Are You Flipping Out or Flipping In?: The How's, Why's, and What's of the Flipped Classroom Model

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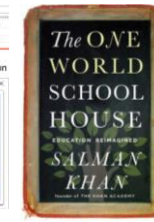
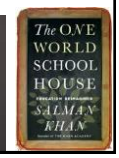
Learning is More Flipped

One Man, One Computer, 10 Million Students: How Khan Academy Is Reinventing Education,
Forbes, November 19, 2013, Michael Noer
http://www.forbes.com/sites/michaelnoer/2012/11/02/one-man-one-computer-10-million-students-how-khan-academy-is-reinventing-education/
The One World Schoolhouse (Twelve, Oct. 2, 2012)



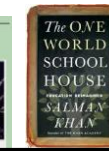
Salmon Khan (2012). The One World Schoolhouse

"The old classroom model simply doesn't fit our changing needs. It's a fundamentally passive way of learning, while the world requires more and more *active* processing of information."



Salmon Khan (2012). The One World Schoolhouse

He explains that if students have consumed learning content before class, "teachers can then carve out face time with individual students who are struggling; they can move away from rote lecturing and into the higher tasks of mentoring, inspiring, and providing perspective."



Reusable Khan

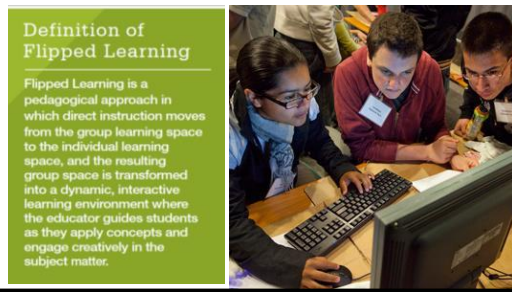
Lacking Teachers and Textbooks, India's Schools Turn to Khan Academy to Survive, NY Times, Anupama Chandrasekaran, Oct. 15, 2012
http://india.blogs.nytimes.com/2012/10/15/lacking-teachers-and-textbooks-indias-schools-turn-to-khan-academy-to-survive/

The New York Times | International Herald Tribune

Students at Sree Karpagavalli Vidhyalaya school in Chennai, Tamil Nadu, watching Khan Academy math videos.

The Flipped Classroom

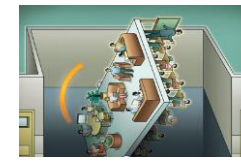
March 12, 2014
The Flipped Learning Network
http://www.flippedlearning.org/definition



What is Flipped Classroom?

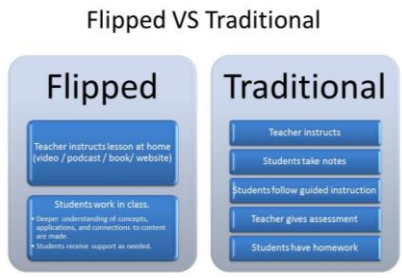
- **A model of learning that rearranges how time is spent both in and out of class to shift the ownership of learning from the educators to the students (The NMC horizon report, 2014).**
- **The Flipped Classroom inverts teaching methods, delivering instruction online outside of class and moving homework into the classroom.**

- **Students watch online lectures at home at their own pace, communicating with peers and teachers via online discussion.**



Source: Demski, J. (2013), Illustration by Peter Hoey

Freddie Diaz-Batista, Flipped Learning
February 14, 2014, E-learning Blog
http://freddiediazbatista.com/main/



Digital distraction in the classroom
July 11, 2012 by Stephanie Chasteen, The Active Class
http://theactiveclass.com/category/uncategorized/

Digital distraction in the classroom
July 11, 2012 by Stephanie Chasteen, The Active Class
http://theactiveclass.com/category/uncategorized/

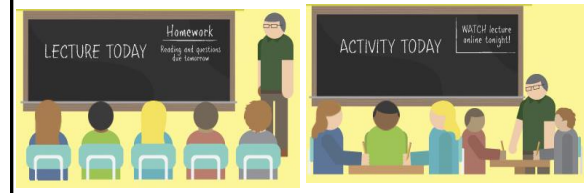
At home → In class

Students watch videos or screencasts

Instructor works with students on hands-on and face-to-face work
"Guide on the Side"

Teacher's role

Traditional Classroom | **Flipped Classroom**



SAGE in the stage | **GUIDE on the side**

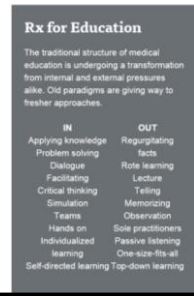
Source: Jeremy F. Strayer, Ohio State University, Flipped Class Conference 2011 (KNEWTON)

Flattened Classrooms and Learning Studios

Adjusting the Prescription: The School of Medicine overhauls its century-old educational approach.

Maura Singleton, February 2011, University of Virginia

http://uvamagazine.org/articles/adjusting_the_prescription/



Rx for Education

The traditional structure of medical education is undergoing a transformation from internal and external pressures alike. Old paradigms are giving way to fresher approaches.

IN	OUT
Applying knowledge	Regurgitating facts
Problem solving	Rote learning
Dialogue	Lecture
Facilitating	Telling
Critical thinking	Memorizing
Simulation	Observation
Teams	Sole practitioners
Hands on	Passive listening
Individualized learning	One-size-fits-all
Self-directed learning	Top-down learning

Flattened Classrooms and Learning Studios

Adjusting the Prescription: The School of Medicine overhauls its century-old educational approach.

Maura Singleton, February 2011, University of Virginia

http://uvamagazine.org/articles/adjusting_the_prescription/

The Learning Studio: First-year medical students work in teams in the learning studio, a radical departure from the lecture hall. "One of the goals of this whole model—of having students do a lot of the learning themselves rather than passively listening—is that they need to be lifelong learners," says Randolph Canterbury, senior associate dean for education. (called the "flattened classroom")

April 30, 2014

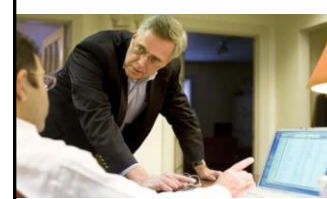
Flipped learning skepticism: Can students really learn on their own?,

Robert Talbert, Chronicle of Higher Education

http://chronicle.com/blognetwork/castingoutnines/2014/04/30/flipped-learning-skepticism-can-students-really-learn-on-their-own/

"Unfortunately this is a common misconception about the flipped classroom: That it's "learning on your own" without *any* guidance or support from an instructor… A misconception about the flipped classroom itself, that it is a pedagogy of abandonment, where students are loaded up with books and videos but then left to fend for themselves."

Instructor as Counselor



Instructor as Consultant

Instructor as Curator

Instructor as Concierge

March 12, 2014

The Flipped Learning Network

http://www.flippedlearning.org/definition

April 1, 2014

Toward a common definition of "flipped learning", Robert Talbert, Chronicle of HE

http://chronicle.com/blognetwork/castingoutnines/2014/04/01/toward-a-common-definition-of-flipped-learning/

Four pillars:

Flexible environment (various modes of learning)

Learning culture (student-centered inquiry)

Intentional content (direct instruction b4 class)

Professional educator (reflective and accessible; collaborates and perfects one's craft)

Flexible Environment

F.1	☐ I establish spaces and time frames that permit students to interact and reflect on their learning as needed.
F.2	☐ I continually observe and monitor students to make adjustments as appropriate.
F.3	☐ I provide students with different ways to learn content and demonstrate mastery.

Learning Culture

L.1	☐ I give students opportunities to engage in meaningful activities without the teacher being central.
L.2	☐ I scaffold these activities and make them accessible to all students through differentiation and feedback.

Audience Polling Q#1: How get learners to do the work before class?

- **Model it**
- **Points awarded**
- **Test on it, email back 2-3 answers**
- **Make it an expected part of the community**
- **What else?**

Audience Polling Q#2: How else motivate to flip?

- **Grade their prework**
- **Inspire**
- **Share the purpose, rationale, objectives**
- **Use it**
- **Bring back former students for testimonials**
- **Build on it (not a one-off activity)**

6 Expert Tips for Flipping

1. Use existing technology to ease faculty and students into a flipped mindset.
2. Be up front with your expectations.
3. Step aside and allow students to learn from each other.
4. Assess students' understanding of pre-class assignments to make the best use of class time.
5. Set a specific target for the flip.
6. Build assessments that complement the flipped model.

Source: Jennifer Demski, Campus Technology, 23 January 2013

May 13, 2014
Exploring the Fringe: Flipping, Microcredentials, and MOOCs
Jeff Cobb and Celisa Steele, Tagoras
http://www.tagoras.com/2014/05/13/flipped-learning-microcredentials-moocs/

May Require:
- More time and effort to prepare.
- Resource investments.
- Prepared learners.
- A different instructional philosophy.
- Active participation.

May 13, 2014
Exploring the Fringe: Flipping, Microcredentials, and MOOCs
Jeff Cobb and Celisa Steele, Tagoras
http://www.tagoras.com/2014/05/13/flipped-learning-microcredentials-moocs/

Class time spent:
- Problem solving activities;
- Case studies;
- Facilitated discussion;
- Other.

Freddie Diaz-Batista, Flipped Learning, February 14, 2014, E-learning Blog
http://freddiediazbatista.com/main/

"One of the big mistakes we made when we pioneered this model is that we focused too much on video. We now like to use the term "learning object" when we talk about the flipped classroom. A learning object can include videos, but it also can be resources such as online simulations, books, and periodicals."

May 13, 2014
Exploring the Fringe: Flipping, Microcredentials, and MOOCs
Jeff Cobb and Celisa Steele, Tagoras
http://www.tagoras.com/2014/05/13/flipped-learning-microcredentials-moocs/

Flipped Content Includes:
- Video captured from conferences.
- Webinar recordings.
- Brief audio or video interviews.
- Screen recordings.
- Various publications.

The Flipped Classroom Enables Personalized Learning
Microsoft Educator Network
http://www.pil-network.com/HotTopics/personalizedlearning/flipped-classroom-enables-personalized-learning#comments

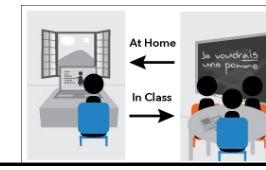
Aaron Sams and John Bergmann's book Flip Your Class: Reach Every Student in Every Class Every Day; "15 Reasons To Flip Your Classroom" speak to personalized learning:
- Helps struggling students
- Increases instructor-learner interaction
- Allows for different learning rates or speeds

Teaching for Tomorrow: Flipped Learning (2:52)
https://www.youtube.com/watch?v=4a7NbUIr_iQ

The Flipped Classroom (2:14)
https://www.youtube.com/watch?v=2H4RkudFzlc

Why is flipping significant?

1. Students can watch, rewind, and fast-forward.
2. Stop and reflect.
3. Devote class time to application of concepts.
4. Better opportunity to detect errors in thinking.
5. Encourage social interaction and peer support.



Digital distraction in the classroom

July 11, 2012 by Stephanie Chasteen, The Active Class
http://theactiveclass.com/category/uncategorized/

"I no longer go to work to 'perform' five times a day; instead, I look forward to going [to class] and interacting with my students all day," says high school teacher Jonathan Bergmann…In the flipped class, instructors create video podcasts for students to watch — either of lectures, or solving a problem, or demonstrations — and post those for the students to watch at home.

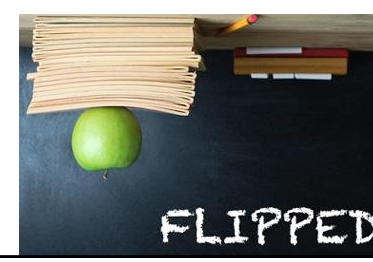
Happening in College Too!

The Washington Post, Nick Anderson, March 11, 2013
http://www.washingtonpost.com/local/education/more-classroom-flipping-in-colleges/2013/03/11/0c425758-8a7f-11e2-98d9-2012c1cd8d1e_story.html

My First Attempt to Flip

- Ask students to watch weekly lectures.
- Reflect on key concepts.
- Instructors helps moderate it.

Flipped Classroom Research



February 5, 2014

Lessons Learned from 1,125 Flipped Classrooms

It's been 40 years since the Army first experimented with competency-based learning, Peter D. Lenn

https://www.edsurge.com/n/2014-02-05-lessons-learned-from-1-125-flipped-classrooms

The solution they decided to test was what we now call the "flipped classroom". After initial successes, the Army opened 1125 learning centers in every combat arms battalion worldwide. They also converted Advanced Individual Training schools to the flipped model. The result was the army was able to train over 500,000 soldiers for highly technical jobs with 85% reaching A-level competence in 40% less time than the prior conventional courses.

February 12, 2014

DODDS-Europe teachers find success with 'flipped classroom' approach

Stars and Stripes, Jennifer H. Swan

KAISERSLAUTERN, Germany

http://www.stripes.com/news/dodds-europe-teachers-find-success-with-flipped-classroom-approach-1.266254

Tried PBL and Cooperative Learning but students not coming to class prepared.

After the first year of flipping math…

- **Traditional Approach: 77 D's and F's out of 265 students (2010-2011).**
- **Flipped: 29 D's and F's (2011-2012.)**

Influences on cooperation, innovation and task orientation

Strayer, J. F. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research, 15*(2), 171-193.

Compares learning environments of an inverted introductory statistics and traditional introductory statistics classes at the same university.

- **Less satisfied with the structure of flipped classroom than the traditional one,**
- **More comfortable and open to cooperative learning and innovative teaching techniques.**
- **The stability and connectedness of classroom learning communities higher.**

How to embed inquiry and design projects

Warter-Perez, N., & Dong, J. (2012). Flipping the classroom: How to embed inquiry and design projects into a digital engineering lecture. In *Proceedings of the 2012 ASEE PSW Section Conference*.

Faculty at California State University flipped one introduction to Digital Engineering course with the goal:

1. **Increasing quality of learning for collaborative PBL.**
2. **Address the prevalence of passive learning in engineering classroom and limited professor-student interaction in the large-scale classroom.**

Findings: Flipped was effective in general, especially:

1. **Improving understanding of course materials**
2. **Developing design skills.**

Inverted classroom model in engineering statistics

Papadapoulos, C., & Roman, A. S. (2010). Implementing an inverted classroom model in engineering statistics: Initial results. *American Society for Engineering Statistics.*

Flipped engineering statistics. Findings:

1. **Students more cooperative each other**
2. **Progressed faster thru learning materials;**
3. **Greater depth of understanding.**
4. **The student test scores higher than those in the traditional learning environment.**

May 21, 2014

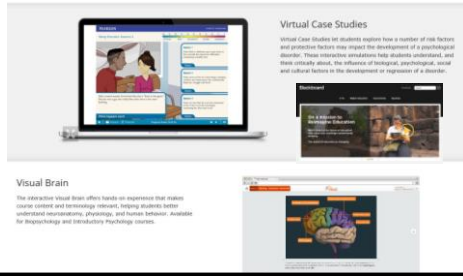
Missouri State U Improves Learning Outcomes With Flipped Course, Leila Meyer

http://campustechnology.com/Articles/2014/05/21/Missouri-State-U-Improves-Learning-Outcomes-with-Flipped-Classroom.aspx?p=1 .

Introductory Psychology (changed fall 2012).
Old Version = 30 percent improvement.
Flipped Class = 76 percent improvement
DFW rate from 24 percent to 18 percent

"and this is a much more rigorous course now" said Hudson. "When you think about it in terms of dollars and retention, that's pretty significant."

May 21, 2014
MyPyschLab from Pearson



April 21, 2014
Microflipping:
a Modest Twist on the 'Flipped' Classroom
Chronicle of Higher Education, Sam Buemi
http://chronicle.com/article/Microflipping-a-Modest-Twist/145951/

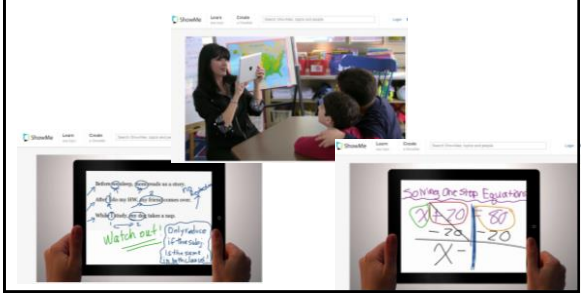
Microflipping includes:
- **Lecture of 5 minutes maximum;**
- **Clickers, mobile apps, videos, activities, conversation, etc.;**
- **Constant balance between lecture and activity is by creating a script that outlines what content and activities I will be covering during class, and which technological tools I'll be using.**

How to Create…?
I Flip, You Flip, We All Flip: Setting Up a Flipped Classroom
(Video: 24:09)
https://www.youtube.com/watch?v=ZRvmjjeZ9CA

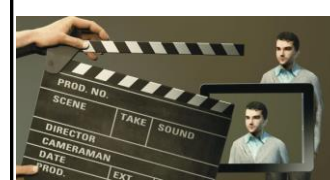

How to Create…?
Creating videos for flipped learning, eSchool News
http://www.eschoolnews.com/2013/09/09/educators-video-flipped-008/2/?ast=123&astc=11015
Joe Zisk: http://teacheronline.us/screencapture/

- **Screencasting software for iPads includes:**
  - **Replay Note ($4.99), Explain Everything ($2.99), Screenchomp (free), and ShowMe (free).**
- **Screencasting software for a laptop or desktop includes:**
  - **Jing (free), Snagit ($29.95), Screencast-o-matic (free), Camtasia Studio ($179), Camtasia for Mac ($75 for a single educator license), and aTube Catcher (free).**

Lessons on iPad
(i.e., Flip the class)
(e.g., ShowMe: http://www.showme.com/)



April 21, 2014 (6:52 video)
Multimedia Assignments: Not Just for Film Majors Anymore (student and instructor produced videos)
Chronicle of Higher Education, Danny Ledonne
http://chronicle.com/article/Multimedia-Assignments-Not/145939/?cid=at&utm_source=at&utm_medium=en



May 18, 2014

Harvard goes all in for online courses

The stress is on production values, props, and, yes, scholarship

The Boston Globe, Marcella Bombardieri

https://www.bostonglobe.com/metro/2014/05/17/behind-harvard-explosion-online-classes-flurry-lights-camera-action/BybPhkyfX59D9a7icmHzSM/story.html

Laurel Thatcher Ulrich, a Harvard historian, was filmed in the HarvardX studio for her class, "Tangible Things."

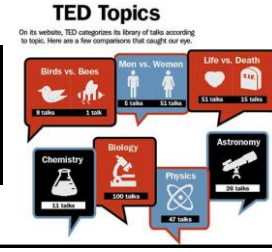
April 14, 2014

The New Academic Celebrity

Why a different kind of scholar—and idea—hits big today,

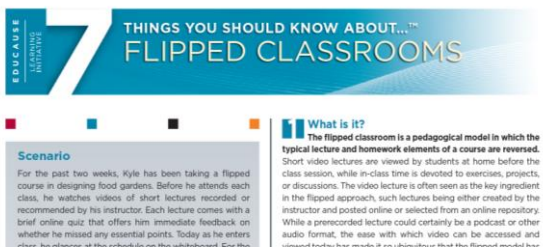
Chronicle of Higher Education, Christopher Shea

http://chronicle.com/article/The-New-Academic-Celebrity/145845/?cid=at&utm_source=at&utm_medium=en



EDUCAUSE
7 Things You Should Know About… Flipped Classrooms

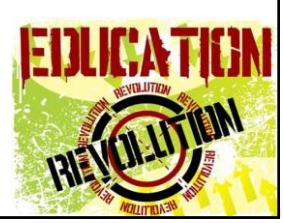
https://net.educause.edu/ir/library/pdf/ELI7081.pdf



Next Steps for you…
And Next Steps for me…

Audience Poll Q#3:
But is this a revolution?

A. Yes
B. Maybe
C. No



Slides at: TrainingShare.com
Papers: PublicationShare.com
Free book: http://tec-variety.com/
cjbonk@indiana.edu

Questions, Comments, Share Ideas
(Will Work, might work, won't work)