Technology and the Flipped Classroom

Final Design Plan

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EDUC 602

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RATIONAL

Technology is continuously growing at an increasing rate. While many new teachers may have had access to technology in their college courses or during their student teaching, many experienced teachers were never taught how to use the technology that the school system has provided them. Students are increasingly aware of technology, and often use their smart phones in the classroom. This course will aid educators in learning how to use the technology Anne Arundel County has given them to benefit their students, and use students' technology know-how to their benefit.

With the Common Core State Standards now being fully implemented in Anne Arundel County in multiple content areas, the fast-paced and rigorous curriculum to fulfill the standards does not allow enough time to teach all of the content that needs to be taught within the classroom. Utilizing the flipped classroom with the help of technology will aid educators in teaching more content and meeting their difficult deadlines while also allowing their teaching methods within the classroom to become more student-centered. Online notes and lectures will save time for teachers in the classroom, help students become independent learners, and allow for a more collaborative classroom environment.

Anne Arundel County Public Schools (AACPS), the sponsor for this training, has a mission for professional growth and development that states, "Our mission is to provide continuous and focused learning for all employees, serve as a school system professional learning network, and to advance individual and organizational development in order to ensure achievement for every student.[1]" This course allows adheres to the AACPS mission by providing focused learning that will advance individual development to ensure achievement for every student.

Participants will find this training useful and relevant, as it can be implemented next-day within their own classroom. While there will be discussions and a brief (online) lecture regarding the purpose and usefulness of technology and the flipped classroom, participants will appreciate and enjoy the hands-on approach to learning in the professional development. Each educator will have the opportunity to create their own recordings using various methods, post the recordings to the internet, create their own Edmodo and Nearpod accounts, and will have the opportunity to truly immerse themselves in the flipped classroom. This course is unique, because each participant should leave with partially created lessons that they can use within their classrooms the next day.

The training is offered as either a one full-day professional development (8 hours), or four 2-hour trainings in the evening. To allow for all participants to use all of the available technology, the class size should be limited to 16 participants or fewer for each training session. The course will be held at the professional development center in Gambrills, Maryland.

Course facilitators will be provided with all necessary materials and handouts, the draft design plan, computer-based slides, and will be required to demonstrate their ability to utilize each piece of technology prior to implementation.

The target population for this course are AACPS educators who are interested in applying the flipped classroom to their classroom with the use of technology.

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[1] http://www.aacps.org/aacps/boe/teach/stafd/stafd.asp

TARGET POPULATION

The population of this training includes all educators, including teachers, support staff, department chairs, and administrative staff of any school within Anne Arundel County Public Schools (AACPS), including charter schools, applied technology schools, and special education schools. Participants will be eligible to earn 1 Advanced Professional Certificate (APC) credit as well as a $100 stipend for attending the training.

The training is open to all AACPS educators, and there are more than 5,766 teachers who teach in AACPS. Participants vary in their racial and ethnic backgrounds. About 95.2% of teachers hold advanced or standard teaching certificates with a bachelor's degree in education or a content area, or a master's degree in education or a content area. The level of teaching experience for participants varies from new teachers to teachers with 35+ years of teaching experience, but the average is 11.78 years of teaching experience.[2] The ages of participants also varies from the age of 21 through 65+ years of age. Elementary school teachers through high school teachers will be attending the training, including their corresponding special educators, department chairs and administrative liaisons. While the training is open to all educators in AACPS, it is likely that the primary participants will be elementary through high school content teachers from the ages of 22 through 50.

Educators in AACPS generally all have access to desktop computers, laptops, interactive smart boards, document cameras, and a few of them have tablets. Unfortunately, many of them have no idea on how to implement the flipped classroom, or how to use the technology they currently have efficiently. Experience with technology to aid the flipped classroom may be significantly lower than teaching experience. Many teachers only know basic functions of the interactive smart board and document camera, and have never worked with the applications and websites that will be shown throughout the training.

Many of the educators are frustrated by the newly implemented common core curriculum in many subject areas, which requires teachers to rush through content at an extremely fast pace. As a result, educators are eager to learn the concept of the flipped classroom to help support their fast-paced curriculums. Due to their frustrations, it is likely that participants will want to vent to their colleagues throughout the training, which, if not managed, can take over the training.

While the educators participating in this course are likely motivated and genuinely interested in using technology to create a flipped classroom environment, they are also distracted since they have a number of work and family obligations. Many of them will struggle with a four, two-hour session training after school due to time constraints and those obligations.

There are various schools within AACPS that have a large number of students with low socioeconomic backgrounds. Teachers at those schools will have concerns about students' access to technology outside of the classroom, so it is important to include clear, concise solutions to their questions regarding it. Conversely, there are some schools within AACPS that have access to large amounts of technology, thus potentially causing conflict within groups of teachers. It is best to stay focused on the "how" and "why" of the training, and not the amount of resources each school has.

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[2] http://www.aacps.org/aacps/boe/ADMIN/PINFO/fastfacts.pdf

MODULE 1 TERMINAL OBJECTIVE

Given handouts, web resources, case studies, classroom discussion, videos, and working computers with access to the internet, browser software, and word-processing software, the Technology and the Flipped Classroom participant is required to design a flipped classroom lesson plan by providing at least 3 elements of a flipped classroom.

> **A:** the Technology and the Flipped Classroom participant

> **B:** design a flipped classroom lesson plan

> **C:** Given handouts, web resources, case studies, classroom discussion, videos, and working computers with access to the internet, browser software, and word-processing software

> **D:** by providing at least 3 elements of a flipped classroom.

MODULE 1 ENABLING OBJECTIVES

1. Given a video on the flipped classroom model, the Technology and the Flipped Classroom participant will be able to compare and contrast the traditional classroom with the flipped classroom by participating in a group discussion.
2. Given web resources and classroom discussion, the Technology and the Flipped Classroom participant will be able to formally define the term flipped classroom by listing at least 3 elements of a flipped classroom.
3. Given a video, web resources, and a classroom discussion the Technology and the Flipped Classroom participant will be able to identify the drawbacks of a flipped classroom by stating a minimum of 5 examples.
4. Given a video, web resources, and a classroom discussion the Technology and the Flipped Classroom participant will be able to identify the benefits of a flipped classroom by stating a minimum of 5 examples.
5. Given handouts and a classroom discussion, the Technology and the Flipped Classroom participant will be able to identify examples of useful technology(websites, software, hardware, etc.) that aid in the flipped classroom by stating a minimum of 10 examples.
6. Given a case study about a traditional classroom lesson, the Technology and the Flipped Classroom participant will be able to draft an example outline of a flipped classroom lesson by providing at least 3 elements of a flipped classroom.
7. Given the created draft outline of a flipped classroom lesson, the Technology and the Flipped Classroom participant will be able to compare and contrast their ideas by participating in a group discussion.
8. Given content area curriculum guides and textbooks, the Technology and the Flipped Classroom participant will be able to design their own flipped classroom lesson seed by providing at least 3 elements of a flipped classroom.
9. Given the flipped classroom lesson seed, the Technology and the Flipped Classroom participant will be able to critique a partner's lesson seed by offering written feedback.
10. Given the flipped classroom lesson seed and the written feedback from a partner, the Technology and the Flipped Classroom participant will be able to design their own flipped classroom lesson plan

COURSE DESCRIPTION

- Training length: Either four sessions, 120 minutes each, or one 8-hour training. The lesson plan provided is outlined for the first module, which is 120 minutes long.
- Modules: Four modules total
- Ideal class size: 16 students maximum, 8 students minimum
- Instructional Methods: lecture, case studies, discussion (both small-group and full class), brainstorming, video, critique
- Distribution Method: technology-enhanced and technology-facilitated
- Room set-up: ADA compliant. Tables that are grouped in groups of four to facilitate cooperative learning as well as lectures and discussions. There should be a laptops within the room so that each participant has access to a laptop with internet access. There will also be a projector, laptop/ computer, and a smart board at the front of the room.
- Materials:
  o Sign-in sheet
  o 20 student handouts
  o 20 Writing instruments

- AV Requirements
  o Facilitator computer, internet enabled, connected to overhead projector, with internet browser that has access to youtube, teachertube, nearpod, Edmodo, schoology, etc., word processing software
  o 20 Laptops with word processing software, internet browser and internet
  o Smart board
  o 1 AVer M70 document camera for display
  o Live echo pens for display
  o 20 Recording and listening headsets
  o Computer speakers

Course Modules

1. What is the Flipped Classroom, and how do I use it?
2. Recording with Technology
3. Getting the Information out There
4. Putting it all Together

The Technology and the Flipped Classroom training will provide Anne Arundel County Public Schools (AACPS) educators with the knowledge and tools to create and administer a flipped classroom within their own K-12 classroom. Participants will learn what the flipped classroom truly is, along with the drawbacks and benefits that come along with using one, and techniques on how to implement one in their own classroom. Additionally, participants will have hands-on experience with the technology and educational websites that AACPS has available to them, so that by the end of the training, they have a fully implementable lesson for their own classroom. The course is offered at no cost, and participants who complete the training and the subsequent lessons/ surveys/ follow-ups are eligible to earn 1 Advanced Professional Certificate (APC) credit as well as a $100 stipend for attending the training.

The training will either be four sessions, 120 minutes each, or one 8-hour training session based on participants' availability. There will be a total of four modules. The first module (which is the module focused on for the design plan and lesson plan) includes lecture, case studies, discussion, brainstorming, a video, and evaluations. The facilitator will provide a brief lecture and will guide the module with a slide presentation, handouts, and point participants to electronic resources to aide in the discussions and case studies. The other three modules consist of lecture, small-group work, independent work, and evaluations.

A summary of the first module is as follows:

Time Allotment	Agenda
14 minutes	Complete introduction, go over module objectives, review prior knowledge
5 minutes	Video: Compare and contrast traditional classrooms and flipped classrooms
10 minutes	Small-group discussion: What is the definition of a flipped classroom?
15 minutes	Video & other resources: Examples of real flipped classrooms.
5 minutes	Small-group discussion: What are 5 drawbacks to the flipped classroom?
5 minutes	Small-group discussion: What are 5 benefits to the flipped classroom?
5 minutes	Small-group discussion: What are 10 pieces of technology to help create a flipped classroom?
10 minutes	Case Study: Students will take a traditional lesson plan and draft an outline to make it a flipped classroom lesson plan.
10 minutes	Compare and Contrast: Participants will share their ideas using group discussion.
20 minutes	Develop lesson seed
10 minutes	Critique a partner's lesson seed
5 minutes	Assessment: Complete a brief quiz.
6 minutes	Closure and complete a "survey monkey" survey.

Participants in the training are asked to bring their lesson plan books, content area resources such as text books, the curriculum guide for a future unit of study that they would like to create a lesson plan for, and a thumb drive with at least 8GB worth of space on it. By the completion of the training, each participant should have a completed or nearly completed flipped classroom lesson plan that is ready to implement with their students in their own classroom.

The training will take place in an ADA compliant classroom at the Carver professional development center in Gambrills, MD. Each participant should have access to a laptop with internet access and word processing software. There will be a maximum16 seats available, but trainings will be cancelled if they do not have at least 8 participants. The room will have eight large tables available for participants to sit at that are conducive to cooperative learning, but they are large enough so that participants have their own space to work with both their content and the technology. The design enables participants to see the board at the front of the room, and for facilitators to move about the room and assist them with questions.

EVALUATION STRATEGIES

A level 1 evaluation will be conducted immediately concluding each module. The evaluation will be administered using laptops and completing a "survey monkey," which will measure their reactions to instructional methods, the environment, and the class as a whole.

Multiple level 2 evaluations will be conducted throughout each module. In module 1, peer-to-peer evaluation strategies and facilitator observations will both prove useful for most enabling objectives, since many of the enabling objectives are met by completing them by participating in discussions.

In order to model the usefulness of using technology in the flipped classroom, a final level 2 evaluation will be conducted in module 1 by completing a brief multiple choice assessment administered with Nearpod. Questions include:

1. The definition of a flipped classroom consists of…
2. Select a drawback to using the flipped classroom.
3. Which piece of technology will be most helpful to create videos?
4. Which piece of technology will be most helpful to post and edit videos?
5. The flipped classroom is…

As a level 3 evaluation, to earn the continuing education credit, participants must demonstrate mastery of the course by implementing their flipped classroom lesson plan within three months of the conclusion of the course, and provide proof of the implementation. Participants will complete a "survey monkey" survey after they have implemented their lesson, which will include questions on how they felt the lesson went, things they would change, things they liked, and things they would like to learn more about to make the flipped classroom more effective for them in the future.

Finally, a level 4 evaluation will be completed by having participants check-in at the conclusion of the school year with some data. Information that is important to note is how much more of the content area curriculum was completed, as well as student achievement.

PARTICIPANT PREREQUISITES

Participants must be employees of Anne Arundel County Public Schools (AACPS), and have a computer log-in through the county. Ideally, participants are K-12 content area educators or support staff. Department chairs and assistant principle liaisons are also welcome, but all participants must have had some sort of experience as an educator in the classroom. As educators of AACPS, all participants should hold at least a Bachelor's degree in either education or a content area.

Participants should have an interest in using technology, and should also be interested in facilitating the flipped classroom in their own classroom. It is necessary for participants to have at least basic knowledge of a content area and curriculum, even if they are not content area teachers. Participants must be able to use computer keyboards, computer mice, internet browsers, word processing software such as Microsoft Word, and know how to operate e-mail all with minimal help from the facilitator.

Participants must be willing to create and implement a flipped classroom lesson plan, and provide proof of the implementation. If the participant is not actively teaching because they are a department chair or administrator, they must provide their lesson plan to a member of their team, and aid in facilitating the

lesson. In addition, they must complete follow-up surveys and give feedback about their implementation of the flipped classroom within three months of the completion of the training. Participants must also be willing to provide further feedback at the end of the school year regarding student success and completion of a curriculum. Participants who want to take part in the Technology and the Flipped Classroom training must register for one of the trainings with the Professional Growth and Development Office (commonly referred to as ERO).

FACILITATOR PREREQUISITES

Facilitators of the Technology and the Flipped Classroom training should be current or former educators of AACPS. They must have a bachelor's degree, and experience utilizing the flipped classroom within their own classroom. Facilitators should be friendly and eager to help all participants, and believe in using the flipped classroom as a tool that benefits students and helps educators complete their curriculums. Facilitators must be familiar with AACPS curriculum guides, and lessons that can easily be modified to be part of a flipped classroom. Facilitators must have the ability to answer questions and concerns from participants about topics such as the benefits of a flipped classroom, the drawbacks of a flipped classroom, and personal insight into the flipped classroom including additional technologies that can be used. Facilitators must be able to use and troubleshoot the following with limited assistance from the IT department:

- Computer keyboards and computer mice
- E-mail
- Word processing software such as Microsoft Word
- Internet browsers
- Projectors and set the computers up so they project images to a screen
- Headsets

Facilitators must have completed at least one lesson of their own with all of the following:

- Working a document camera, and using it to record video lessons
- Using smart board software and recording headsets to record video lessons
- Using a live echopen to record notes
- Uploading videos to the internet via sites such as YouTube or teachertube
- Posting videos to an educational website
- Creating and keeping up with posting updates, polls, quizzes, documents, and videos with Edmodo
- Developing a Nearpod presentation, with slides, multimedia, and assessment tools
- Administering Survey Monkey surveys

Facilitators must have a Nearpod account, and have downloaded the Nearpod presentation for the course.

Deliverables:

- Population Analysis
- Lesson Plan for Module 1
- Participant Handouts
- Evaluation Instruments