



Effects of the Flipped Classroom on Learning Outcomes

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- The flipped classroom is a pedagogical model in which the typical lecture and homework elements of a course are reversed.

Definition

What is a flipped classroom?

Home	Instruction
Class	Practice



Class	Instruction
Home	Practice

What is a flipped classroom?

THE INVERSION

The Traditional Classroom

Teacher's Role: Sage on the Stage



The Flipped Classroom

Teacher's Role: Guide on the Side



THE FLIPPED CLASSROOM

Turning Traditional Education on Its Head

Many educators are experimenting with the idea of a flipped classroom model. So what is it and why is everyone talking about it?

WHAT IS THE FLIPPED CLASSROOM?

The flipped classroom inverts traditional teaching methods, delivering instruction online outside of class and moving "homework" into the classroom.

THE INVERSION

The Traditional Classroom

Teacher's Role: Sage on the Stage



The Flipped Classroom

Teacher's Role: Guide on the Side



1. Speaks the language of today's students
2. Helps busy students
3. Helps struggling students
4. Students of all abilities can excel
5. Allows students to pause and rewind their teacher
6. Increases student-teacher interaction
7. Increases student-student interactions
8. Allows for real differentiation

Why should you flip?

Synchronous Group

Through Creative, Personalized Projects & Presentations



Demonstration & Application

Hands On Activities



Experiential Engagement

Synchronous Group

Games

Experiments

The Arts

Flipped Classroom Model

Meaning Making

Blogging

Reflective Podcasts



Meaning Making

Reflective Vodcasts

Tests

Concept Exploration



Interactive Websites

Video Lectures

Audio Lectures

Asynchronous Individual

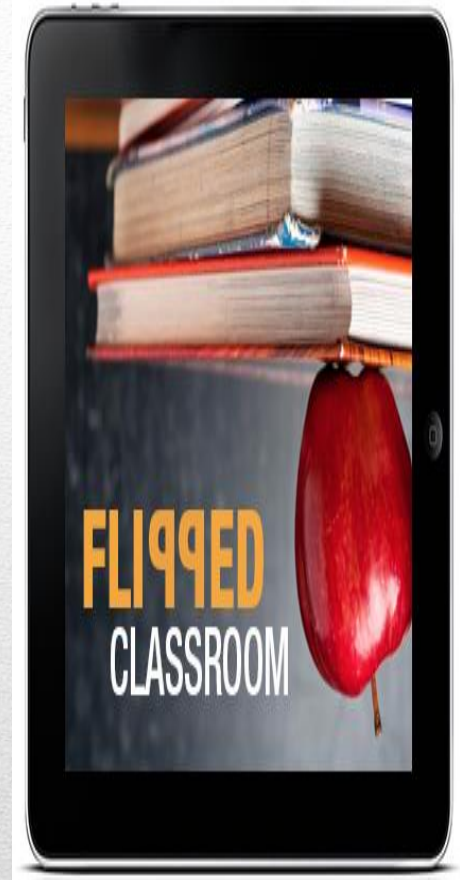
Asynchronous Individual

- Although lectures used for decades as an effective way to help students acquire new knowledge (Hattie, 2008; Schwerdt & Wupperman, 2010), other researchers argue that the problem with lectures is often a matter of pacing.
- For some students, the information may come too slowly or cover what they already know; other students may have trouble taking in information so rapidly, or they may lack the prior knowledge they need to understand the concepts presented (Goodwin and Miller, 2013).

Literature

Based on prior research on the flipped classroom teaching strategy, the investigators hypothesized that students in face-to-face courses will improve their learning outcomes.

Research Hypotheses



Convenience samples

The three investigators Dr. A, Dr. B, and Dr. C utilized the flipped classroom strategy in their classroom. The flipped classroom strategy was defined to meet the following criteria;

- students read chapters or online content before class or screencast,
- strategy to make sure that students read the content (i.e. quizzes in ten minutes before class),
- minimize lecture (no more that 20% of class time),
- practice and hands-on-activities (80% of class time),
- student practice more complex levels of skills after having read the chapters or watched the video
- student have the opportunity to ask question in class
- work through problems with the guidance of teachers and the support of their peers, and
- emphasize on collaborative learning.

Each of the three investigators applied the flipped classroom strategy to a course or courses that they were teaching.

Subject Selection Methodology

- The participants consisted of approximately 70 students enrolled in the courses two sections of Adolescent Development.
- Participants were recruited through direct communication between the instructors and students in the class. The participants were involved in class activities January 20, 2014 through February 7, 2014.

Dr. A's Study

- Both groups of students were given pre and posttests over material covered within the indicated time span. Students in both sections covered the same material.
- The first group (control group) was taught utilizing a standard lecture format.
- The second group was taught utilizing a flipped classroom strategy. Post test results are being analyzed to see what effect flipped classroom teaching strategy has on students' learning outcome is nearing completion.

Dr. A's Study

- Their demographics was also recorded to be included in the analysis and interpretation. Data will be analyzed using ANCOVA and Correlation Coefficient Analysis.

Dr. A's Study

- Participants were 36 pre-service undergraduate teacher educators, enrolled in an advanced literacy course at a Midwestern University. There was 1 male and 35 females participants. English was reported as the native language of all participants. The participants' ages ranged from 21-52 years. All 26 participants were Caucasian. All participants were also in their senior year of school.
- Data collection for the study was done during the Spring semester 2014

Dr. B's Study

Research Question:

The focus of this particular study was to examine the effect of the flipped classroom model on students' knowledge application abilities and self-efficacy.

Data:

Every student completed a demographic survey, two self-efficacy surveys (pre/post), participated in a variety of class activities and discussions as well as analyzed a specific case study based on the course material for that week as well as took a summative quiz.

Dr. B's Study

Week 1

- During week 1 of the study students participated in a traditional classroom teaching model which contained a large lecture discussion element for the instructional component, power point slides, individual note taking, and an in class summative quiz all developed around the topic of effective instructional strategies and activities for developing fluent readers and writers.

Week 2

- During week 2 of the study students participated in a flipped classroom model which contained a large collaborative element for the instructional component with various interactive activities like lesson simulations, a jigsaw, group case analysis, and a summative online quiz developed around the topic of effective instructional strategies and activities for building children's word knowledge.

Dr. B's Study

- Participants were sixty pre-service teachers (39 undergraduates, 21 graduates), enrolled in technology integration courses at a Midwestern University. Participants were non-science majors and attending three sections: Section one: 19 undergraduate students, Section two: 20 undergraduate students and section three: 21 graduate students (10 male, 50 female). Students were from four different majors: 32 in early childhood education, 2 in elementary education, 14 in middle-level education, 9 in high school education and 3 other education major such as physical education or speech/theater. English was reported as the native language of all participants. The average reported age of the participants was 22-25 years (SD = 1.415 years). Participants were 53 White, 4 African American, 1 Hispanic and 1 Asian, among them 4 freshmen, 11 sophomores, 23 juniors, and 22 seniors.

Dr. C's Study

Tools to “Flip” your instruction



Professional Content

- YouTube, [Khan Academy](#), [TedTalks](#), [TedEd](#)

Teacher-created Screencasts

- Camtasia (\$\$)
- [Screencast-o-matic](#) (Free!)

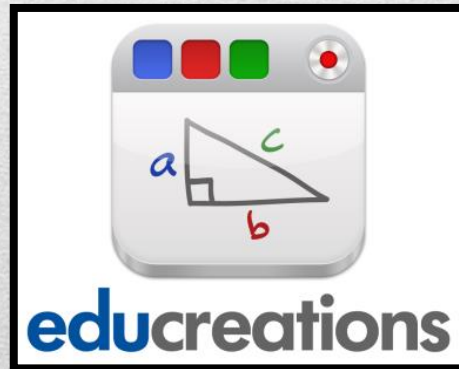
Teacher-created Video

- Camcorder
- Webcam
- iPhone or iPad

Content Creation

Tools to “Flip” your instruction

SCREENCASTOMATIC



References

Goodwin and Miller (2013). Research Says / Evidence on Flipped Classrooms Is Still Coming In. *Technology-Rich Learning* Pages 78-80, 149, March 2013, Volume 70, Number 6. Retrieved from <http://bit.ly/1clfxgX>

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