

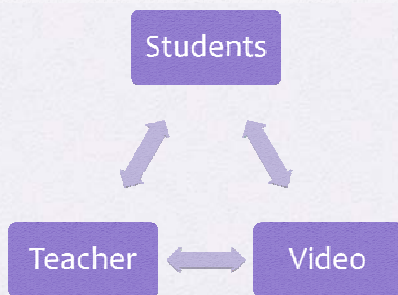
# Instructional Design Theory for Self-directed Learning

Guidelines for using YouTube in the Classroom

## Background

- Instructional Design Theory (IDT) is developed through an Interview Project
- Use a Web 2.0 tool for K-12 Education.
- Identify an expert and investigate a model program of using YouTube in education.
- Research the literature for supporting data.
- Develop guidelines to present the IDT to educators.

## Framework



## Learning Conditions of IDT

- Learners
  - High School
- Content
  - Algebra II
  - Precalculus
- Context
  - Flipped classroom

## The Flipped Classroom Model

- Student Centered Teaching
  - Supports Digital Learning Style
- Delivered over the Internet
  - Available anytime, anywhere a signal is found
- Differentiated Instruction
  - High Flyers
  - Middle level
  - Struggling students

## How the Flipped Classroom Works

- Videos are viewed on student owned and school provided mobile devices. Students may view the videos several times; may view other linked lessons.
- Students work at their own pace. Homework is completed in the classroom with the teacher acting as "the guide on the side."
- Students take quizzes and tests together on the same day.

## Designing the Instruction

- Teachers record video lessons with SMART Boards and Slates that are uploaded to YouTube.
- YouTube videos are embedded in school Moodle.
- Teachers create their own homework lessons, quizzes and tests.
- Students are trained to use technology to watch video lessons before class.
- Students work on homework in class.

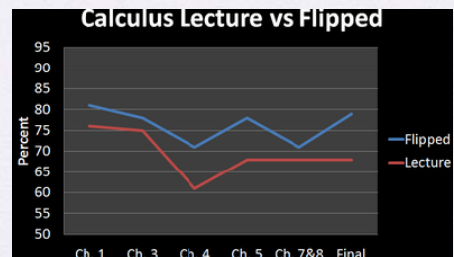
## Prepare Students

- State the purpose of the flipped classroom.
- Demonstrate how to access and use the recorded video lessons.
- Communicate expectations of watching video lessons before coming to class.
- Provide mobile devices for students who do not have their own.

## Revised Instructional Design Theory

- Customize teaching to support state standards.
- Have the technology and professional development to support it.
- Experience improved test scores with continued use.
- Students work together or alone on homework.
- Develop policies and protocols for students to use their own mobile devices at school.
- Collect data on the effectiveness of instruction prior to and after using video lessons.

## Shared Results of Flipped Classroom



## Analyze the Data

- Revise lessons based on analysis of data  
Using the principles of formative research you can adjust your teaching to use video to teach any subject.
- Repeat the data collection and revision cycle  
Create a new educational model to include video lessons to enhance teaching and learning.