FLIPPED EDUCATION

Dr. Vadim Zaytsev
Universiteit van Amsterdam
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Introduction

- Vadim Zaytsev
- aka @grammarware
- teaches at UvA
- worked at CWI (Amsterdam)
- worked at Uni Koblenz (Germany)
- studied at VU (Amsterdam), UTwente (Enschede), ...
- software language engineer
Classic education
Classic education
Flipped education
Freedom in flipped
Flipped education

- Lecture element & homework element are reversed
- “Sage on the stage” => “guide on the side”
- Lectures are pre-recorded & made available
- Known since 199x, popular in 201x
- Claimed better use of class time
- Not a silver bullet

7 Things You Should Know About the Flipped Classroom (EDUCAUSE, 2012, CC-BY-NC-ND)
## Classic education

<table>
<thead>
<tr>
<th></th>
<th>Students</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before class</strong></td>
<td>Homework (reading §§)</td>
<td>“Homework” (prep)</td>
</tr>
<tr>
<td><strong>In classroom</strong></td>
<td>No idea</td>
<td>Assume usability</td>
</tr>
<tr>
<td><strong>During class</strong></td>
<td>Follow</td>
<td>Get through</td>
</tr>
<tr>
<td><strong>After class</strong></td>
<td>Homework (assignments)</td>
<td>“Homework” (grading)</td>
</tr>
<tr>
<td><strong>Away</strong></td>
<td>Request confirmation</td>
<td>Repeat</td>
</tr>
</tbody>
</table>

**WHAT is the Flipped Classroom?** (University of Texas at Austin)
### Flipped education

<table>
<thead>
<tr>
<th></th>
<th>Students</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before class</strong></td>
<td>Learn &amp; answer questions</td>
<td>“Homework” (prep)</td>
</tr>
<tr>
<td><strong>In classroom</strong></td>
<td>Specific questions</td>
<td>Anticipate questions</td>
</tr>
<tr>
<td><strong>During class</strong></td>
<td>Practice skills being learnt</td>
<td>Guide with feedback</td>
</tr>
<tr>
<td><strong>After class</strong></td>
<td>Continue to practice</td>
<td>Post additional info</td>
</tr>
<tr>
<td><strong>Away</strong></td>
<td>Seek help when needed</td>
<td>Continue to guide</td>
</tr>
</tbody>
</table>

**WHAT is the Flipped Classroom?** (University of Texas at Austin)
Usually vs. flipped

- Usually in class (at home when flipped)
- Lectures
- Exams
- Usually at home (in class when flipped)
- application
Consequences [1/5]

- Better utilisation of teachers?
- one to one interaction
- Better pacing of the learning process
- students decide on their own
- never progress without mastery

Consequences [2/5]

- Solves the absentees problem (kinda)
- sick/away/resting => miss nothing
- provides lots of data for improvement
- diagnostic possible
- teachers can improve courses

Consequences [3/5]

- Restructured material
  - typically one video is 5-15 min long
- Enables other sources of info
  - friends, parents, interwebz
- Increases “screen time”
  - watching is lecture is HCI

Consequences [4/5]

- Uncontrolled environment
- many flipped courses => hours of videos every day!
- some have more/better hardware
- suboptimal conditions

Consequences [5/5]

- Lots of work!
- no time for prep?
- unmotivated students?
- underqualified teachers?

Results

**BEFORE THE FLIP**

- +50% of freshmen failed English
- 44% of freshmen failed math

**AFTER THE FLIP**

- 19% of freshmen failed English
- 13% of freshmen failed math

**736 discipline cases in one semester**

**249 discipline cases in one semester**

KNEWTON, The Flipped Classroom (made from other sources)
Summary

- Classwork / homework flipped
- Teachers provide videos, tests, feedback
- Theory is learnt at home
- Application is learnt in the class
- Works if everybody is motivated/smart
Places to know

Khan Academy
Udemy
Udacity
Coursera
YouTube
Vimeo
Slideshare
Screenr
Camtasia:mac
Tegrity
Panopty
Wikispaces Classroom
How to flip YOUR classroom

- Where this makes sense for your course
- Spend class time on feedback
- Clarify connections classwork/homework
- Adapt your materials
- Extend learning beyond class

Flip Quick-start Guide (University of Texas at Austin)
Further reading


- J.Bergmann, A.Sams (2012). Flip your classroom: Reach every student in every class every day.

- D.Berrett (2012). How flipping the classroom can improve the traditional lecture.


- Sources?
  - given on the bottom of each slide

- Slides?
  - http://grammarware.net/talks/#EFD2014

- Fonts?

- Questions?