Flipped Classrooms 101—An Introduction to Flipped Learning

Julie Schell

August 20, 2013
This is a basic introduction to flipped classrooms for new or less-experienced flippers.

Intermediate or Advanced flippers - HELP out by responding to participant questions, sharing resources, & sharing your own flippin-ovations in the chat box as much as possible at TodaysMeet - bit.ly/flipit101

This is NOT a training on creating or finding videos, for help with vids check out my quick start guide - bit.ly/makegoodvids

All slides will be available at bit.ly/pearsonflip

Follow me on Twitter @julieschell
Listen

Welcome!
10 minutes ago by Julie Schell

Talk

What's your name?

Join

By submitting this form you agree to the Privacy Policy and Terms.

bit.ly/flipit101

http://today.io/RlfP

transcript | projector | 🌟
Listen

Welcome everyone!
less than a minute ago by Julie Schell

Welcome!
11 minutes ago by Julie Schell

Talk

Message:
Welcome!

Say

bit.ly/flipit101
Education
LundenStallings @livestrong_1

I was having a pretty good night, until I realized I gotta get up for prison in the morning 😛🔫 #ihatesschool
Dear pre-calc, I hate your stinking guts. You make me vomit. You're the scum between my toes. Love me. P.S. send that message to physics too.
I hate the fact that there's school tomorrow. Dead serious right now, I'd rather throw up and sit on it. #ihateschool
Kelly Chen @pianokchen
School is so boring #ihateschool
Expand
Jessie Stockstad @jessiestockstad

Casually sitting in my room staring at the wall cause that's more fun than actually studying #iloveschool
History = there dead dude.
English = dictionary/ google.
Science = not a nerd. Don't need it.
Math = calculator.
#ihateschool #die

Expand
KAILS @kaillleybird

Never learned how to get a loan, buy a house, car, or anything else useful in life, but I DO know the effing pythagorean theorem.
Would be funny...if it wasn’t so heartbreaking.
The number of hours students spend in a system they hate.

10,800
What #hashtag best describes your schooling experience?

#ihateschool
#iloveschool*(really)
#schoolisboring
#schoolisnotpractical
#mixedfeelings
Q. What keeps you up at night?
Q. What keeps you up at night?
A. Nothing.

Q. What keeps you up at night?
A. How do I keep my students engaged in the class?

McNeese State University
Q. What keeps you up at night?

A. Having greater student involvement.

A. How can I motivate the class better? It is my real struggle.

A. How to better connect with students (who are easily distracted...)

Q. What keeps you up at night?

A. How to better connect with students (who are easily distracted...)

Q. What keeps you up at night?

A. How to better connect with students (who are easily distracted...)

Q. What keeps you up at night?
A.

Finding new ways to engage students in class and outside the classroom.

Dominican University
Q. What keeps you up at night?

A. How boring I am & how little will be retained by the student.
Students and teachers want the same thing.
I want you engaged.
I want you engaged.

We want to be engaged!
I want you engaged.

We want to be engaged!
Flipped Classrooms
My goals for this webinar...

This doesn't seem so bad.
My goals for this webinar...

I've been doing this for decades but didn't know it.

This doesn't seem so bad.
My goals for this webinar...

This doesn’t seem so bad.

I’ve been doing this for decades but didn’t know it.

I already do this. I’m going to innovate and help others!
3 essential questions about flipped classrooms
Big ideas about flipped classrooms
What is a flipped classroom?
The Flipped Classroom

Out of Class

BEFORE

Students prepare to participate in class activities

Out of Class

In Class

Students prepare to participate in class activities

BEFORE

The Flipped Classroom

created by Josh Walker
The Flipped Classroom

Out of Class

BEFORE

Students prepare to participate in class activities

In Class

DURING

Students practice applying key concepts with feedback

Out of Class

created by Josh Walker
The Flipped Classroom

Out of Class

Students prepare to participate in class activities

BEFORE

In Class

Students practice applying key concepts with feedback

DURING

Students check their understanding and extend their learning

AFTER

Out of Class

created by Josh Walker
The Flipped Classroom

Out of Class

Before
Students prepare to participate in class activities

Goal

In Class

During
Students practice applying key concepts with feedback

Goal

Out of Class

After
Students check their understanding and extend their learning

Goal

Created by Josh Walker

Always Learning
Myth 1: You must flip your entire class

Big idea: A flipped classroom is an approach that can be implemented gradually or all at once.

- 1 concept
- 1 chapter
- 1 unit
- 1 lab
- 1 course
- 1 school
Myth 2: Flipped classrooms are the latest edutrend.

![Graph showing the number of Google Scholar hits for "flipped classroom" over different years. The graph shows a significant increase in hits starting from 2011-2012, peaking at 363 hits in 2013.](image-url)
Christopher Columbus Langdell, 1890s
School at Athens, Antiquity
Myth 2: Flipped classrooms are the latest edutrend.

- Big idea: Flipped classrooms = new term, old idea.

- 1st modern flipped classroom developed in 1890s
- Eric Mazur, Peer Instruction 1990s
- Seminal publication in 2000 Lage et al.
- Jonathan Bergmann and Aaron Sams, 2007
Myth 3: A flipped class replaces faculty with computers and videos.
Myth 3: A flipped class replaces faculty with computers and videos.

‒ Big idea: Flipped classrooms are not about technology, they are about pedagogy.

• Computers & videos are not needed to flip your class
• Main approach - lift coverage of some content out of the class, privilege content application in-class, find ways to motivate continued learning after class
• Common description: Moves sage on the stage, to guide on the side.
Myth 4: Students without internet or tech will suffer if I flip my class.

Big idea: Flipped classrooms are a “mindset” that directs attention away from the teacher and redirects it to students.*

- Computers & videos are not needed to flip your class
- You can flip your class without the Internet
- Use readings
- Use flash drives
- Loan devices
- Have students read or watch for first 15 mins of class

*Bergmann and Sams, 2012
“Recording lectures and having students view them before class is not an option for me. So I would like more ideas about ways to flip the classroom that do not just involve pre-recorded lectures.”

“Really, record lectures? Sounds like a lot of work. More work than a non-flipped class.”

“Are pre recorded lectures the only option or will posting notes w PPT and questions be as effective?”

“How do I flip my classroom when most of my students don’t have computers at home?”
Why should I flip my classroom?
Myth 5: Flipped classrooms are fads not tied to how people actually learn.
Study these letters, don’t write them down.

J FKFB INAT OUP SNA SAI RS
Study these letters, don’t write them down.
Study these letters, don’t write them down.

JFK FBI NATO UPS NASA IRS
Think of something you know really well, something you are an expert in.

How did you learn that so well?

By doing it! Practicing it! = Application.
Bloom’s Taxonomy

created by Josh Walker
This is the brain... on lecture...
## Bloom’s Taxonomy

<table>
<thead>
<tr>
<th>Traditional Arrangement</th>
<th>In-class</th>
<th>Out-of-class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Design</td>
<td>Remember</td>
<td>Analyze</td>
</tr>
<tr>
<td>Bloom’s Taxonomy</td>
<td>Understand</td>
<td>Evaluate</td>
</tr>
<tr>
<td></td>
<td>Apply</td>
<td>Create</td>
</tr>
</tbody>
</table>

created by Josh Walker
Bloom’s Taxonomy

Inverted “Flipped Classroom” Arrangement

<table>
<thead>
<tr>
<th>Instructional Design</th>
<th>Out-of-class</th>
<th>In-class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloom’s Taxonomy</td>
<td>Remember</td>
<td>Apply</td>
</tr>
<tr>
<td></td>
<td>Understand</td>
<td>Analyze</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create</td>
</tr>
</tbody>
</table>

created by Josh Walker
Q. What keeps you up at night?

A. How to improve the quality of my lectures.

TU Darmstadt
How to lecture on or off line: Chunk it
lecture

0 min - 40 mins
Chunking with Retrieval Practice

<table>
<thead>
<tr>
<th>Test</th>
<th>Test</th>
<th>Test</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>lecture</td>
<td>lecture</td>
<td>lecture</td>
<td>lecture</td>
</tr>
</tbody>
</table>

0 10 20 30 40
Myth 5: Flipped classrooms are fads not tied to how people actually learn.

- Big idea: Flipped classrooms leverage how people learn best.
  - We learn best when we have some prior content knowledge
  - We learn best when we apply our content knowledge
  - Flipped classrooms help develop higher-order thinking skills in students by privileging application in class
  - We learn best from direct instruction when content is chunked
  - If you want students to remember, give them lots of practice with retrieving
Myth 6: Flipped classrooms are a cure all.

- Big idea: Flipped classrooms take time, effort, and iteration - but doesn’t all good teaching?
  - Time investment is up front, saves time and is more efficient over time
  - Takes a few iterations to implement effectively
  - Some students will still fail to reach their highest potential
  - Save time by using other people’s videos / readings
  - Find a co-flipper or a mentor at Flipped Learning Network
Myth 7: Flipped classrooms aren’t supported by research.

Big idea: 20+ years of research

blog.peerinstruction.net

- New implementations have less research
- Case example: Just-in-Time Teaching & Peer Instruction
- Using JITT: First exposure to content happens before class through readings and questions
- Instructors analyze feedback on student understanding before class
- Peer Instruction in class-time spent eliciting confronting and resolving student misconceptions
- Peer Instruction - GOOD FOR BIG CLASSES!
Why should I flip if it is going to take time & energy I don’t have?

“Engaging students and making content relevant and interesting. Also, how not to be "talking at" students and just presenting content. I want to develop deeper thinking and learning skills for my students.”

bit.ly / flipit101

“How can I present material in a way that it stays with the student?”

“How to get my students to dig deeper to obtain more than just a surface understanding of the material.”

“Wondering how to make the material more applicable, and present it in a more engaging way.”
How do I flip my class?
Myth 8: Students will love not having lecture in class.
“Lecture is a comfort blanket for students.”
Myth 8: Students will love not having lecture in class.

Big idea: Lecture is a comfort blanket for students.

- Students may resist flipped learning
- Lecture a little every class period
- Don’t called it a “flipped” classroom
- Don’t call it an experiment
- Make sure frequent assessments cover what they do outside of class
Myth 9: Students will not do pre-class work.

- Big idea: If you assess it, they will come.
Just-in-Time Teaching

- Pre-class assignment
- assessment
- review responses
- address difficulties in class

2 conceptual questions
1 feedback question

What do you find most difficult or confusing about this concept?

blog.peerinstruction.net
Just-in-Time Teaching

% of students (n=28) completing reading assignment (n=26)
Just-in-Time Teaching

% of students (n=28) reading assignment engagement (n=26)
Peer Instruction

address difficulties in class

question

think

respond

discuss

explain

blog.peerinstruction.net
Myth 9: Students will not do pre-class work.

- Big idea: If you assess it, they will come.

- Use JiTT with readings, observations, videos
- Give frequent quizzes in class
- Post students’ questions in class
- Make sure formal assessments cover what they have learned out of class
- Don’t forget to follow up with “after” activities
Myth 10: There is one right way to flip a class.

Big idea: There are many ways to flip a class, and no one right way.

- Bergmann and Sams, Flip 101 - Flip Mastery
- Eric Mazur, JiTT and Peer Instruction
- Case Study Method
- Project-based learning
- Classroom-response systems / clickers
- Inquiry Learning
- Discovery Learning
- Team-based learning
FLIP in 4 easy steps

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F</strong></td>
<td>Find a concept to flip</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>Lift coverage / first exposure out of class</td>
</tr>
<tr>
<td><strong>I</strong></td>
<td>Incentivize out of class work</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>Privilege application activities in class</td>
</tr>
</tbody>
</table>

*Inspired by Josh Walker, Center for Teaching and Learning UT Austin*
How have you already flipped?

“Using case studies that students work thru prior to meeting for a case review/discussion.”

“They have reading materials before the lecture.”

“I’ve been requiring a lot more outside reading prior to coming into class and then having a pre-class quiz based on the reading.”

“Pre-recorded lectures for students to view online prior to live classroom where we discuss cases posed?”

“Ask student to read prepared documents at home and use class time for practice and solving problems.”

“In some classes (for example labs) I have the students watch short "how to" videos prior to class so they have a better idea of what to expect when they get to class and we can spend more time on other aspects of the lab.”

“I use an article about Katrina and the healthcare that followed for ethics class discussion.”
Big ideas about flipped classrooms
<table>
<thead>
<tr>
<th></th>
<th>You can flip one concept or 10.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Flipped classrooms = new name, old concept.</td>
</tr>
<tr>
<td>3</td>
<td>Flipped classrooms are about pedagogy not technology.</td>
</tr>
<tr>
<td>4</td>
<td>Flipped classrooms are a mindset that puts attention on students.</td>
</tr>
<tr>
<td>5</td>
<td>Flipped classrooms align with how people learn best.</td>
</tr>
<tr>
<td>6</td>
<td>Flipping classrooms well takes time and effort.</td>
</tr>
<tr>
<td>7</td>
<td>20+ years of research supports flipped approaches to teaching.</td>
</tr>
<tr>
<td>8</td>
<td>Lecture is a comfort blanket for students, lecture a little.</td>
</tr>
<tr>
<td>9</td>
<td>If you assess pre-class work, most will do it.</td>
</tr>
<tr>
<td>10</td>
<td>There are many ways to flip a class and no one right way.</td>
</tr>
</tbody>
</table>
“I’d like to know tips for the first day of class so that I can set my students up for success.”

“What are some do and do nots for flipped classrooms?”

- Do show them, live, how to read out of class work or how to watch a video, where you would pause, where you would take notes, where you would look something up.
- Don’t call it a “flipped classroom”
- Don’t call it an experiment
- Do plan on multiple iterations
- Don’t forget the “After” part of a flipped class - exit tickets, one minute papers, mystery boxes!
- Do check out blog.peerinstruction.net for tons of additional tips
Tyson_Awesome @tegrinse614

today I developed my own proof for *pythagorean*'s theorem. woooo yeah baby #genius
blog.peerinstruction.net
Join the FLN’s Ning!
For More Information

Pearson Contact: **Bonnie Skloss**

Bonnie.skloss@pearson.com

830-745-2400

Find about about our September ELA Webinars at:

www.pearsonpd.com/thoughtleadership
Acknowledgements

PEOPLE
Eric Mazur
James Fraser
Ives Araujo
Cassandre Alvarado
Brian Lukoff
Jen Ebbeler
Carol Dweck
Dan Meyer
Nancy Duarte
Chip and Dan Heath

BOOKS
Flip Your Classroom
Slide:Ology
Made to Stick
Why Students Don’t Like School

www.julieschell.com
@julieschell