction? And why? Please provide a reference to this information nugget. (Tell us where you got the info!) **REPLY to AT LEAST 2** of your colleagues finding common areas of interest when you can!

**Objective 5**

The graduate students will respond to at least two peers' discussion posts about Flipped Classrooms to examine and either argue or support the peers post by identifying concepts of Flipped Classrooms.

**Initial Presentation:** Based on survey results, articles and blogs read, and videos watched, students engage in conversation (DB).

**Strategy:** Question #1: Is classroom instruction the best choice for all your students? Or is it beneficial for your students to come to class already prepared from information provided as homework? Please provide a reference to this information nugget. (Tell us where you got the info!) **REPLY to AT LEAST 2** of your colleagues finding common areas of interest when you can!

Question #2: Do your students prefer to hear a lecture during class time or do an activity during class time? When might you use Flipped Classroom instruction? And why? Please provide a reference to this information nugget. (Tell us where you got the info!) **REPLY to AT LEAST 2** of your colleagues finding common areas of interest when you can!

**Objective 6**

After completing the module, the graduate students will answer questions and comment on Team wiki about what they learned from the Flipped Classrooms learning module.

**Strategy:** Short reflections on resources and information provided on the Flipped Classroom.

The Wiki Reflections will serve as the evaluation for the Flipped Classroom learning module.

**Objective 7**

The Learner will implement a mini lesson using the Flipped Classroom methodology.

**Strategy:** Practical application of Flipped Classroom to understand the effect on the learner. Will this methodology be meaningful for learners in the classroom and at home?

### **Development Phase**

Our Subject Matter Expert needed this learning module to be accessible for her online students, so it was asked that we make it a website. We created a Wiki for this learning module to organize all of the components that the students need to have access to. The different media that we included in this learning module on Flipped Classrooms included an introduction video and Power Point made by our team, an info graph found online, links to different videos, websites, online articles, and blogs. We decided that this variety of different resources online and in our wiki would provide the learner with a wide range of information to satisfy their needs. The introduction video and Power Point are a quick way to give the learners an idea of what Flipped Classrooms are and get them interested in the topic.

The homepage of our wiki on Flipped Classrooms has a list of the tasks the learner needs to complete for the learning module. They are broken down into steps, with each one containing a link to the wiki page for that task. The links to the pages were also contained in the navigation bar on the right hand side of the wiki, so the learners could navigate from any page to any other page on the wiki. They were listed in the order that the learners should go through them. It started with introduction material, then resource material for more information, a discussion activity, and a mini-assignment to show the learner had an understanding of Flipped Classrooms after completing the module. The wiki was separated into pages to make a more cohesive learning module. We chose fonts that were easy to read, making the headings bold to bring attention to them. The colors on the wiki are classic colors, black, grey, and white. This was chosen so that the learners would not be

distracted from the content of the wiki.

Some of the informational resources on our wiki were created by our team, and some were links to websites and articles online about Flipped Classrooms. We created our own introduction video and Power Point so that we could give the learners their first glimpse of what Flipped Classrooms are. For the more detailed information we provided links to articles, blogs, and websites created about Flipped Classrooms. We included these links so that the learners could see how Flipped Classrooms are being used in the real world, so they would get more than just what we were telling them in our video and Power Point. This was also helpful for students to be able to complete their mini-assignment because there are many different ways to flip a classroom, so the learners were able to do some researching and find ideas on their own.

For the learners, we had them participate in a discussion board about challenges they may face in their classroom when trying to make a flipped lesson. We also had them create a mini-lesson assignment. The wiki included a rubric for this assignment so learners know exactly what is expected of them. For our peers that evaluated our wiki, we created a wiki reflections page for them to answer some questions on how well they think the wiki was in covering the content needed and the design of our wiki. Our Flipped Classroom wiki can be found at <http://team3j.wikispaces.com/Flipped+Classroom+Home>.

### **Implementation Phase**

In order to start the Implementation phase, we first had to consider the target audience. The target audience, as discussed earlier, is Graduate Students of the Instructional Technology Program and other educators. Dr. Ward would like to introduce the topic of Flipped Classrooms in her graduate level courses. We feel that the members of this wiki will share the knowledge gained from the Flipped Classroom Module with other professionals, such as fellow teachers

and administrators.

Next, we had to come up with ways to communicate with some members of the target audience. During the Analysis phase of this project, we decided to create and then send out a survey to fellow IT Master students to complete. The survey asked about their current use of technology in the classroom and if they ever thought about recording their lessons. Our SME, Dr. Ward, helped to send out the information to current IT Master students. Those that were interested in participating in the survey, participating in our Flipped Classroom module, and writing a reflection statement about Flipped Classrooms will be allowed to use this as Field Experience for their E-portfolio, with permission given by Dr. Ward. After learning the results of this survey, we moved on to the Design and Development stage of ADDIE.

At this point, we emailed those IT Masters students that wished to participate to inform them of the upcoming wiki page. Out of those emailed, seven have participated in the Flipped Classroom Wiki Reflection Page, which is the last page of the wiki. In addition to their participation on the Flipped Classroom Wiki, they are to create a reflection about Flipped Classrooms and if and how they would implement the Flipped Classroom approach in their classroom.

For the Implementation phase, we decided to create a wiki that Dr. Ward could use in her master classes. This wiki could be used as part of a lesson, as an additional topic for masters students to review, or just as a source for those interested in Flipped Classrooms. The wiki contains a Wiki Home Page, or an Introduction Page, for those reviewing our wiki. This page can be deleted in the future, if Dr. Ward would like to use this wiki in a different way. This page guides the readers through the wiki in a step-by-step process. The next page, the Flipped Classroom Introduction page, introduces the readers to the Flipped Classroom model.

This page includes a video, PowerPoint, an info graphic about Flipped Classrooms, and some corresponding NETS for Teachers standards. In addition, this page provides a brief history and an example of Flipped Classrooms.

The next page, Flipped Classroom Video, includes a short video of a teacher explaining why she decided to flip her classroom. Next, the Flipped Classroom Resource Page provides additional resources along with a short description about Flipped Classrooms. The Discussion Question page raises two key questions about Flipped Classrooms. Question one is: “When it comes to implementing the Flipped Classroom in your room, what obstacles do you envision holding you back? For example, some students may not have access to the internet. What are some ways you can overcome these challenges? How can you make sure that all students are receiving the necessary information?” Question Two is: “Any time a new technological concept is introduced, parents and other community members may be skeptical. What would you do to convince the parents and other community members that the Flipped Classroom is a step in the right direction?” These discussion questions could also be included in a Springboard Discussion page if Dr. Ward would prefer that method instead. The Assignment page and Assignment Direction page will allow students to create a mini lesson about Flipped Classrooms. We did not ask the participants in this wiki to complete this activity, or the discussion question activity, due to time constraints. Instead, we asked them to give their feedback about this activity in the Wiki Reflection page. This mini lesson assignment will evaluate learners knowledge about Flipped Classrooms based on the module, or wiki, thus far.

For part of the implementation, we asked the participants to answer two questions and to leave comments about the Flipped Classroom Module under the Wiki Reflection page on the wiki. We felt that this would not only be beneficial for us, as creators of the Flipped

Classroom wiki, but for the SME as well. We felt that Dr. Ward could benefit from reading comments from current students about this wiki to see if it is something that she would like to implement in her classroom. One evaluator of this wiki stated, “I found this wiki to be very clear and understandable. I felt that it gave a good description of Flipped Classrooms, and it provided some good resources for applying this method to our own classrooms.”

While we feel this wiki would be beneficial in Dr. Ward’s master classes, there were a few challenges that occurred along the way. One of the challenges was deciding how the participants should review our wiki. We felt that leaving the comments on the wiki page would allow the participants to view each other’s comment without having to leave the wiki. Another challenge was coming up with a meaningful assignment that would showcase what the learners learned in the Flipped Classroom wiki. With guidance from Dr. Ward, we feel this mini lesson would be something she would possibly use in her classes. Another challenge that occurred came from the participants themselves. Some participants did not follow directions stated on the wiki page, such as leaving their comments outside the table in the Wiki Reflection page while the directions state to leave the comment inside the table. To prevent some of these challenges from occurring, we could have implemented our Flipped Classroom wiki sooner to allow more time or have provided clearer directions, although we felt that a week or so would be plenty of time for a module this size and the instructions are stated on the wiki page.

### **Evaluation Phase**

Fourteen IT Masters students and One IT Endorsement students expressed an interest in learning more about the Flipped Classroom. Eleven of the IT Masters students expressed interest in using the Flipped Classroom learning module for their ePortfolio and Field Experience, as evidence of participation and evaluation of an online learning module. Dr.

Ward advised the students “To use this as a field experience, you will show evidence of participation in the survey and the evaluation of the learning module, plus write a reflection on Flipped classrooms and how this might be implemented in your classroom or work environment. These artifacts will be included in your ePortfolio under assessment and evaluation or leadership!” These eleven students were notified when the learning module became available. The Flipped Classroom learning module is on a team wiki <http://team3j.wikispaces.com/Wiki+Reflections>, for viewing. Only seven IT Masters students participated in The Flipped Classroom learning module evaluation: Sharon Caine, Lauren Butcher, Cassandra Neumann, Tawanna Owens-Hamm, Isaac Fickey, Tara Young, and Jackie Misiak.

The questions to initiate the discussion were:

1. Based on what you have learned from this wiki, do you think you will ever use the Flipped Classroom approach in your classroom? Why or why not?
2. Did this wiki, including the resources provided, answer your questions about Flipped? Classrooms? Please tell us at least one concern you still have about Flipped Classrooms.
3. Additional Comments

A table was provided for their responses. Six of the evaluators are teachers and one works in a company. Six of the evaluators, including the one that works in a company, would use the Flipped Classroom for their learners. Out of the six, three do not have technology readily available in their classrooms. Only one evaluator chose not to use the Flipped Classroom. She has students on IEPs who have the need for instruction that is F2F and Tactile-Kinesthetic. She was not willing to use the Flipped Classroom methodology for her students.

All of the evaluators stated that after viewing the team wiki, they have a better understanding of what the Flipped Classroom is about. Two of the teachers admitted that the team wiki answered their questions about the Flipped Classroom.

Evaluators felt we did an excellent job of presenting the material, the information was concise and simple to understand, the resources enhanced the instruction, and the suggested activity to engage the students (hands on student project) along with a rubric to evaluate the students' project was a real plus.

All of the Evaluators mentioned that they had concerns about students within their classrooms that did not have access to the internet at home. Lack of internet capability, lack of motivation and lack of organization of those few students in their classroom would be a problem. The team sent an article (in red italics) addressing these concerns, <http://team3j.wikispaces.com/Wiki+Reflections>, we also reiterated that the Flipped Classroom lesson must have follow up activities such as note taking, paper writing, etc., in order to motivate learners to participate.

Overall, everyone who evaluated our Flipped Classroom learning module, benefited from the information and resources provided. Therefore, we would say, that the Flipped Classroom learning module was a success, and ready for implementation as a learning module for the Instructional Design course.

Reference

Morrison, G., Ross, S., & Kemp, J. (2007). *Designing effective instruction*. (5th ed., pp. 350-352). New Jersey: John Wiley & Sons, Inc.