


More than Video: Using Innovative Pedagogies to Flip your Classroom



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THE UNIVERSITY OF
TEXAS
— AT AUSTIN —

Julie Schell
Director, OnRamps and Strategic Initiatives
Center for Teaching and Learning
onramps.org

February 20, 2014
New York, NY



I



Education



I



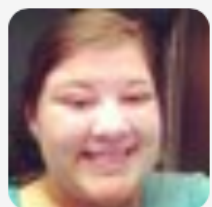
Education



I



Education

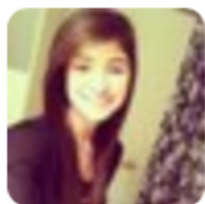


brianna girlie @bripaigegirlie

33 mins

I hate school. lhateschool. I HATE school. I h8 school. I hate skool.
lh8skool. I. hate. school. Eye h8 skool. I HATE SCHOOL. **#ihateschool**

Expand  Reply  Retweet  Favorite  More



LundenStallings @livestrong_1

Feb 25

I was having a pretty good night, until I realized i gotta get up for prison in the morning 😊🔫 **#ihateschool**

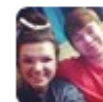
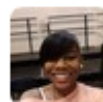
Collapse ↩ Reply ↻ Retweet ★ Favorite ⋮ More

11

RETWEETS

3

FAVORITES





Kaylee Krepps @kay_lay13

Fel

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

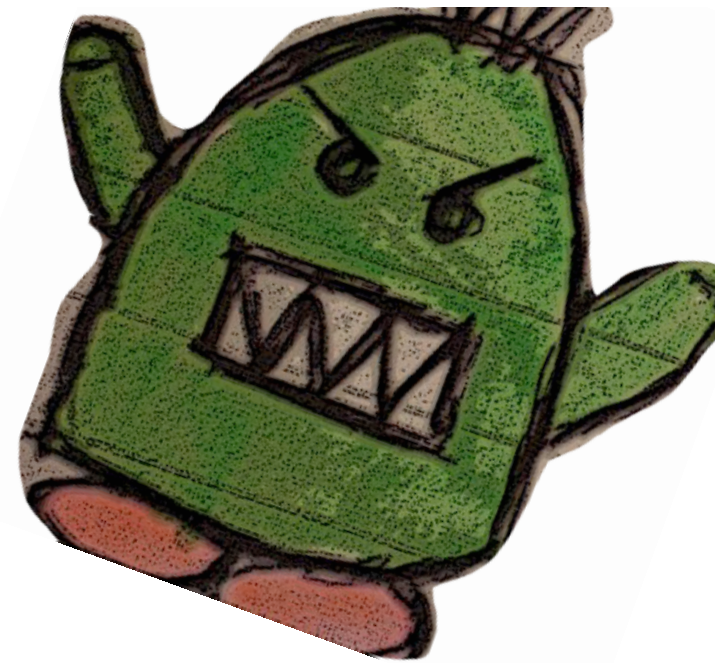


JasmineJandu @JasmineJandu

13 mins

I hate the fact that there's school tomorrow. Dead serious right now, I'd rather throw up and sit on it. **#ihateschool**

Expand



Kelly Chen @pianokchen

School is so boring #ihateschool

Expand



Jessie Stockstad @jessistockstad

16 Apr

Casually sitting in my room staring at the wall cause that's more fun than actually studying **#iloveschool**

Expand ← Reply ↻ Retweet ★ Favorite ... More





✨ Lexie 🚢 ✨ @XxL_weeezyxX

17 Mar

History = there dead dude.

English = dictionary/ google.

Science = not a nerd. Don't need it.

Math= calculator.

#ihateschool #die

Expand



✨ Lexie ✨ @XxL_weeezyxX

17 Mar

History = there dead dude.

English = dictionary/ google.

Science = not a nerd. Don't need it.

Math= calculator.

#ihateschool #die

Expand



KAILS @kaillleybird

7 Apr

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

Expand



Sarah Bridge @SarBearrr17 · Feb 14

Prof: I've got plenty of other things to bore you with. **Class:** *silence* P: That was a joke. [#sometimesjokesaretootru](#) [#medschool](#)

Expand

↩ Reply ↻ Retweet ★ Favorite ⋮ More



Gerald @incognito0121 · 18 Nov 2011

Why the hell did I come to **class** today? One of the more droning professors is teaching for two hours. Thank God for StumbleUpon. **#medschool**

Expand

↩ Reply ↻ Retweet ★ Favorite ⋮ More

Would be funny...if it wasn't so
heartbreaking.

The number of hours students spend in a system they hate.

10,800

By the time they get to you:

10,800

+4 years

What vestiges of these experiences
do you see your classrooms?

What #hashtag best describes your schooling experience?

- a. **#ihateschool**
- b. **#iloveschool*(really)**
- c. **#schoolisboring**
- d. **#schoolisnotpractical**
- e. **#mixedfeelings**

Q. What keeps you
up at night?

A.

Q. What keeps you
up at night?

A.

Teaching does not keep me up at
night.

Cornell

A.

Q. What keeps you
up at night?

Being a boring lecturer.

Cornell

A.

Q. What keeps you
up at night?

How to get people excited.

Cornell

A.

Bored students.

Q. What keeps you
up at night?

Cornell

Q. What keeps you
up at night?

A.

how can I connect and keep
the interest of students?

Cornell

How can I
better?

Q. What keeps you
up at night?

Q. What
up at night?

you

A.

A.

A.

A boring teaching session

Cornell

Q. What
up at night?

Q. What keeps you

Q. What keeps you
up at night?

How can I motivate

A.

f

A.

Desinteresse!!

Brasil

A.

How
be

Q. What keeps you
up at night?

Q. What
up at night?

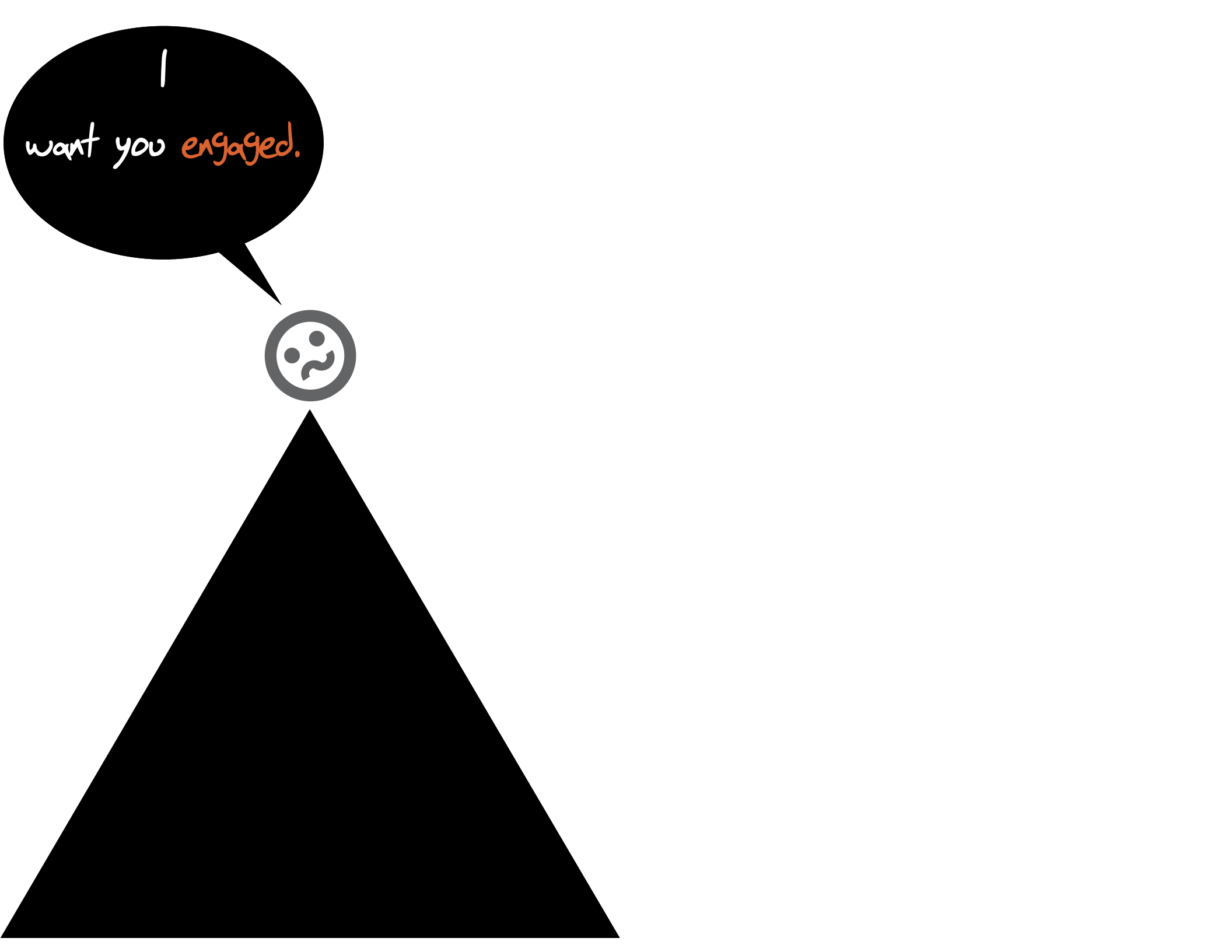
you

How boring I am & how little
will be retained by the student.

Yale

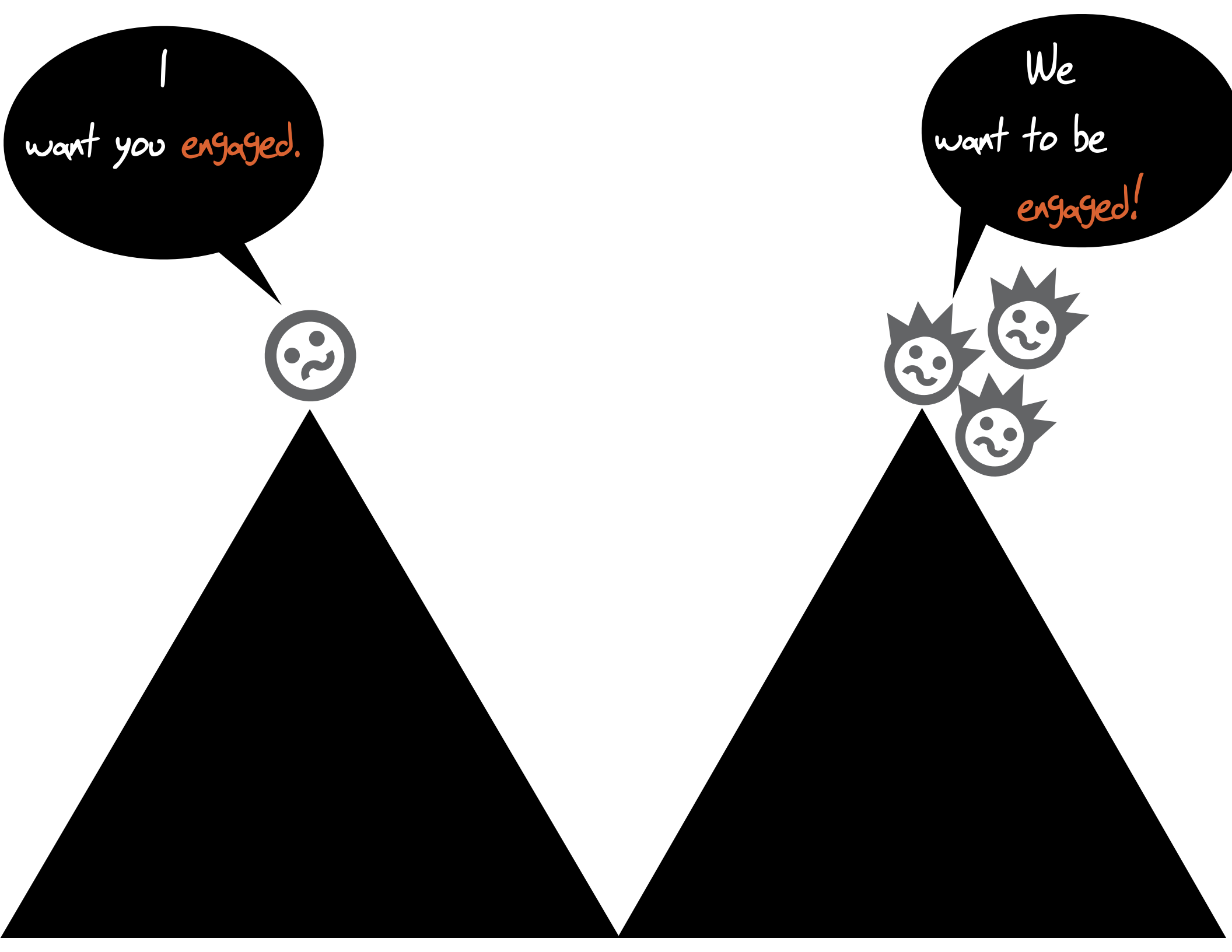
A.

Students and professors want the same thing.



I

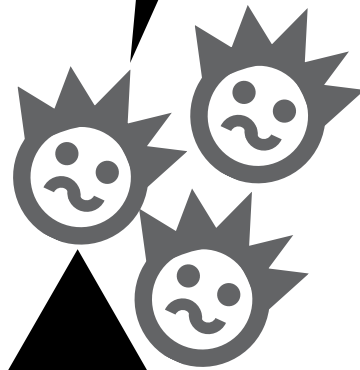
want you engaged.



I
want you engaged.



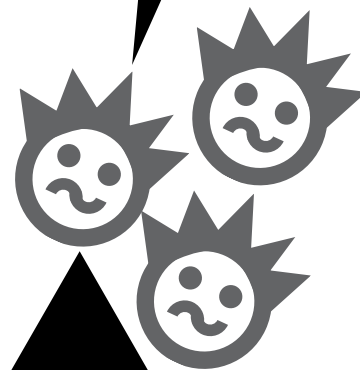
We
want to be
engaged!



I
want you *engaged.*



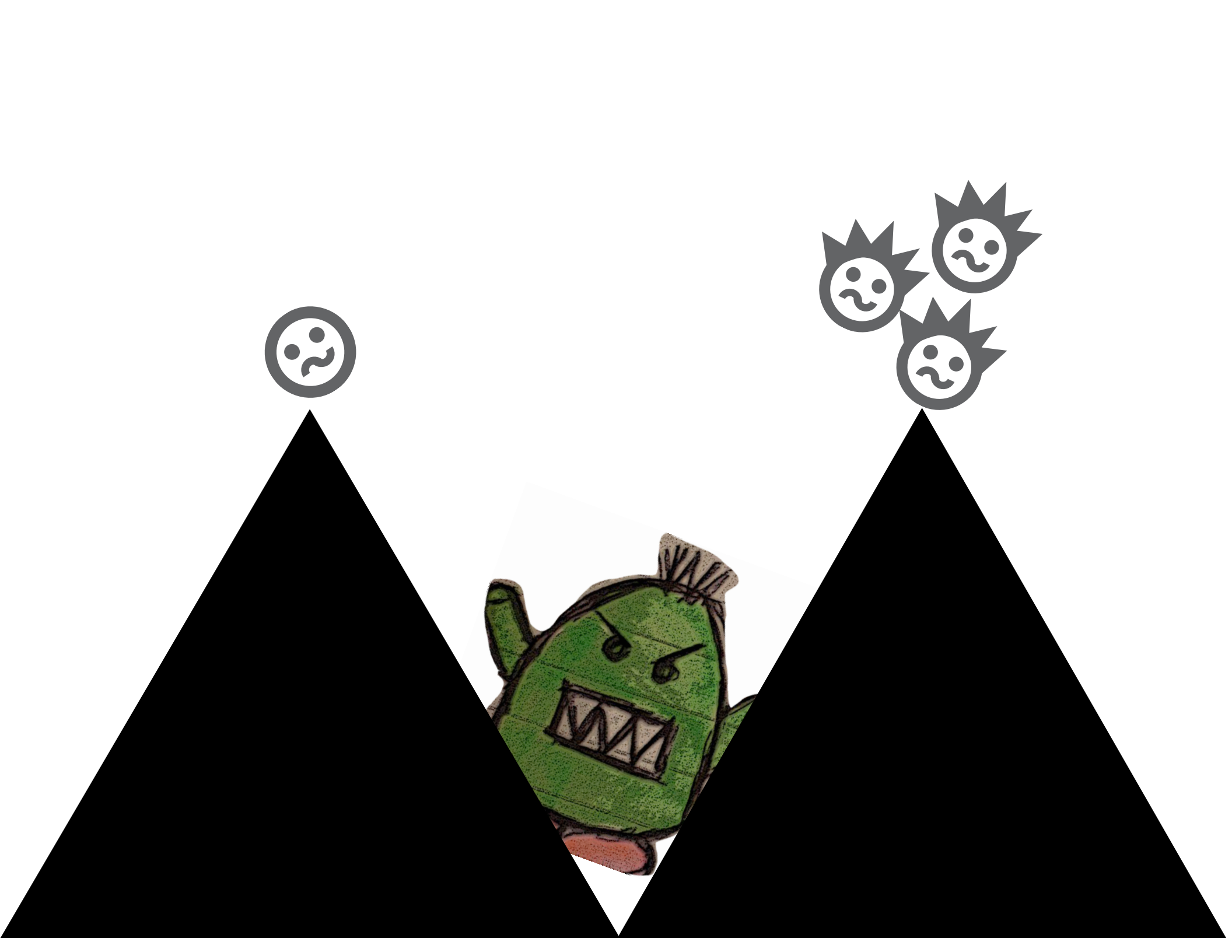
We
want to be
engaged!

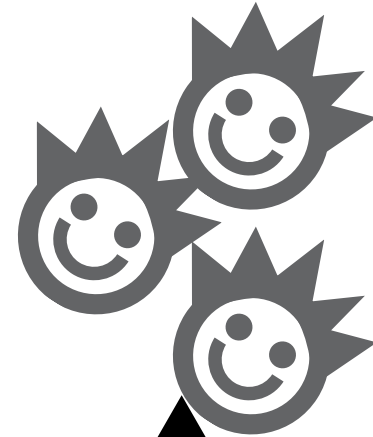


Message

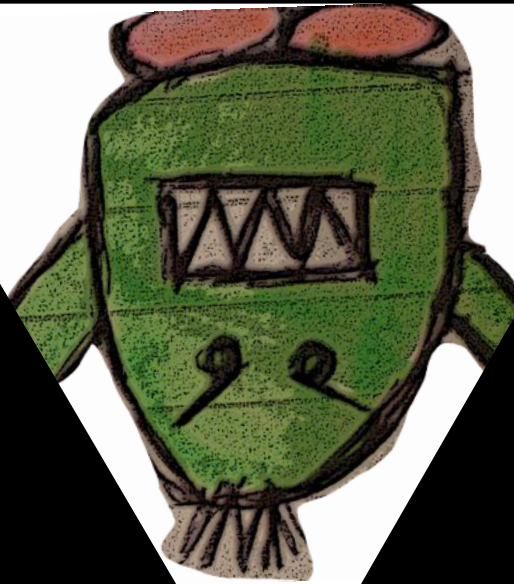


**Education doesn't
have to be this
way.**

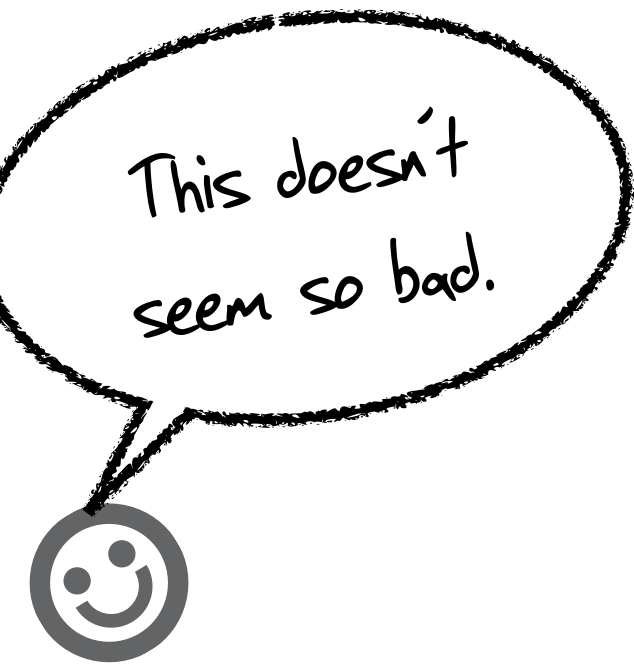




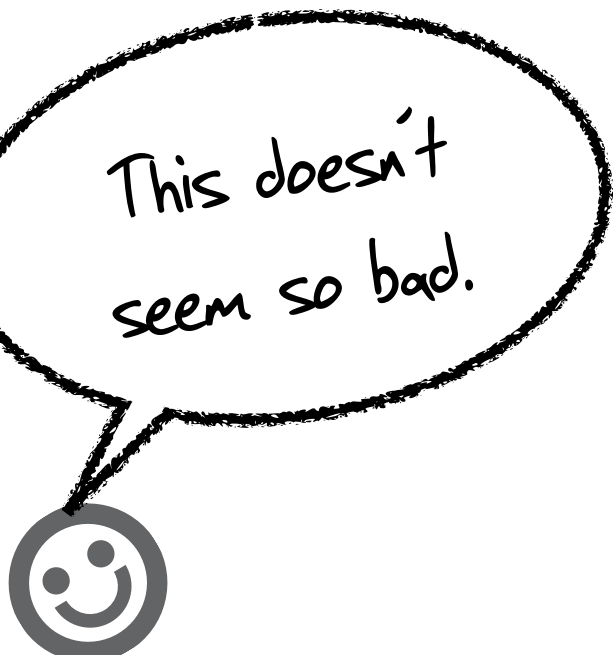
Flipped Classrooms




My goals for this talk...



My goals for this talk...

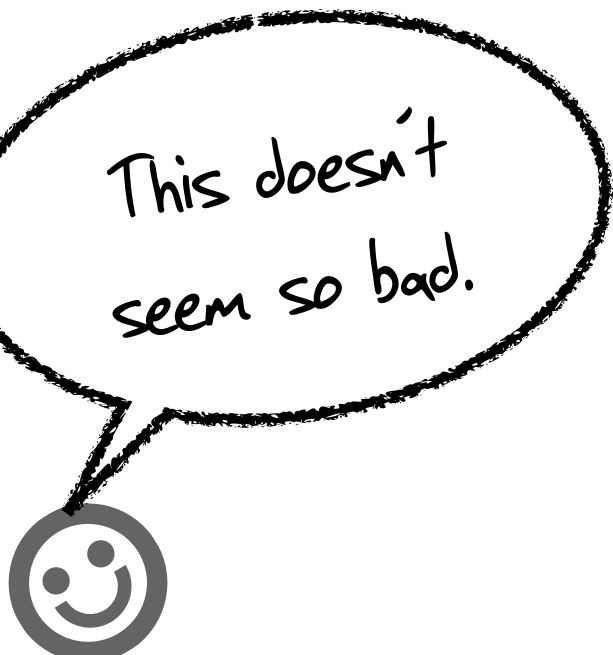


This doesn't
seem so bad.




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


My goals for this talk...



This doesn't
seem so bad.



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

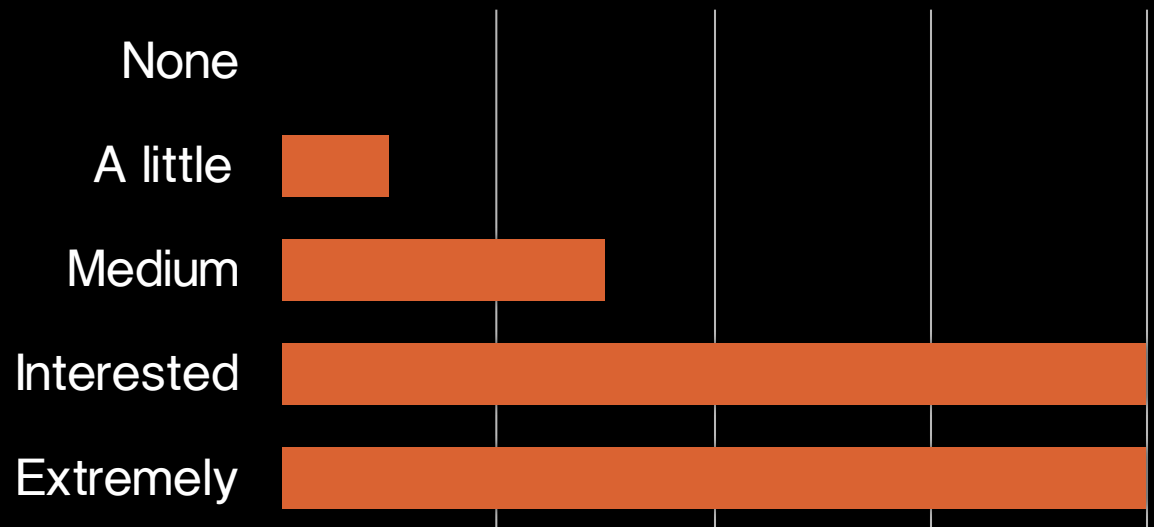


I already do this.
I'm going to innovate
and help others.

What is a flipped
classroom?



Cornell Interest



The Flipped Classroom

Students prepare to
participate in class activities

BEFORE

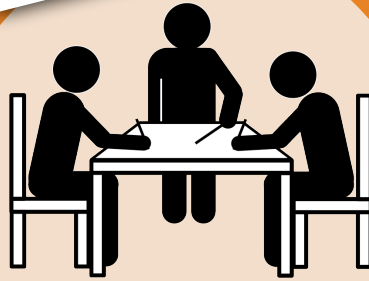


Out of Class

created by Josh Walker

The Flipped Classroom

DURING



Students practice applying key concepts with feedback

In Class

Students prepare to participate in class activities

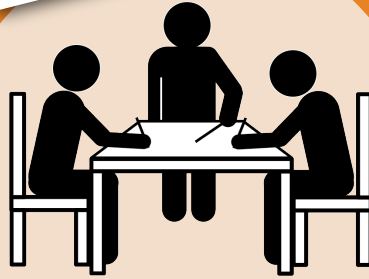
BEFORE



Out of Class

The Flipped Classroom

DURING



Students practice applying key concepts with feedback

In Class

Students prepare to participate in class activities

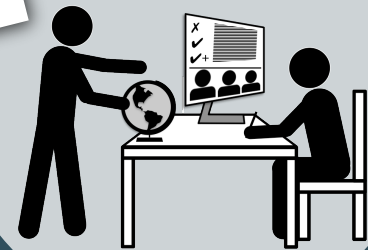
BEFORE



Out of Class

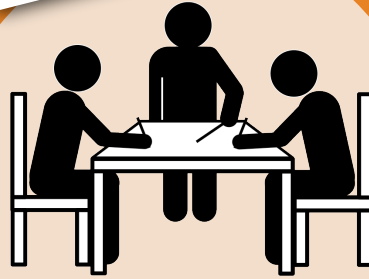
Students check their understanding and extend their learning

AFTER



The Flipped Classroom

DURING



Students practice applying key concepts with feedback

In Class

GOAL

GOAL

GOAL

Students prepare to participate in class activities

BEFORE



Out of Class

AFTER

Students check their understanding and extend their learning



You must flip your entire class

- a. True
- b. False
- c. I am not sure

Myth: You must flip your entire class

►Big idea: A flipped classroom is an approach that can be implemented gradually *or* all at once. There are many ways to flip a class!

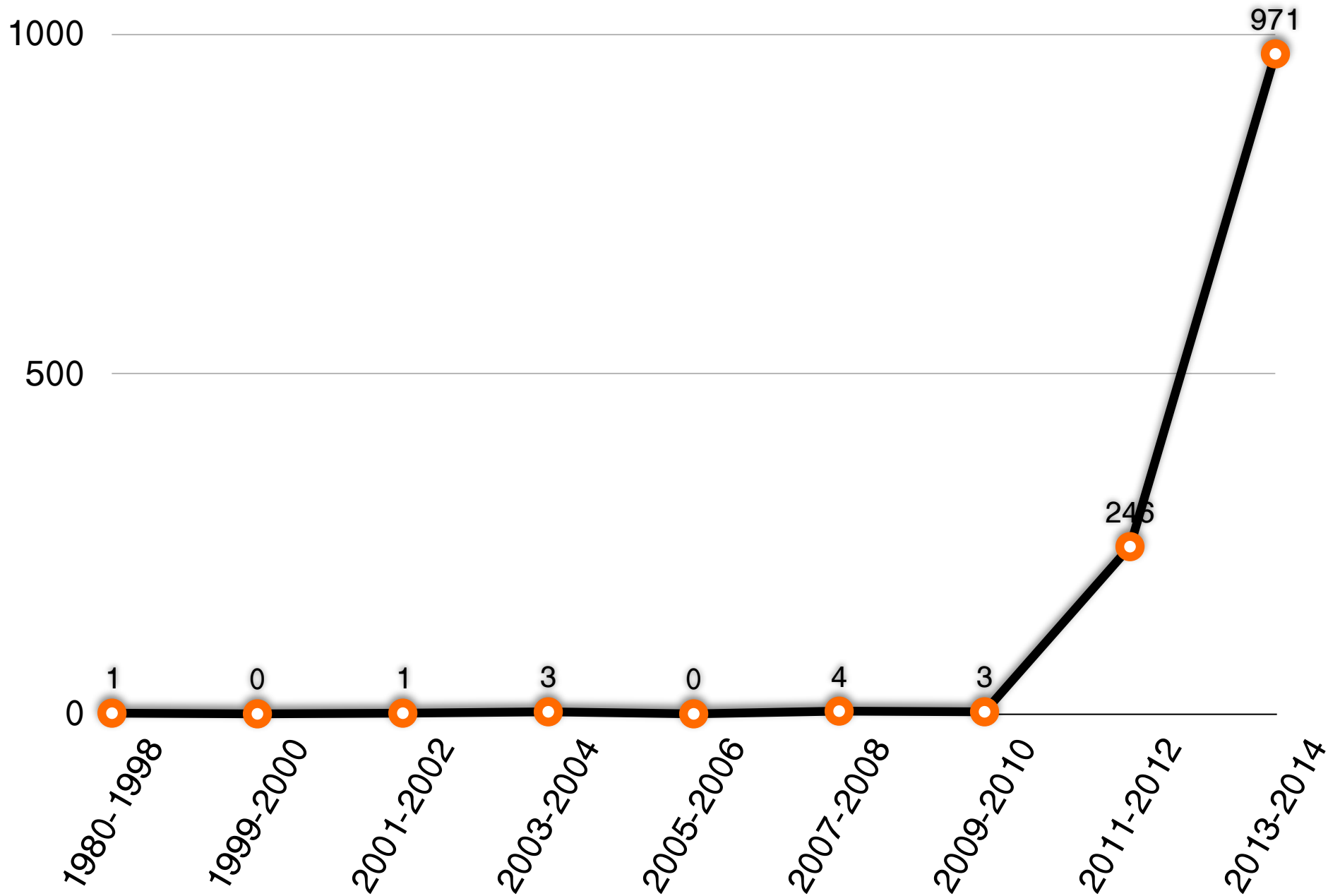
FLIP

- 1 concept
- 1 chapter
- 1 unit
- 1 lab
- 1 course
- 1 school

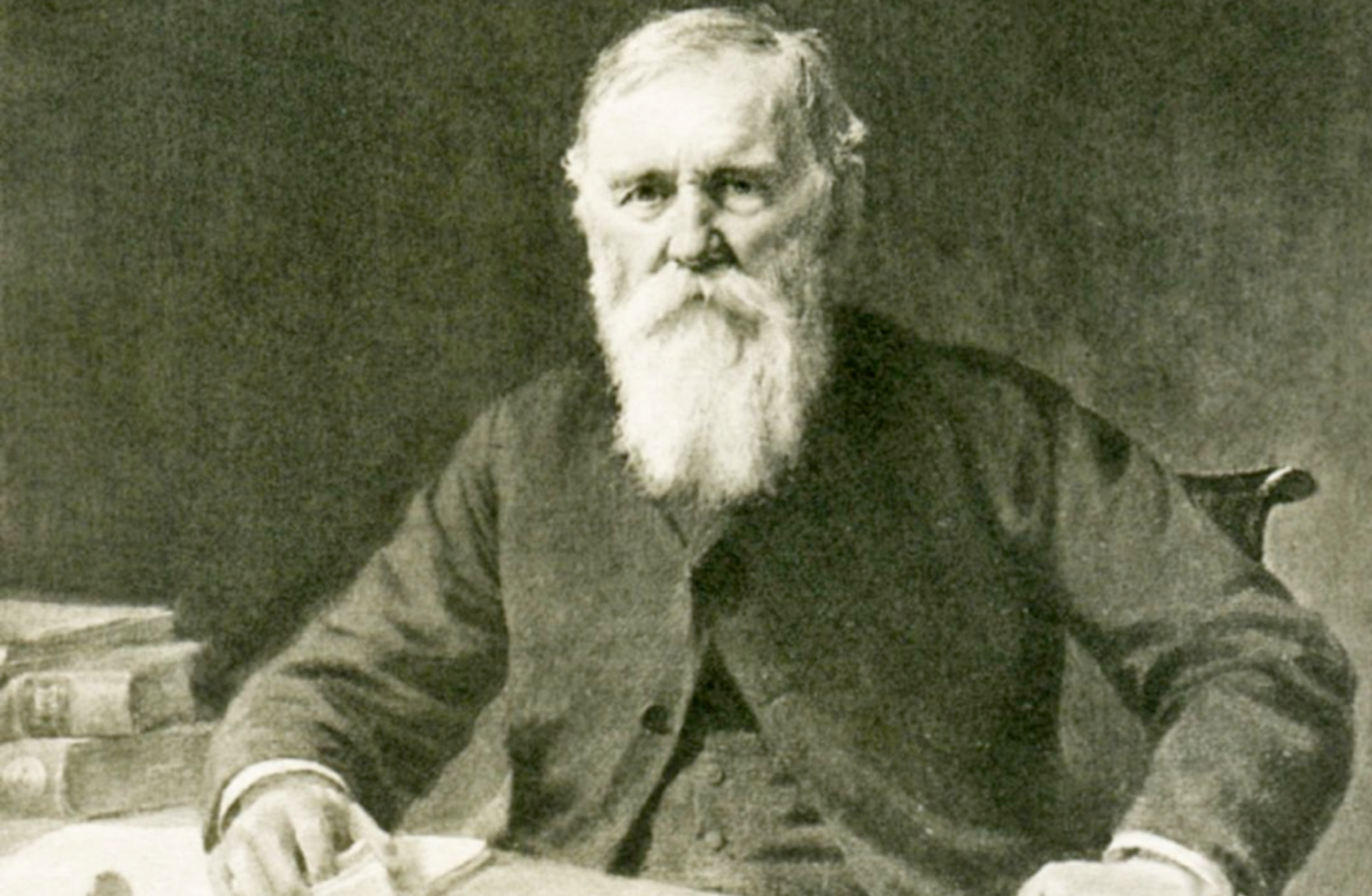
Flipped classrooms are the latest edutrend.

- a. True
- b. False
- c. I am not sure

○ Number of Google Scholar Hits for “flipped classroom”



Christopher Columbus Langdell, 1890s



School at Athens, Antiquity



Big questions about
flipped classrooms



How do I get students to do
out-of-class work?





A scene from the movie 'The Sandlot'. On the left, a man in a light blue patterned short-sleeved shirt and jeans stands with his hands in his pockets, looking towards the right. In the center, a woman in a blue denim shirt and a young girl in a plaid shirt and denim overalls are hugging. On the right, a baseball player in a white pinstriped uniform is seen from the back, looking away. A speech bubble is positioned above the family, and the name 'Schell' is written on the back of the baseball player's jersey.

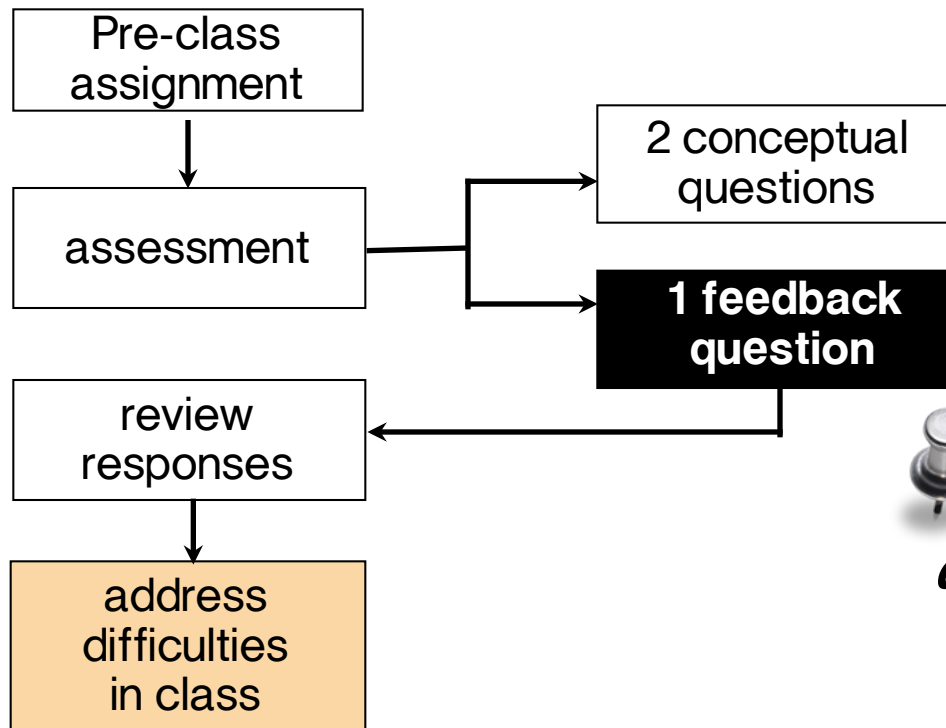
If you assess it...
they will come

Schell

2 methods to get students to do out of class work:

1. Just-in-Time Teaching

Just-in-Time Teaching



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

Just-in-Time Teaching

What makes a good JiTT question?

Pride and Prejudice

Collins to Elizabeth: “My reasons for marrying are, first, that I think it a right thing for every clergyman in easy circumstances (like myself) to set the example of matrimony in his parish. Secondly, that I am convinced it will add very greatly to my happiness; and thirdly -- which perhaps I ought to have mentioned earlier, that it is the particular advice and recommendation of the very noble lady whom I have the honour of calling patroness.

What is Collins' profession?

Hypothesize Collins' purpose for marrying.

What do you wonder about Collins' proposal and why?

REU: Neuroethics - Assignment 2 (Responses)

Julie Schell

File Edit View Insert Format Data Tools Form Help Last edit was 18 hours ago

Comments

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\$ % 123 Arial 10 B I A

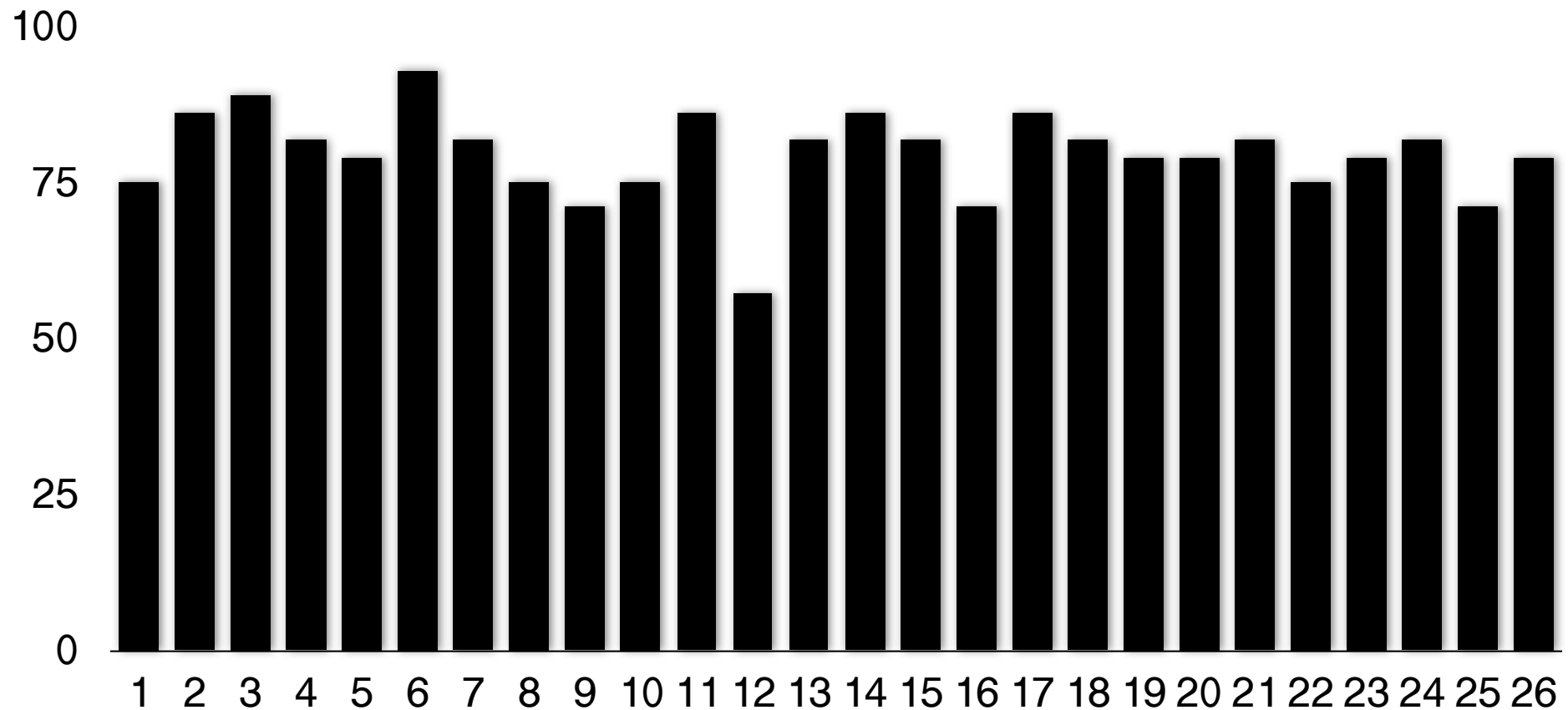
	A	B	C	D	E	F	G	H	I	J	K
1	Timestamp	Explain, in detail, three things that bothered or confused you ethically in the readings, NPR story, or video and include WHY those things bothered you.	Thinking about all 5 sources (videos, NPR story, articles) - what do you wonder about the ethical issues in the story of Einstein's brain?	At the time of the autopsy was Einstein a human subject?	Please enter your email address.						
2		<p>Why was it ok for Harvey to take Einstein's brain- it does not sound like he was given permission and as though the family tried to stop him.</p> <p>Why did the other scientists accept Einstein's brain- it's no better than what Harvey did.</p> <p>Should we be continuing to study his brain? I just think that if he didn't give permission, you cannot assume that Einstein wanted his brain to be used for studies.</p>	<p>It is amazing that people continue to study his brain, knowing that there was no consent. Especially after the family, from what it sounds like from the sources, was upset by it.</p>	Yes	161						
	2/25/2013 21:14:40	1. It seems like the sources disagree on whether or not Dr. Harvey had permission to remove Einstein's brain and preserve it for scientific study. The video									

Just-in-Time Teaching

How do you score JiTT responses?

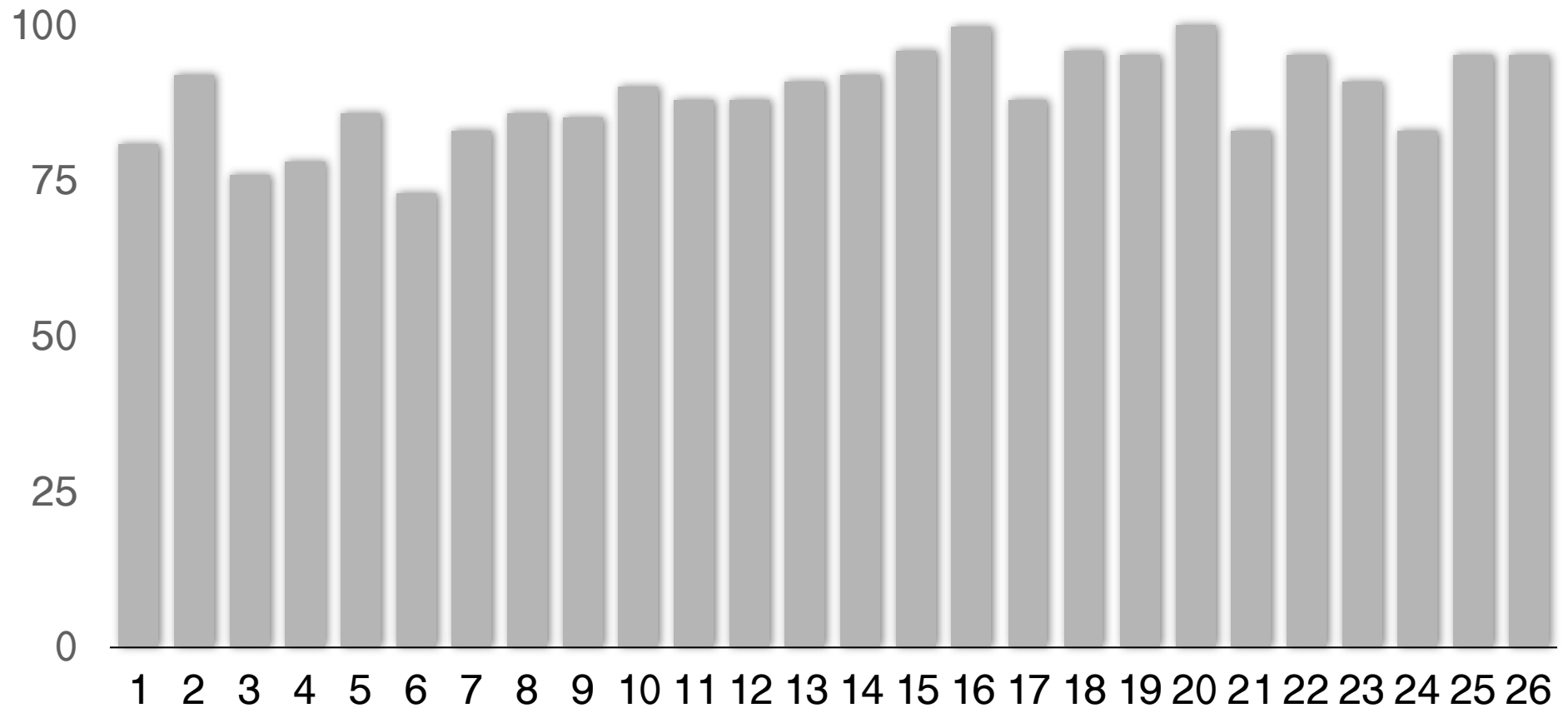
Score for each question	Criteria (Students are asked to respond with an answer and a rationale for that answer)
0	Question is left blank or incomplete
1	Response includes an answer, but does not include any or includes only very minimal reasoning or rationale (regardless of correctness)
2	Response includes an answer AND reasoning or rationale (regardless of correctness)

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)

2 methods to get students to do out-of-class work:

1. Just-in-Time Teaching

2. Quizzing

-Immediate feedback assessments

Break into groups of 5.
Answer these
questions.

1. Who won the Super Bowl in 2014?

a. Seahawks

b. Broncos

c. 49ers

d. Ravens

2. What is the only breed of dog with the American Kennel Club description of “The Barkless Dog.”

- a. Bouvier**
- b. Basenji**
- c. Briard**
- d. Borzoi**

What is the step in flipped classrooms that people often forget?

- a. Pre-class work**
- b. During-class work**
- c. After-class work**
- d. None of the above**

Myth: Students will not do pre-class work.

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

- Students may resist flipped learning
- Don't call it a "flipped" classroom
- Don't call it an experiment
- Make sure frequent, low-stakes assessments cover what they do outside of class

"I like the concept of flipped classrooms but wonder what I should do with students when we are together in person." Cornell



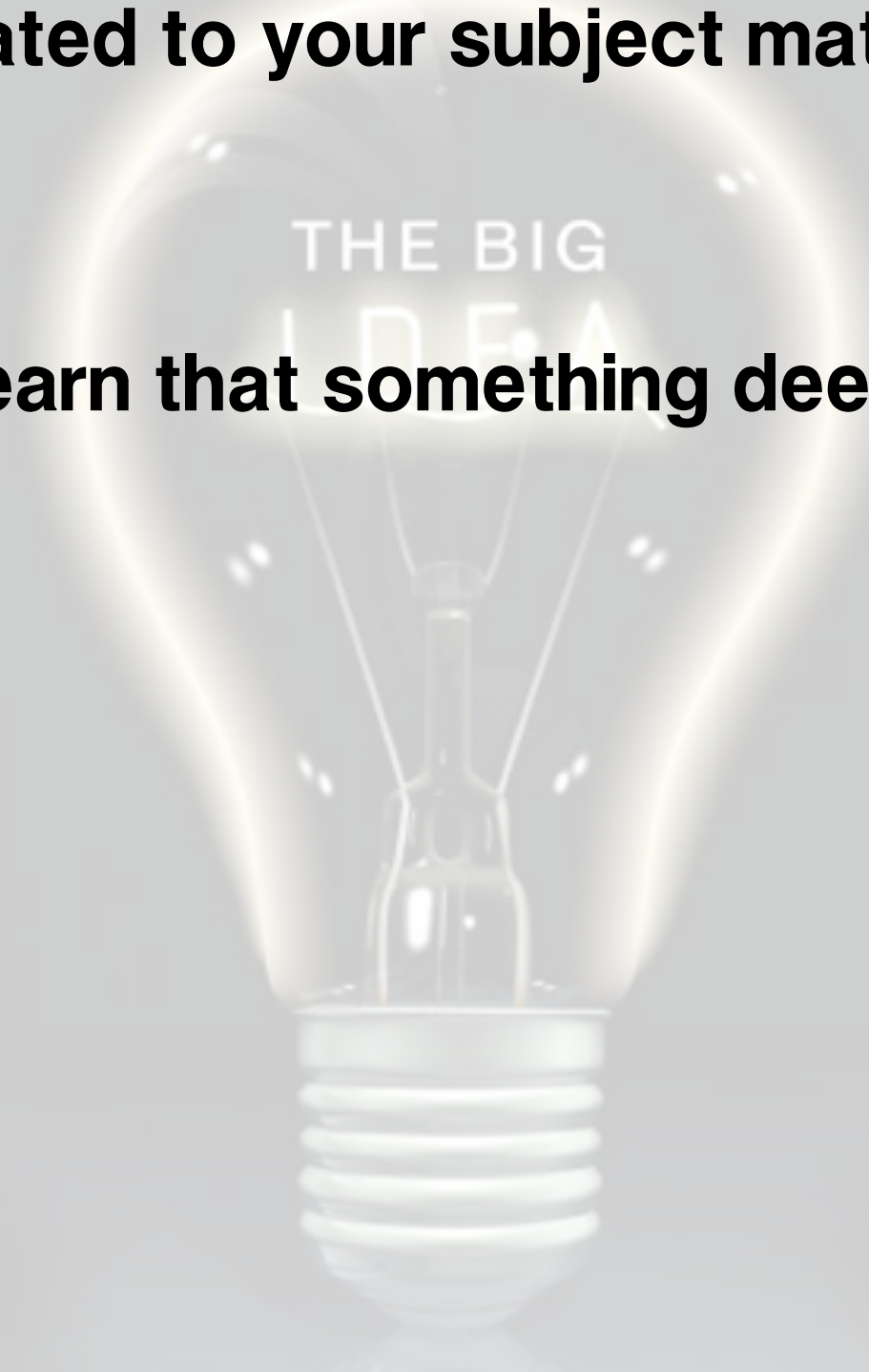
People learn most when they are engaged.

Think of something you know really well, preferably something related to your subject matter.



Think of something you know really well, preferably something related to your subject matter.

How did you learn that something deeply?

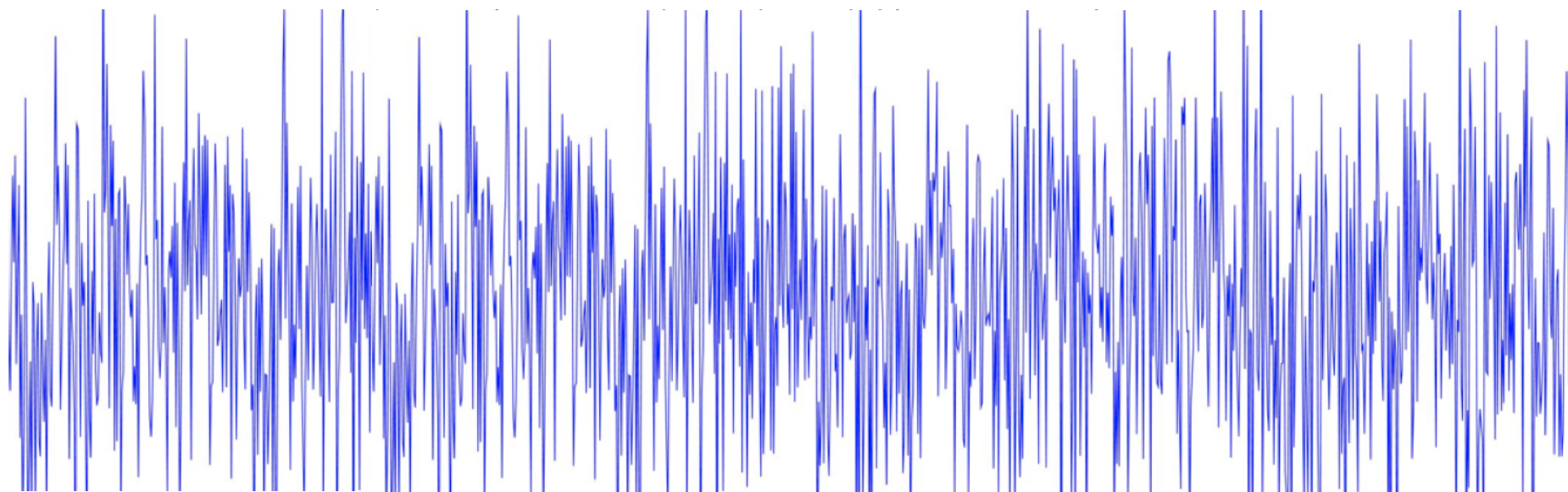


Think of something you know really well, preferably something related to your subject matter.

How did you learn that something deeply?

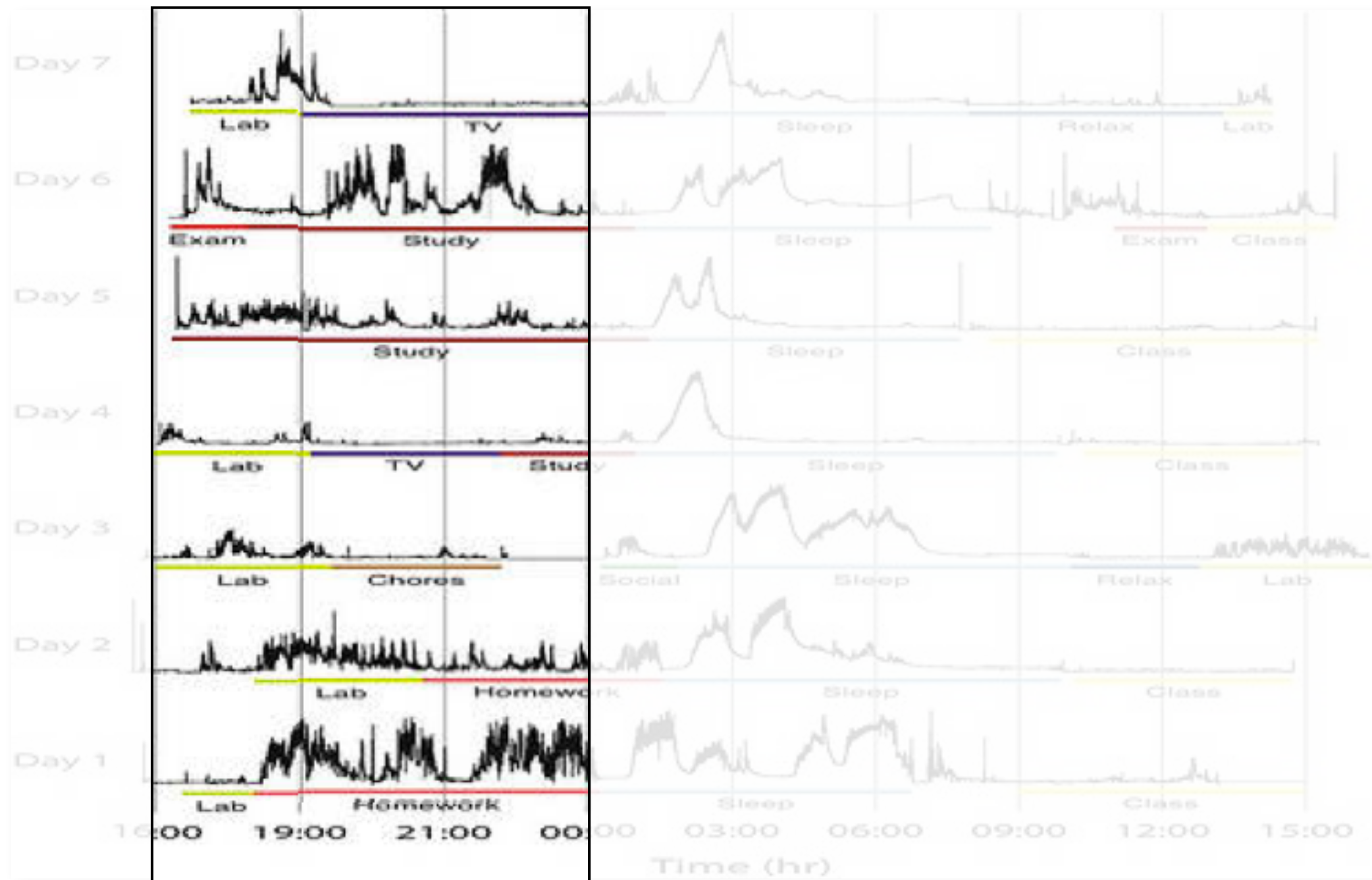
- A. Listening to a brilliant lecture**
- B. Practice**
- C. Teaching to someone else**
- D. Other**

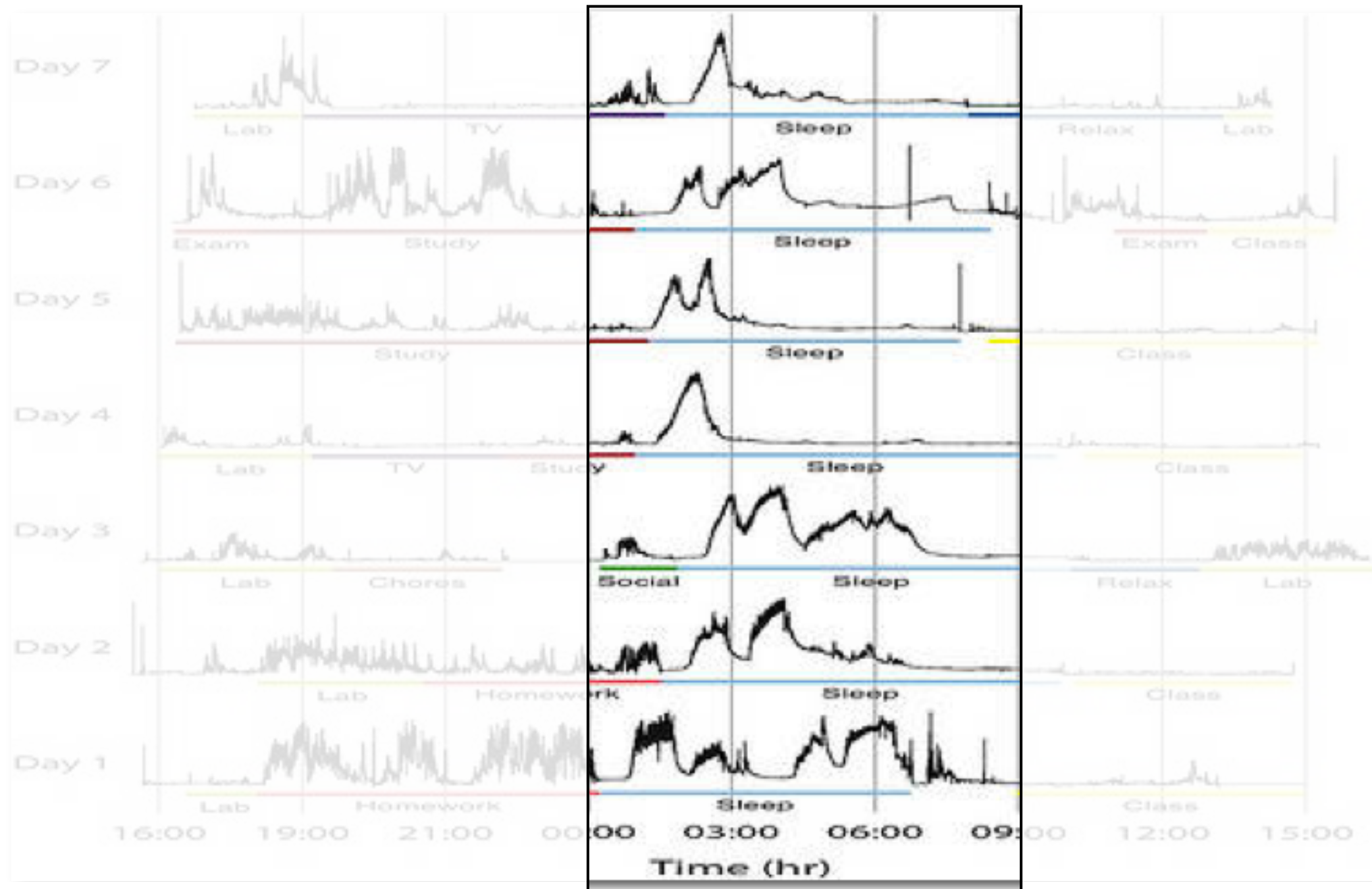


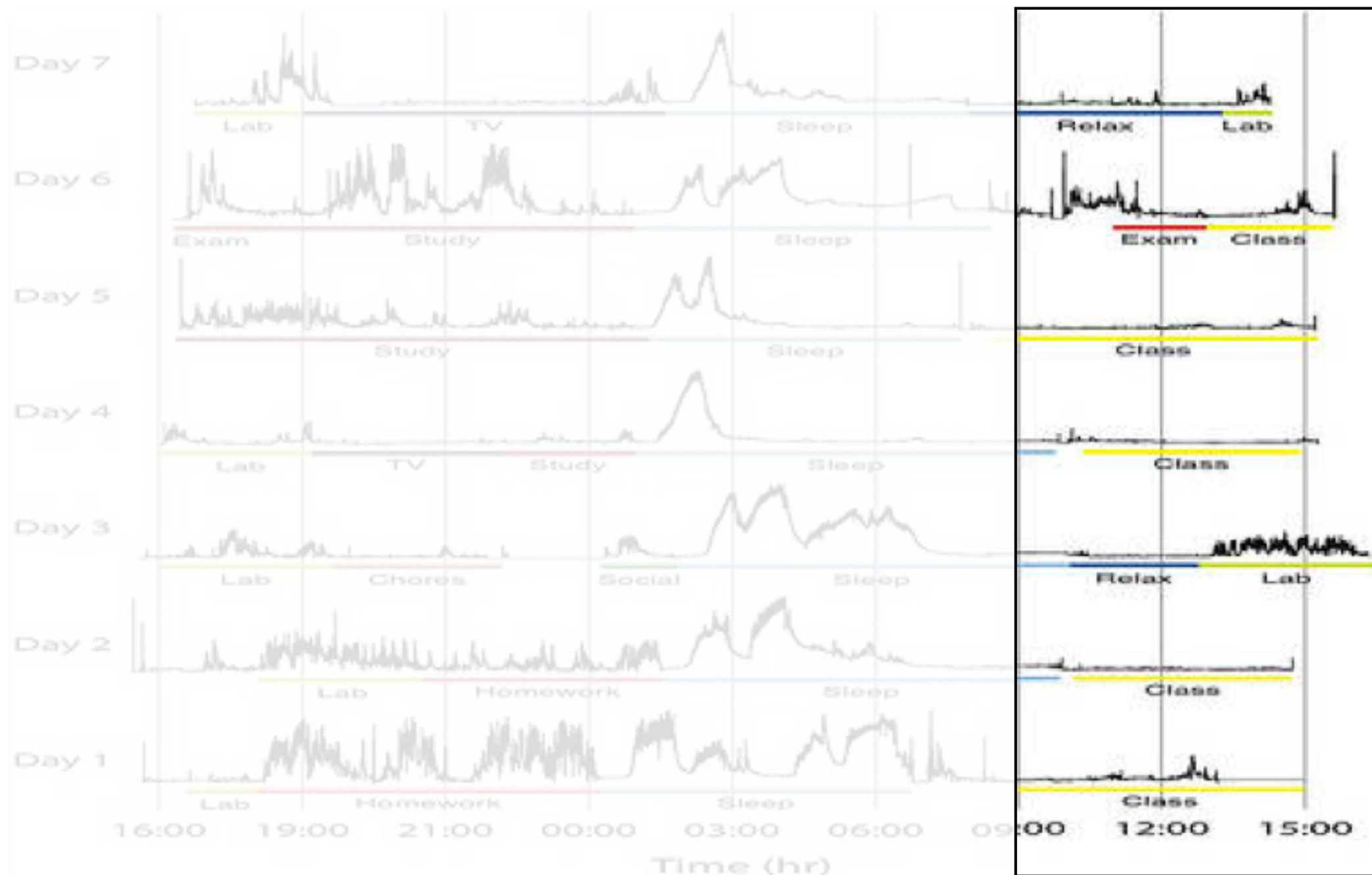


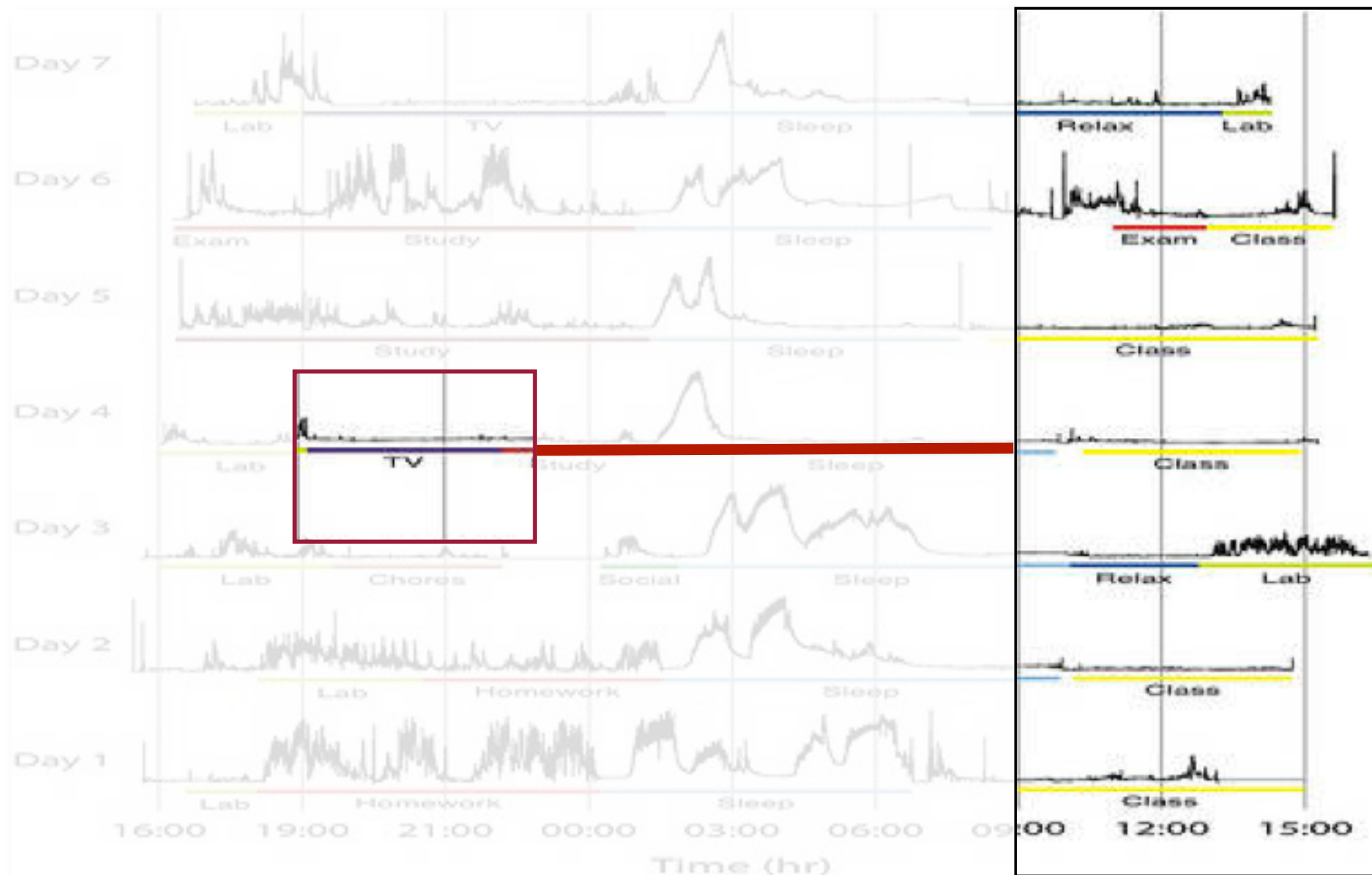
0 min

40 mins

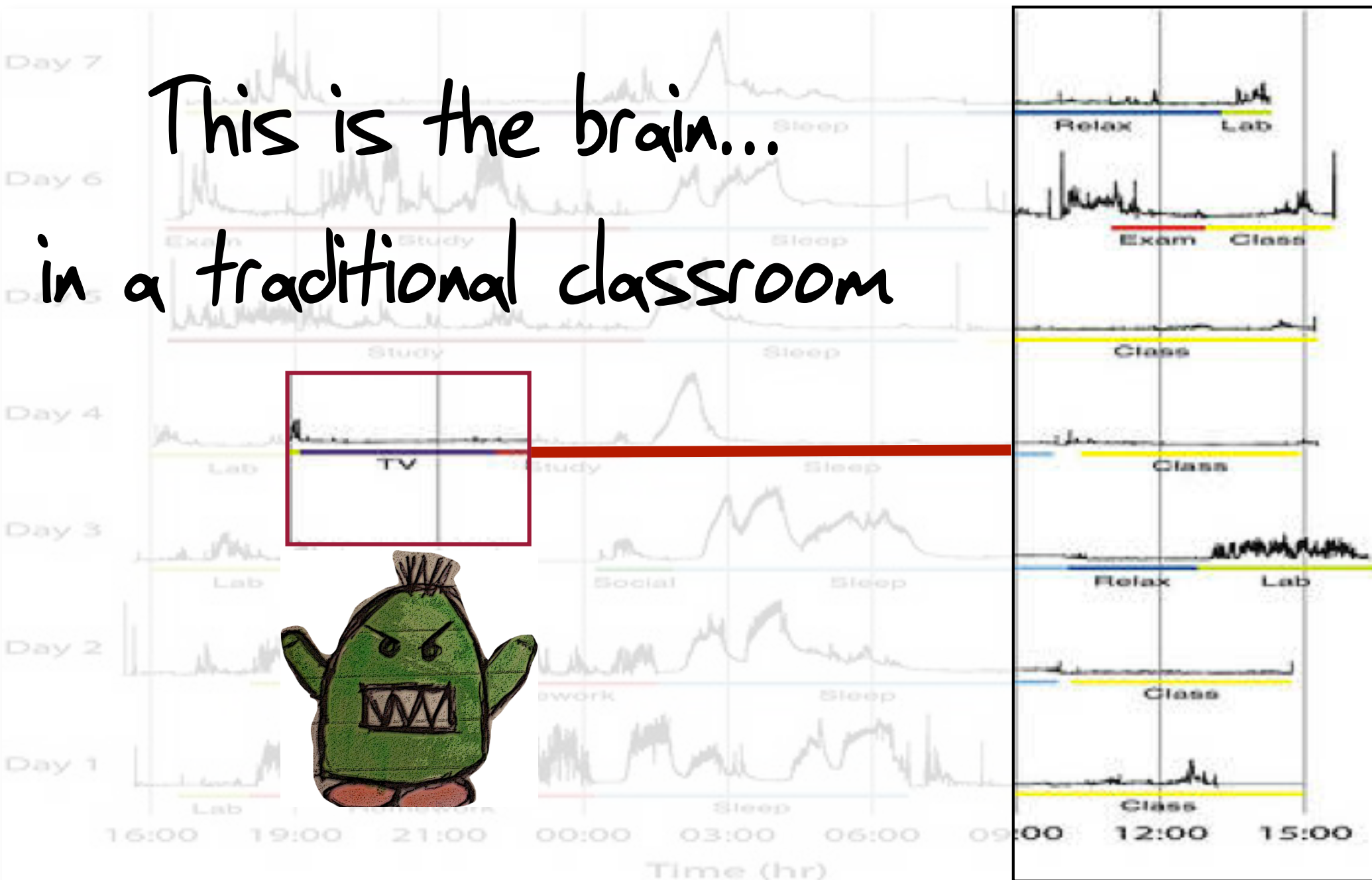




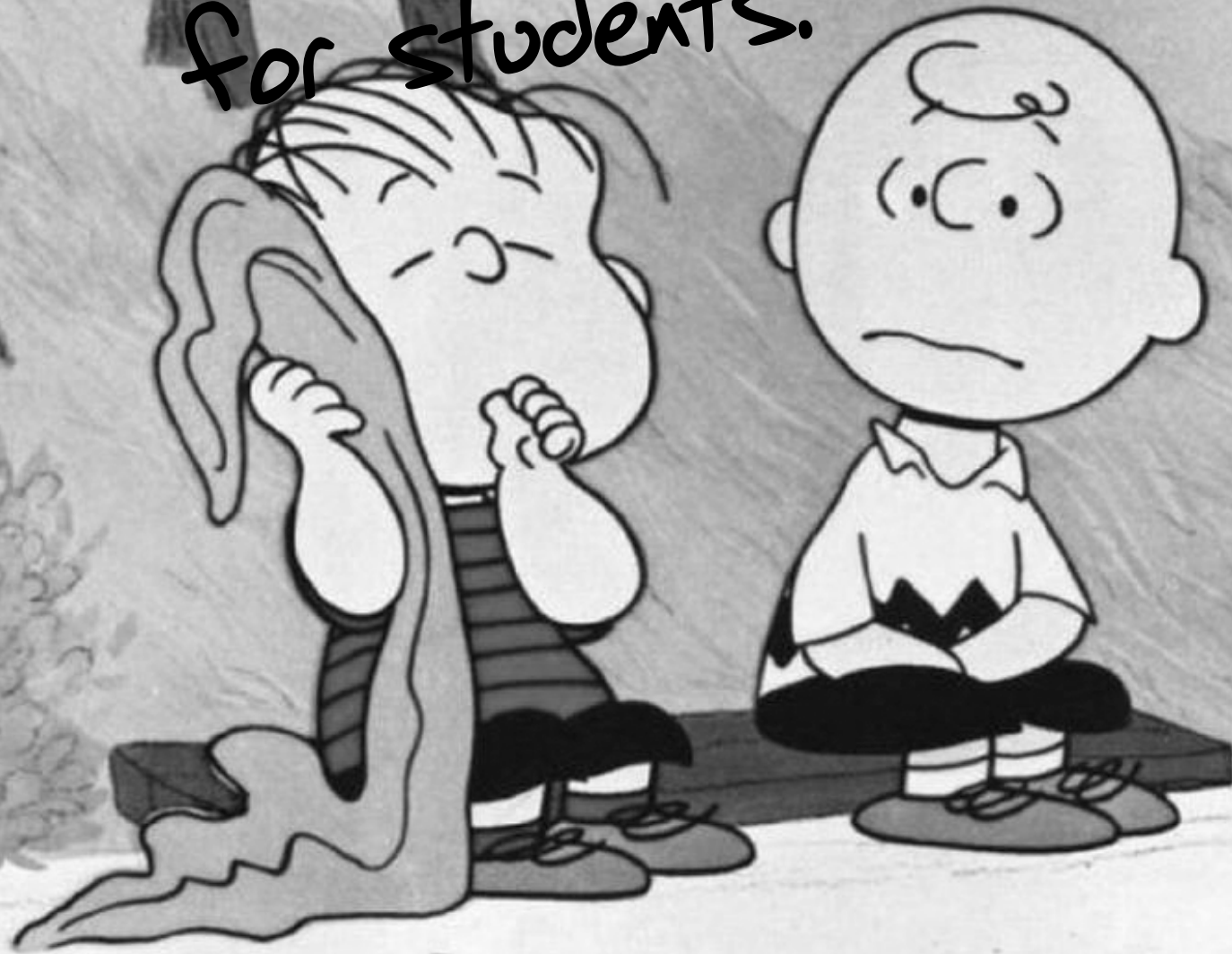




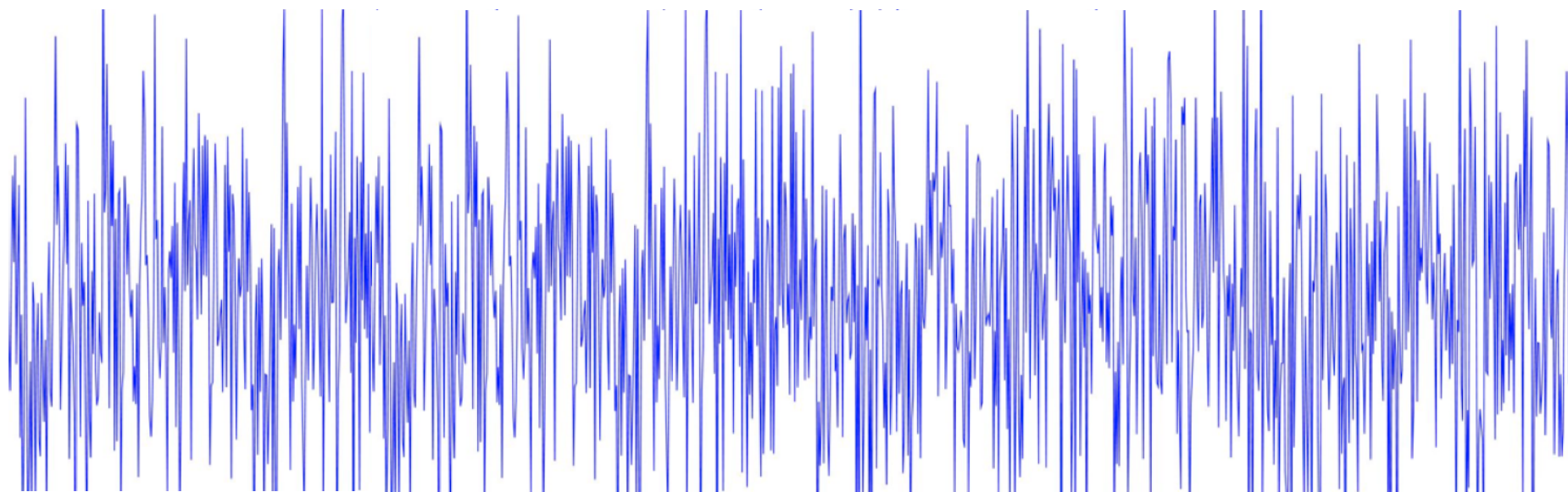
This is the brain...
in a traditional classroom



"Lecture is a comfort blanket
for students."

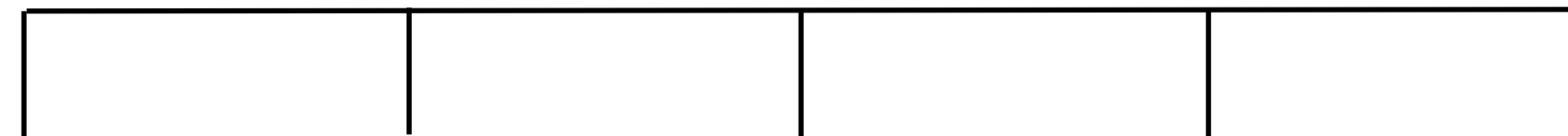
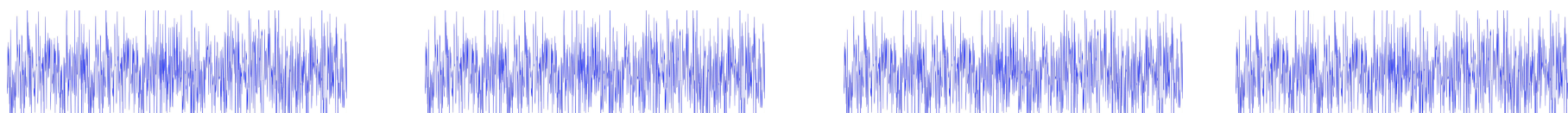


How to lecture on or off line: **Chunk it**



0 min

40 mins



0

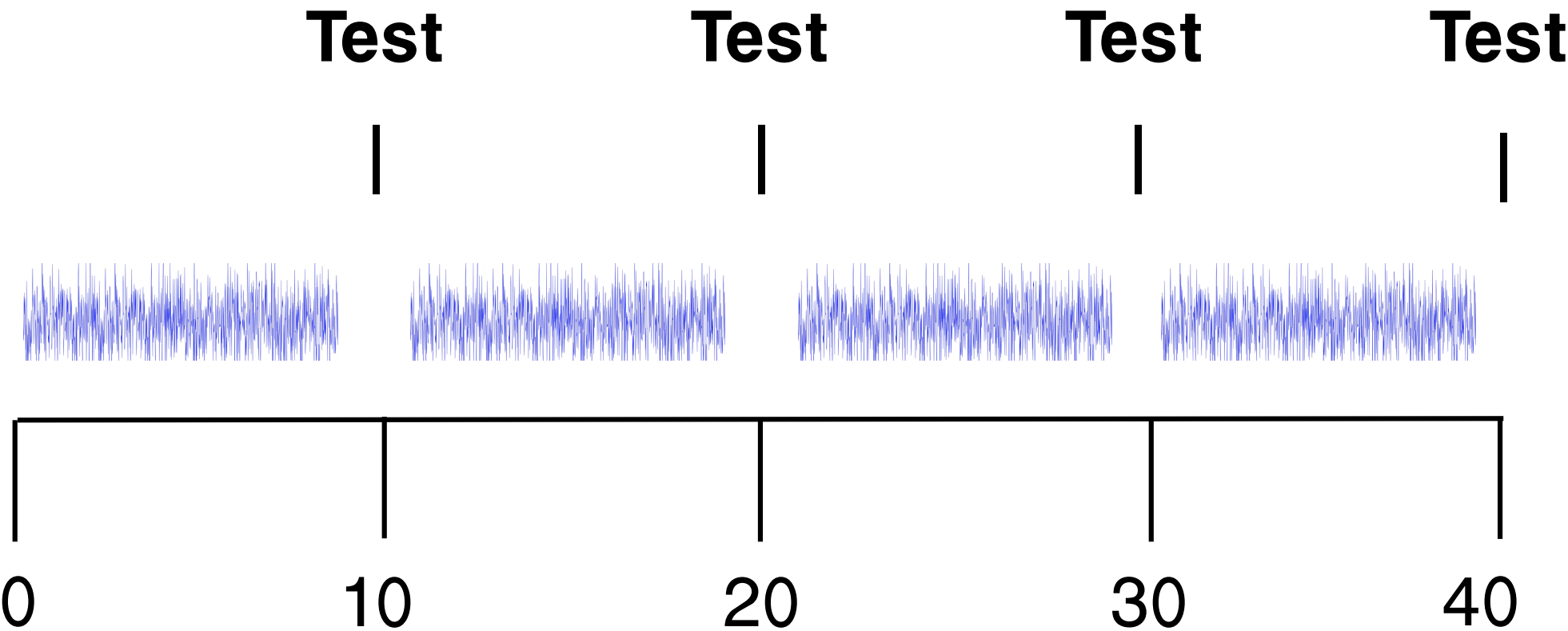
10

20

30

40

Chunking with Retrieval Practice

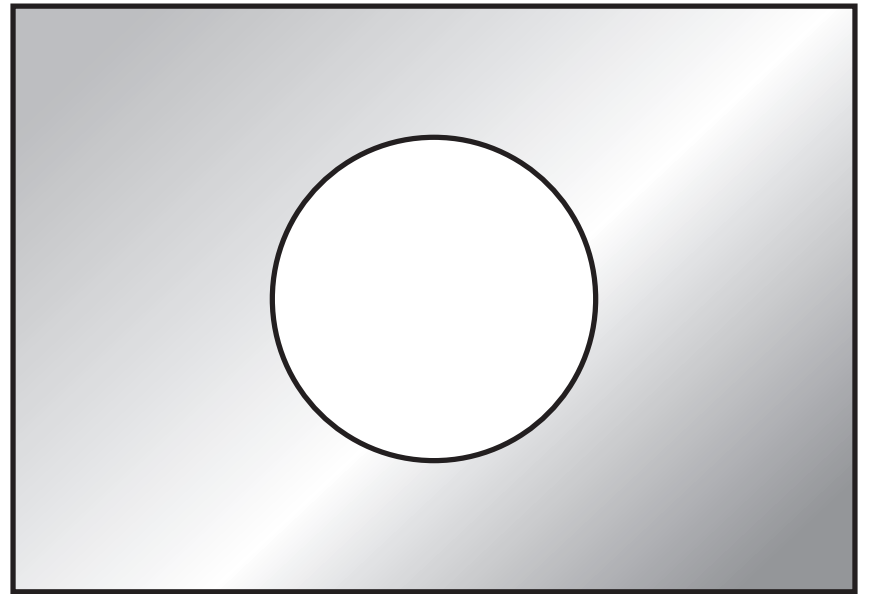


Thermal Expansion



When metals heat up, they expand.

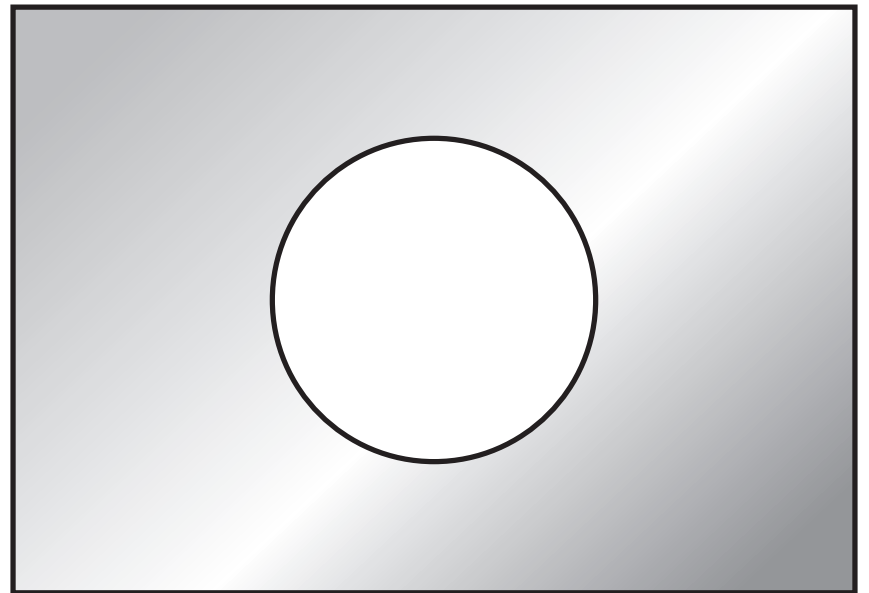
Consider a metal (aluminum) plate with a hole in it.



Consider a metal (aluminum) plate with a hole in it.

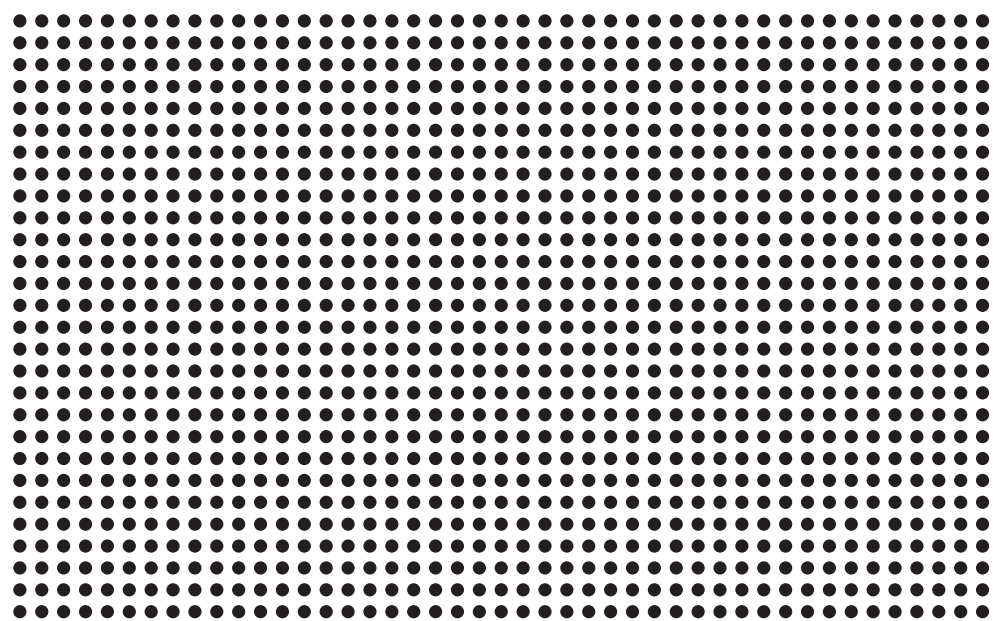
If you heat the plate uniformly what happens to diameter of hole?

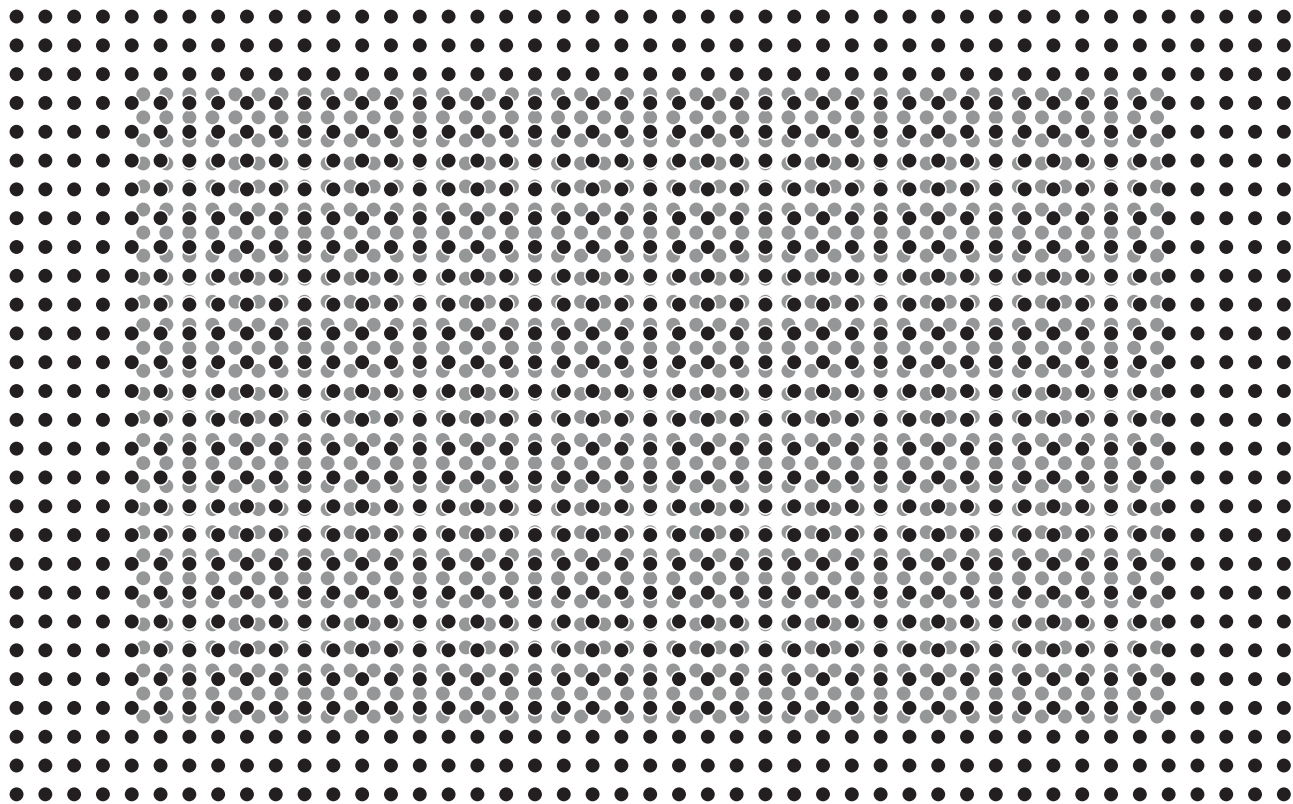
- A. increases**
- B. stays the same**
- C. decreases**

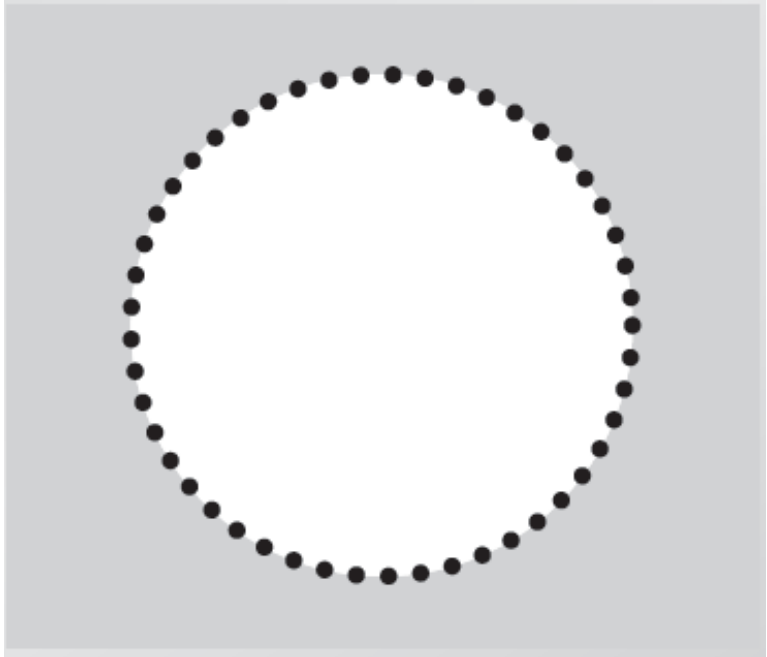


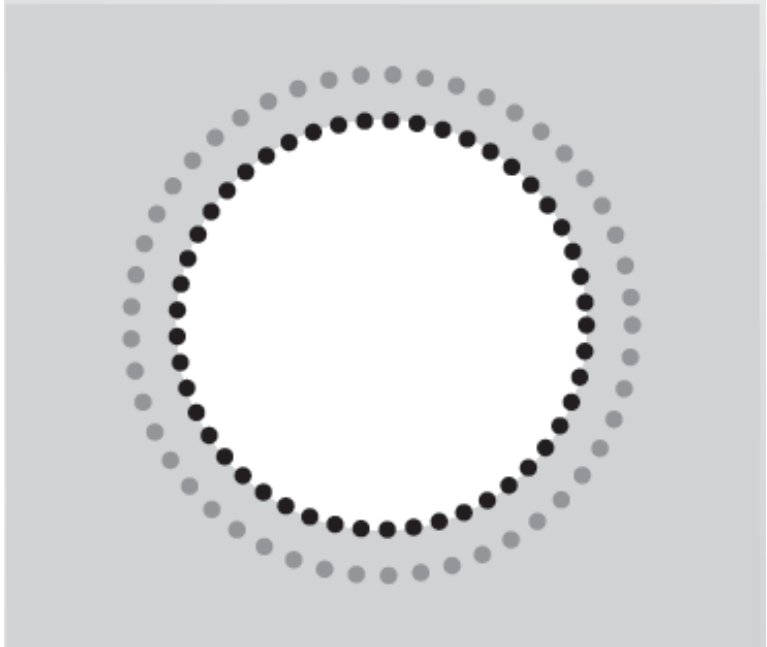
What just happened?

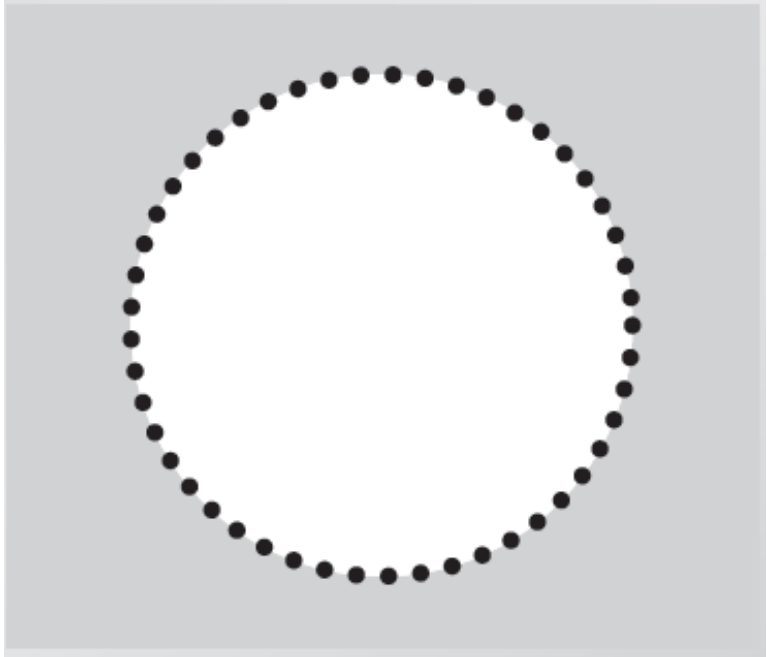
1. made a commitment, gained awareness of knowledge state
2. externalized your answer
3. moved from the answer to reasoning
4. became emotionally invested in the learning process









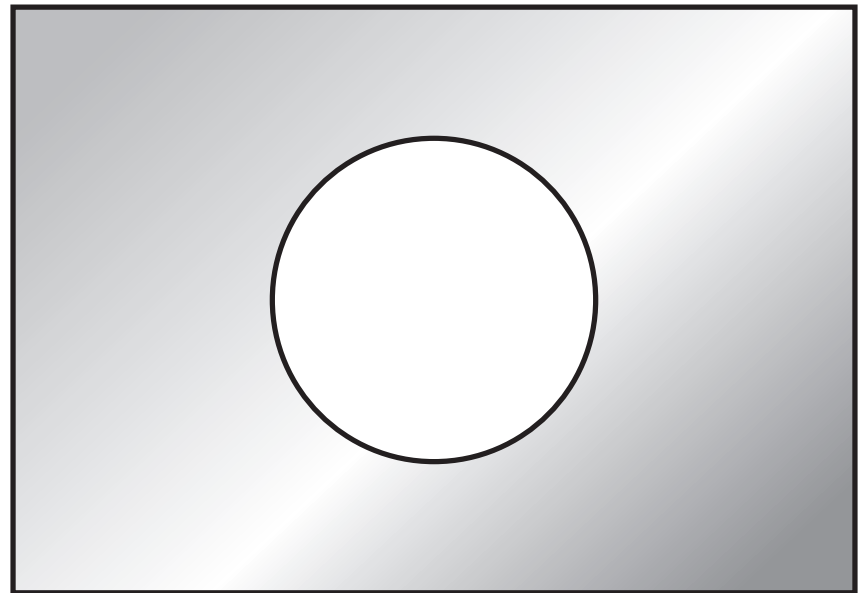


If you heat it uniformly what happens to diameter of hole?

A. increases

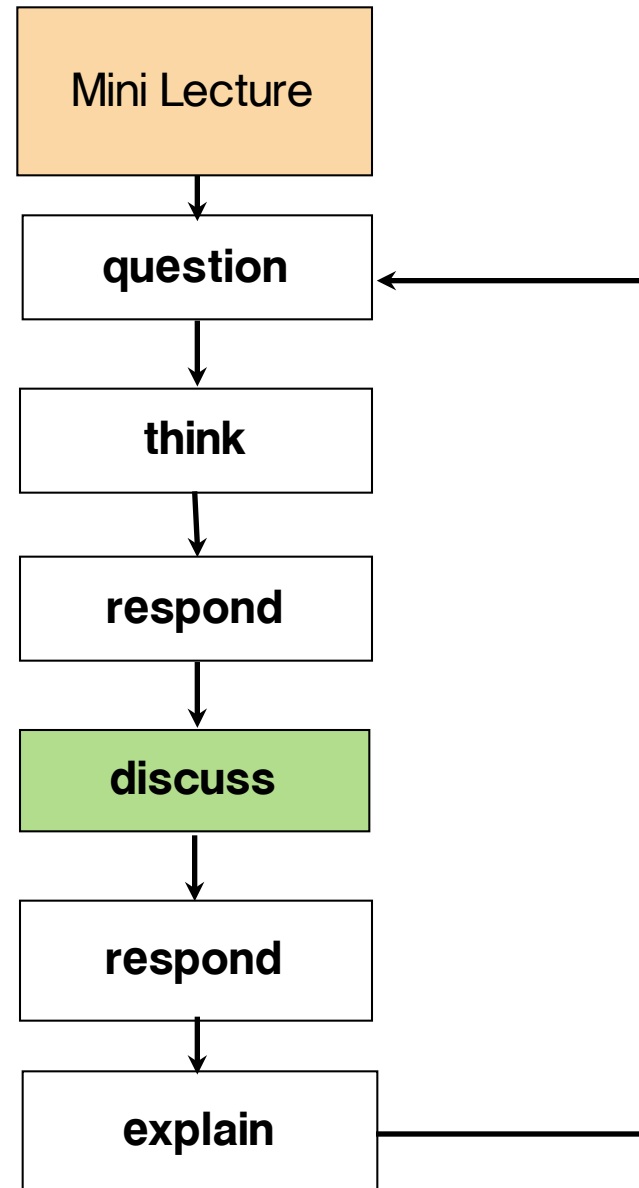
B. stays the same

C. decreases



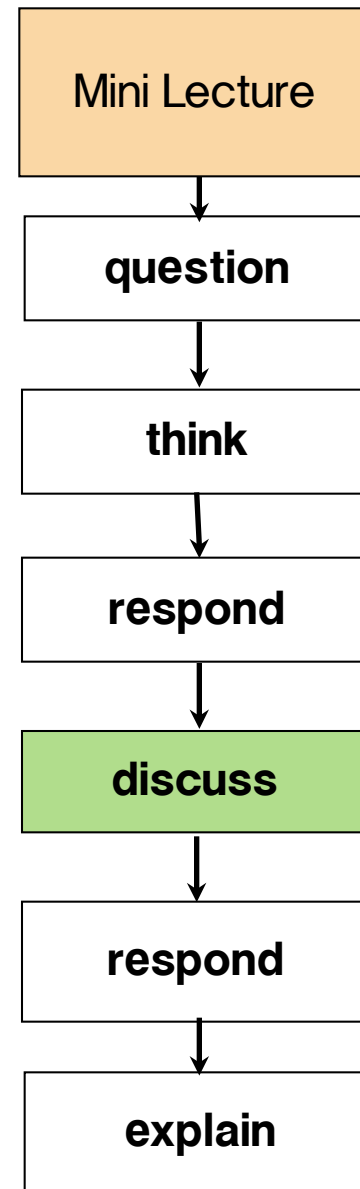
Peer Instruction

address
difficulties
in class

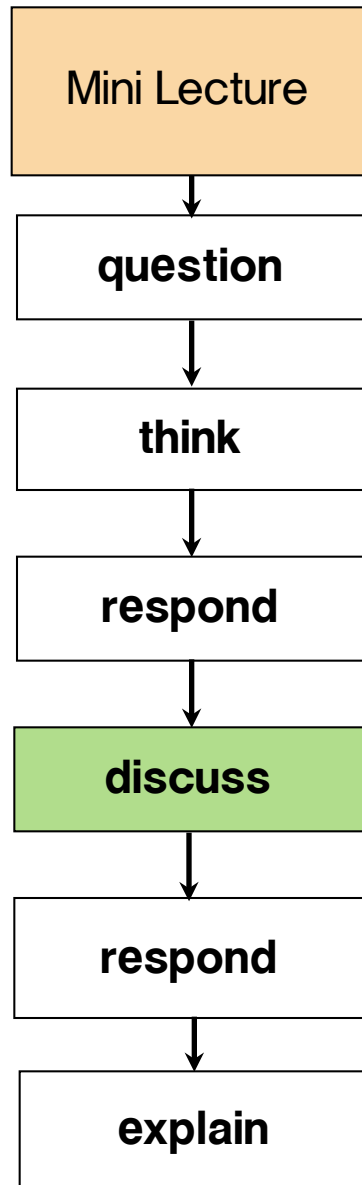


Peer Instruction

address
difficulties
in class



Goldilocks Range of
Desirable Difficulty
30-70% correct



7 basic steps



THE BIG

IDEA

3 tips for driving student engagement in Peer Instruction



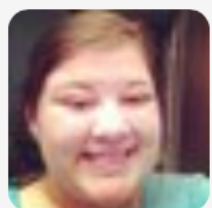


1. Don't skip letting students vote individually first

2. Don't display or reveal the results after the first vote *if* there is a majority

3. Cue students to discuss their responses with a neighbor who has a different answer

Call to action: pick one concept to try with JiTT and Peer Instruction



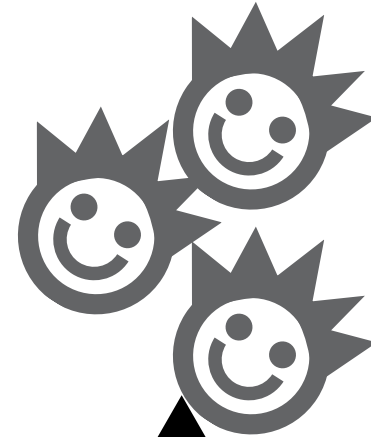
brianna girlie @bripaigegirlie

33 mins

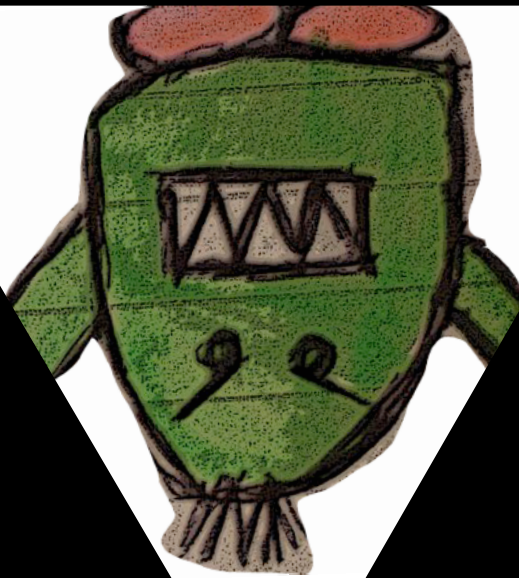
I hate school. lhateschool. I HATE school. I h8 school. I hate skool.
lh8skool. I. hate. school. Eye h8 skool. I HATE SCHOOL. **#ihateschool**

Expand ↩ Reply ↕ Retweet ★ Favorite ⋮ More





Flipped Classrooms





Tyson_Awesome @tegrinse614

6 hrs

today I developed my own proof for **pythagorean**'s theorem. woooo
yeah baby **#genius**

Expand



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PEOPLE

Eric Mazur

James Fraser

Ives Araujo

Cassandra Alvarado

Brian Lukoff

Jen Ebbeler

Carol Dweck

Dan Meyer

Nancy Duarte

Chip and Dan Heath

Acknowledgements

BOOKS

Flip Your Classroom

Slide!Dlogy

Made to Stick

Why Students Don't Like School



www.julieschell.com

@julieschell

