Architecture of a MOOC: Flipped Classroom
Technology in Education

- MOOCs are technology intensive
- Designed for ‘Large Scale’ use
- Can we use these technologies in the small?
Opportunity

- Use the recorded lessons in traditional classroom settings
- Student learn part of the curriculum from online lectures
- Blended Learning!
Flipped class room

- One form of blended learning
- Reverse the lectures and ‘homework’ times
- Listen to lectures at home
- Problem solving and discussions in the class
What happens in a Flipped classroom?

- Students view a small number of online lectures at home
- Might take online quizzes to test the leaning
- Can re-run the videos if they have not understood
- Class room is used for discussion, clarification, problem solving, monitoring progress
Essentially

- Exposed to the material at home, instead of class: watch videos, interactive exercises
- Deepen the understanding in the class instead of home: exercises, discussion
- Conceptual understanding / procedural fluency
“Flipped Learning”

“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.”

Flipped learning Network http://www.flippedlearning.org
How does it help?

- Students can watch the videos multiple times
- Every F-to-F class becomes a tutorial
- Students can solve problems together, under guidance
- Instructor knows immediately where the difficulties are
What are the problems?

- Lot of work for the instructor – designing, recording
- New skills needed
- Students may not watch lectures at home
  - Incentives for watching the video
- Internet access needed at home
- Students may want face-to-face lectures
What do you need?

- Tools to record lectures
- Platforms to host lectures, Management
Implications?

• Teachers become facilitators instead of lecturers
• Students no longer passive listeners to a lecture
• Become active participants
• Activities can energize the class and teach new skills like collaboration and cooperative problem solving
Does it work

• Yes
• Georgia Tech, Texas A&M, UBC,….
• As much as 20% improvement in grades
• IITK experiments
  • Students with backlogs
  • Post graduate students
References


The Flipped classroom FAQ [link](http://www.cirtl.net/node/7788)
Thank You