

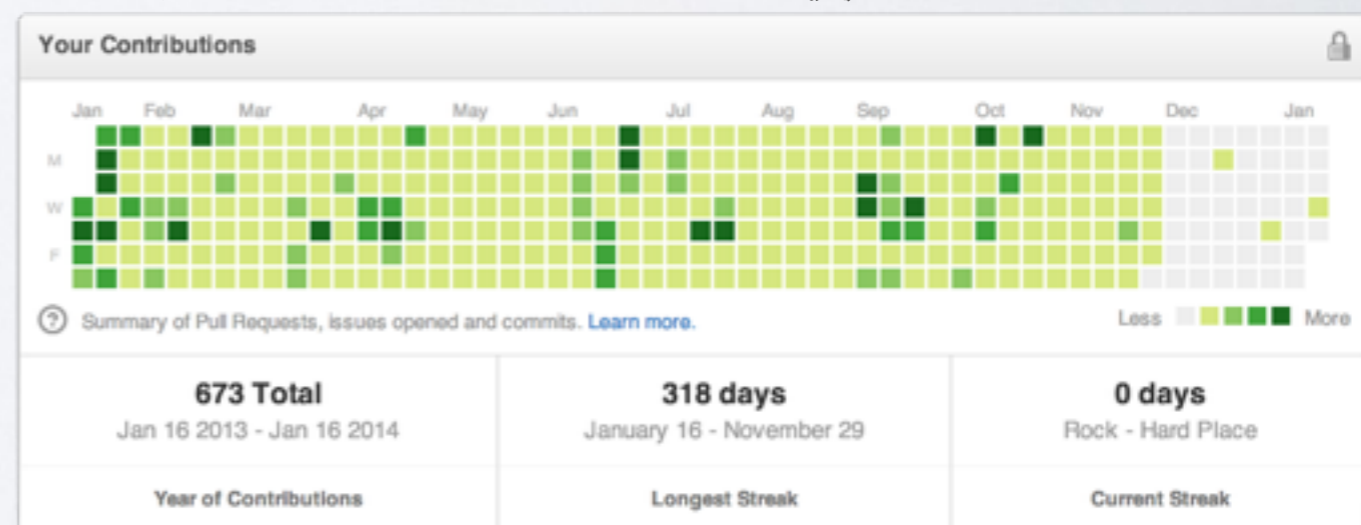
FLIPPED EDUCATION

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Universiteit van Amsterdam
Education Freedom Day, 19 January 2014
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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



Ikiwaner, Gambian classroom, 2008. CC-BY-SA.

Classic education



Flipped education



Onderwijsgek, [Empty classroom](#), 2011. CC-BY-SA.

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 1990s, popular in 2010s
- Claimed better use of class time
- Not a silver bullet

Classic education

	Students	Instructor
Before class	Homework (reading §§)	“Homework” (prep)
In classroom	No idea	Assume usability
During class	Follow	Get through
After class	Homework (assignments)	“Homework” (grading)
Away	Request confirmation	Repeat

Flipped education

	Students	Instructor
Before class	Learn & answer questions	“Homework” (prep)
In classroom	Specific questions	Anticipate questions
During class	Practice skills being learnt	Guide with feedback
After class	Continue to practice	Post additional info
Away	Seek help when needed	Continue to guide

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]

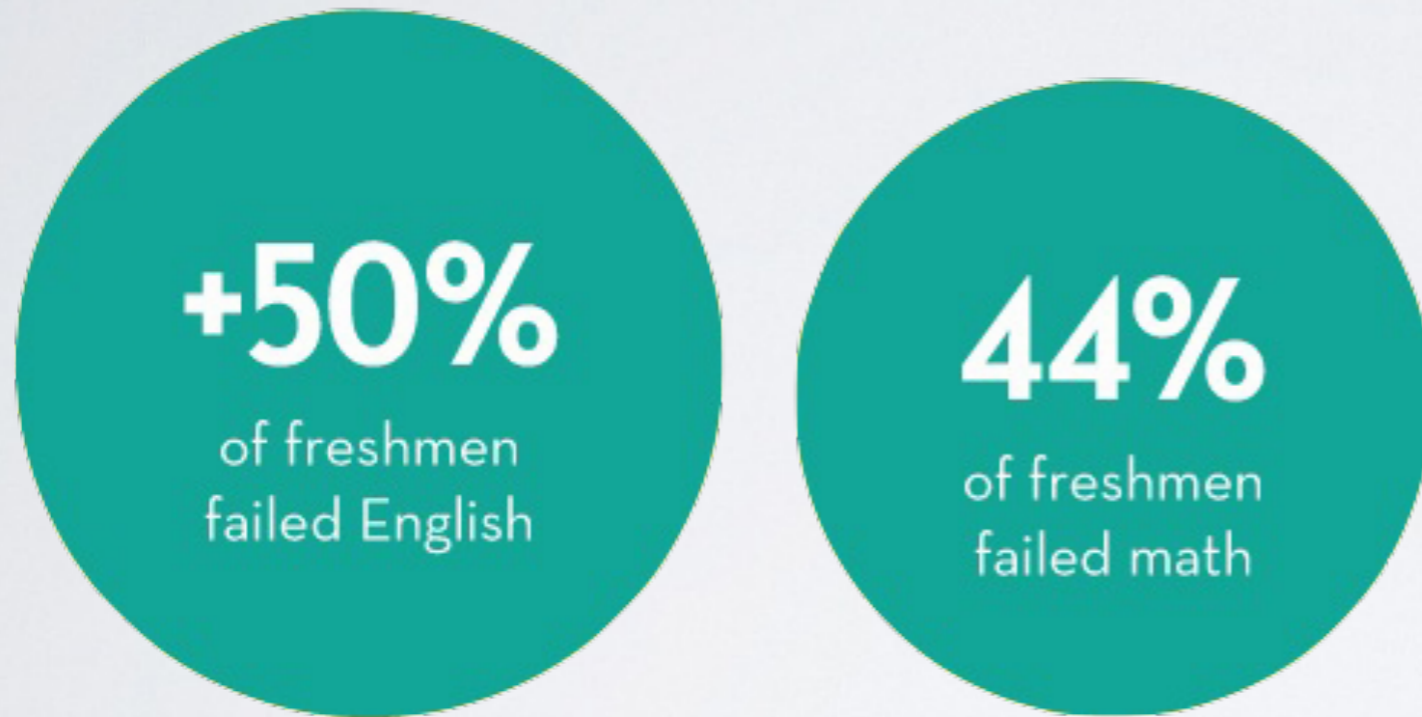
- Uncontrolled environment
- many flipped courses => hours of videos every day!
- some have more/better hardware
- suboptimal conditions

Consequences [5/5]

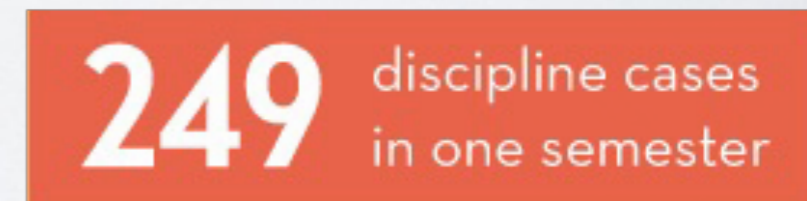
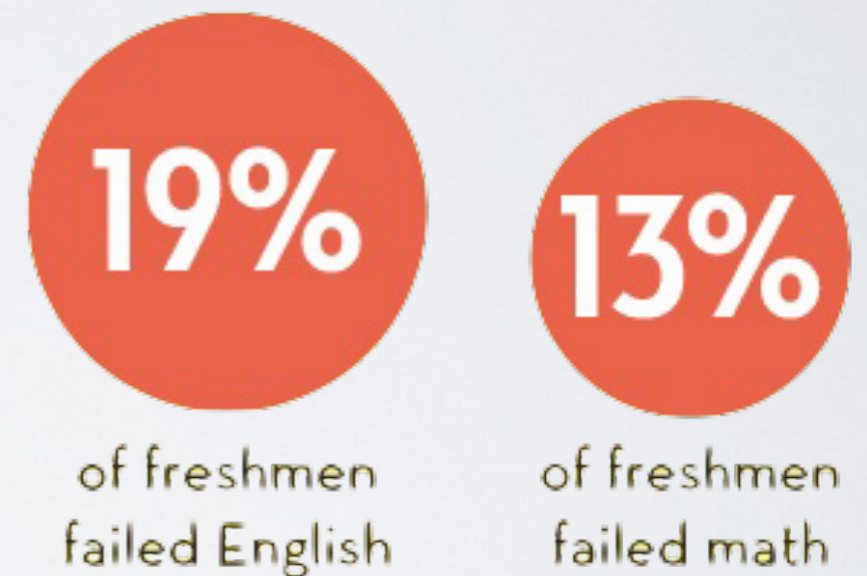
- Lots of work!
- no time for prep?
- unmotivated students?
- underqualified teachers?

Results

BEFORE THE FLIP

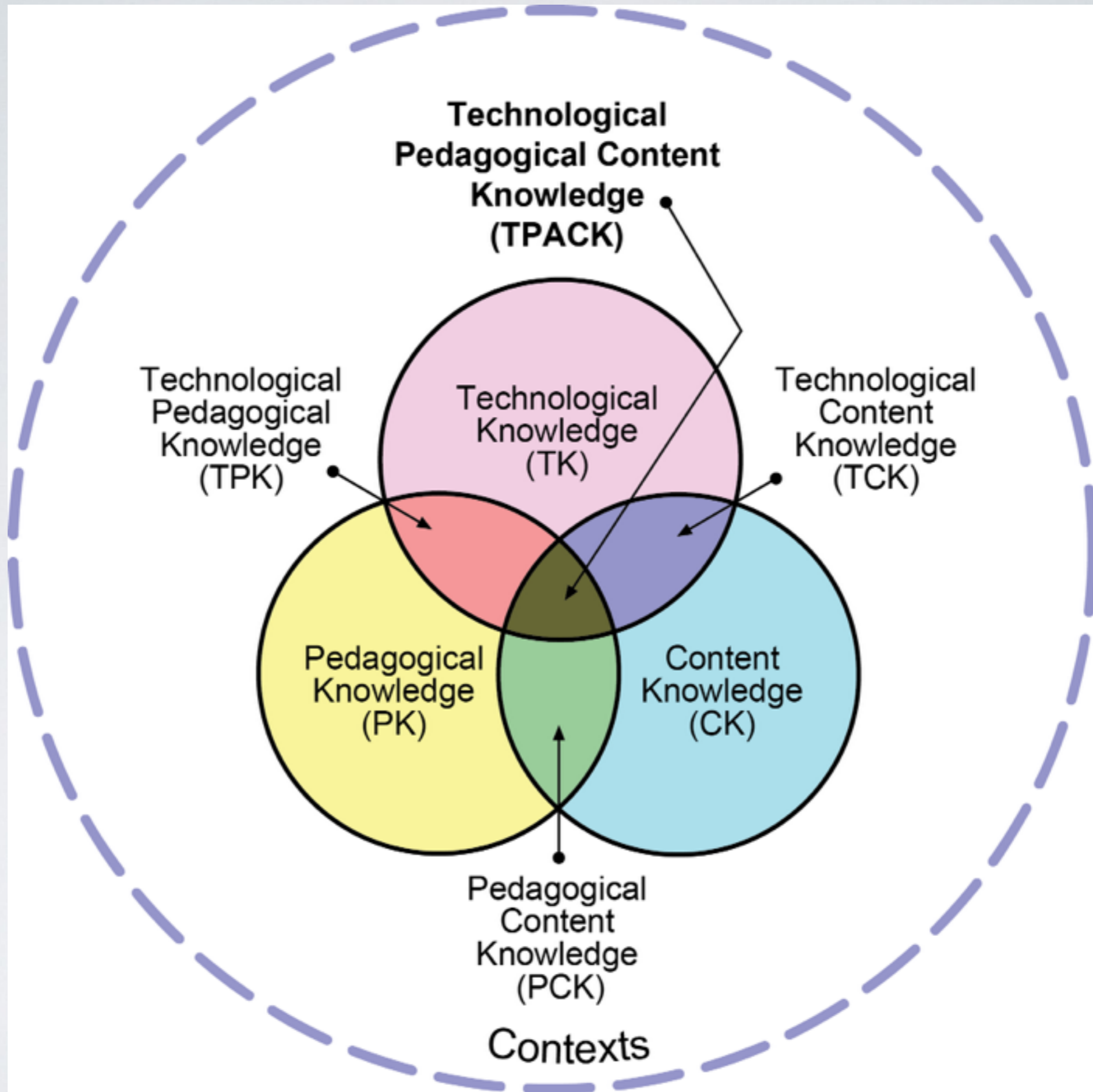


AFTER THE FLIP



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



UDACITY

courseera



vimeo



screenrSM

Camtasia[®]:mac

tegrity

PAN▶**PTO**

 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

Further reading

- A.Kohn (2006). The Homework Myth: Why Our Kids Get Too Much of a Bad Thing.
- 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.
- R.R.Hake (1998). Interactive engagement vs. traditional methods: A six-thousand student survey of mechanics test data for introductory physics courses.
- S.Zappe, R.Leicht, J.Messner, T.Litzinger, H.W.Lee (2009). Flipping the Classroom to Explore Active Learning in a Large Undergraduate Course.

- Sources?

- given on the bottom of each slide

- Slides?

- <http://grammarware.net/talks/#EFD2014>

- Fonts?

- Avidira — George Douros, Unicode Fonts for Ancient Scripts, 2009.

- Finger Paint — Ralph Oliver du Carrois, 2013.

- Questions?