

Repeat as Necessary

Creating lasting knowledge by fully medializing a course

About me

- Michael Mittag
- Psychologist, multimedia, technical communicating, education, cartoons
- Live with my girlfriend and 2 cats in Rheinfelden (Switzerland)
- Enjoy painting, acting, dancing (Hip Hop / Lindy Hop), Netflix, Gaming
- Created 100+ educational videos



About you

How many of you have created:

- No video (yet)
- 1-2 videos
- 3-5 videos
- 6-10 videos
- more than 10 videos?

How many of you like to draw?

Looking for a supervisor

I want to write my dissertation about educational videos.

If you're interested in supervising it (or know someone who might), please let me know.



Background

Three ways to ensure lasting knowledge:

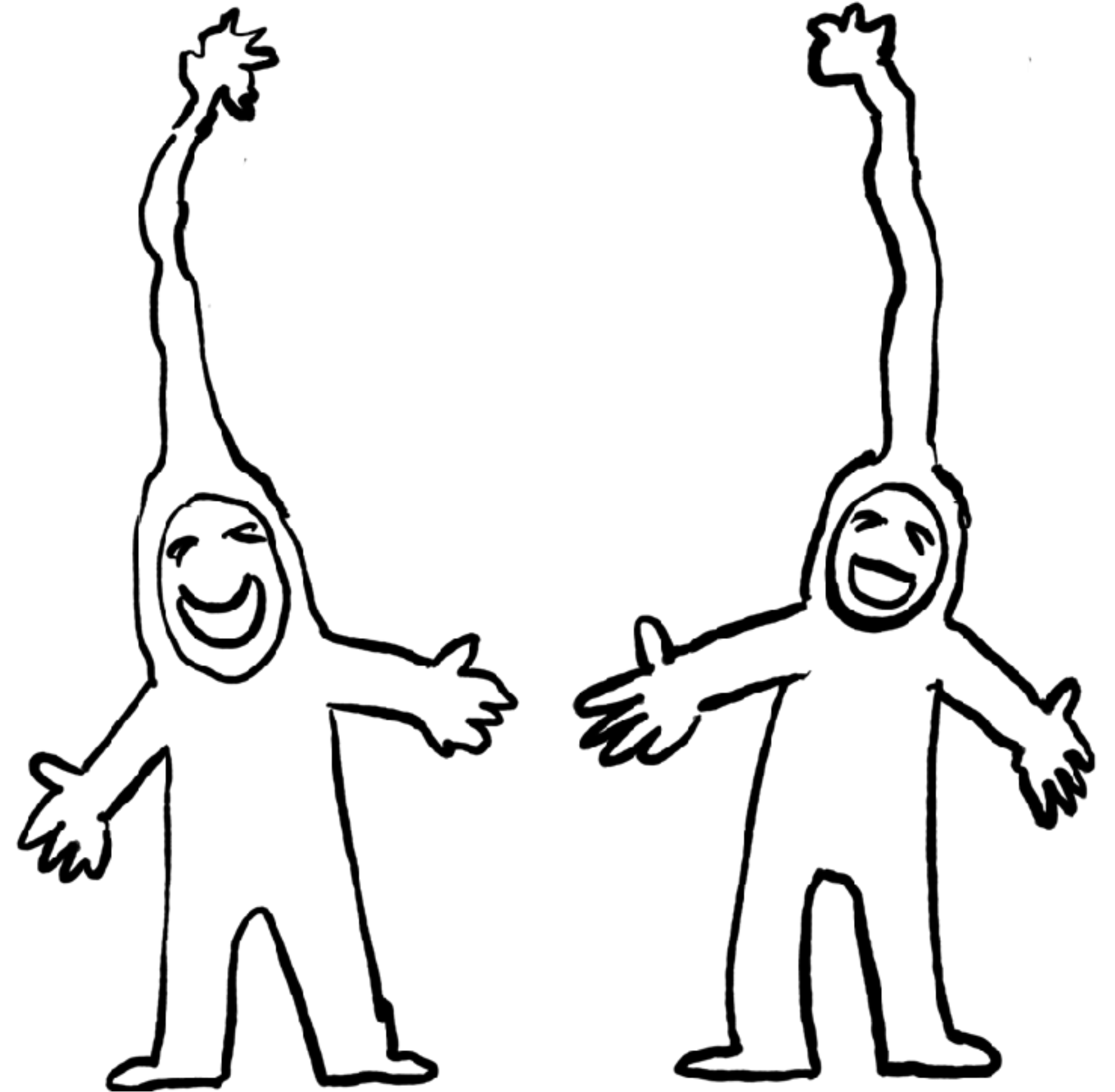
- Insight
- Repetition
- Media

Learning by Repetition

Brain cells connect following a simple rule:

Fire together, wire together

The more frequently this happens, the stronger the connection.

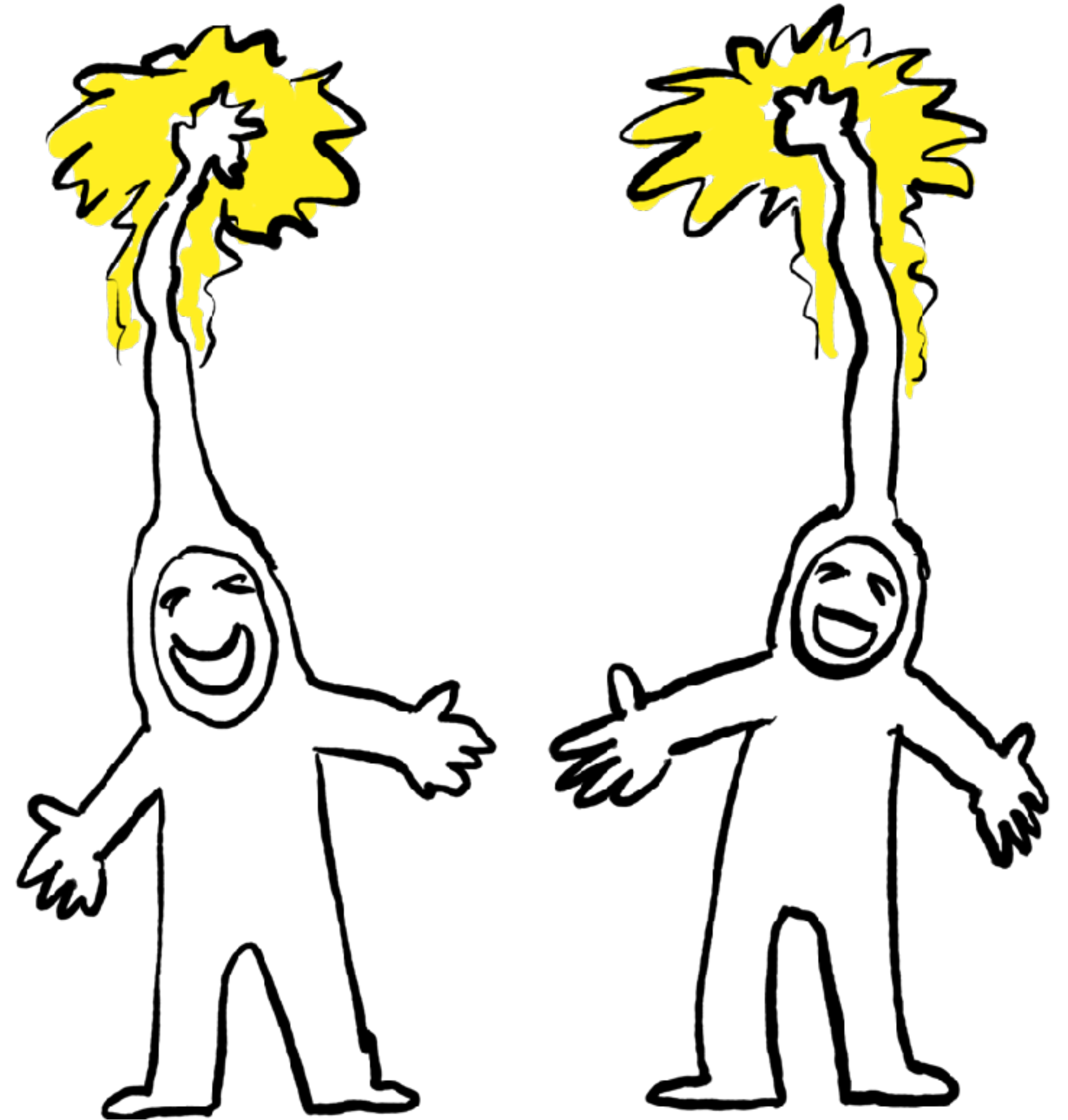


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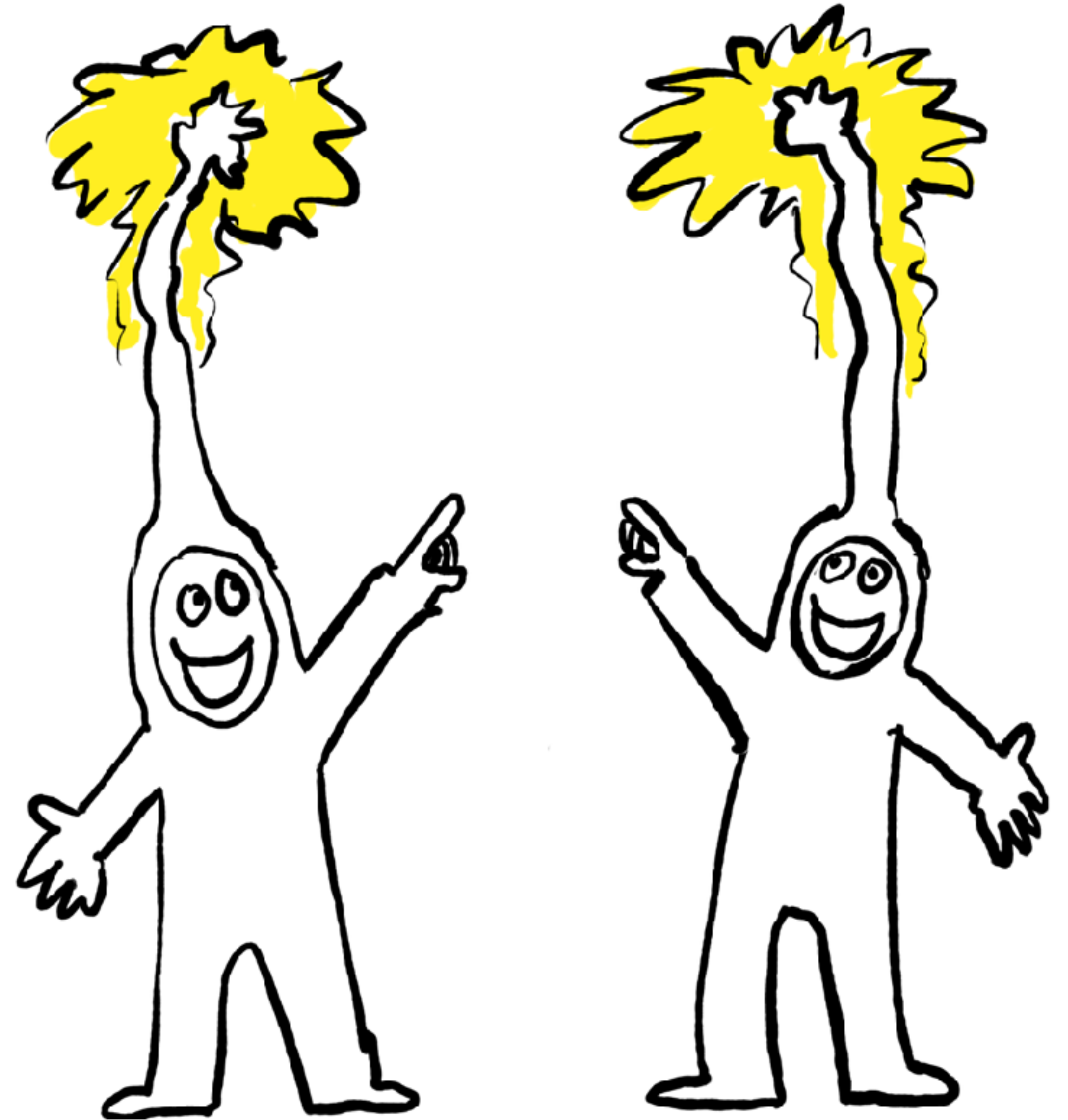


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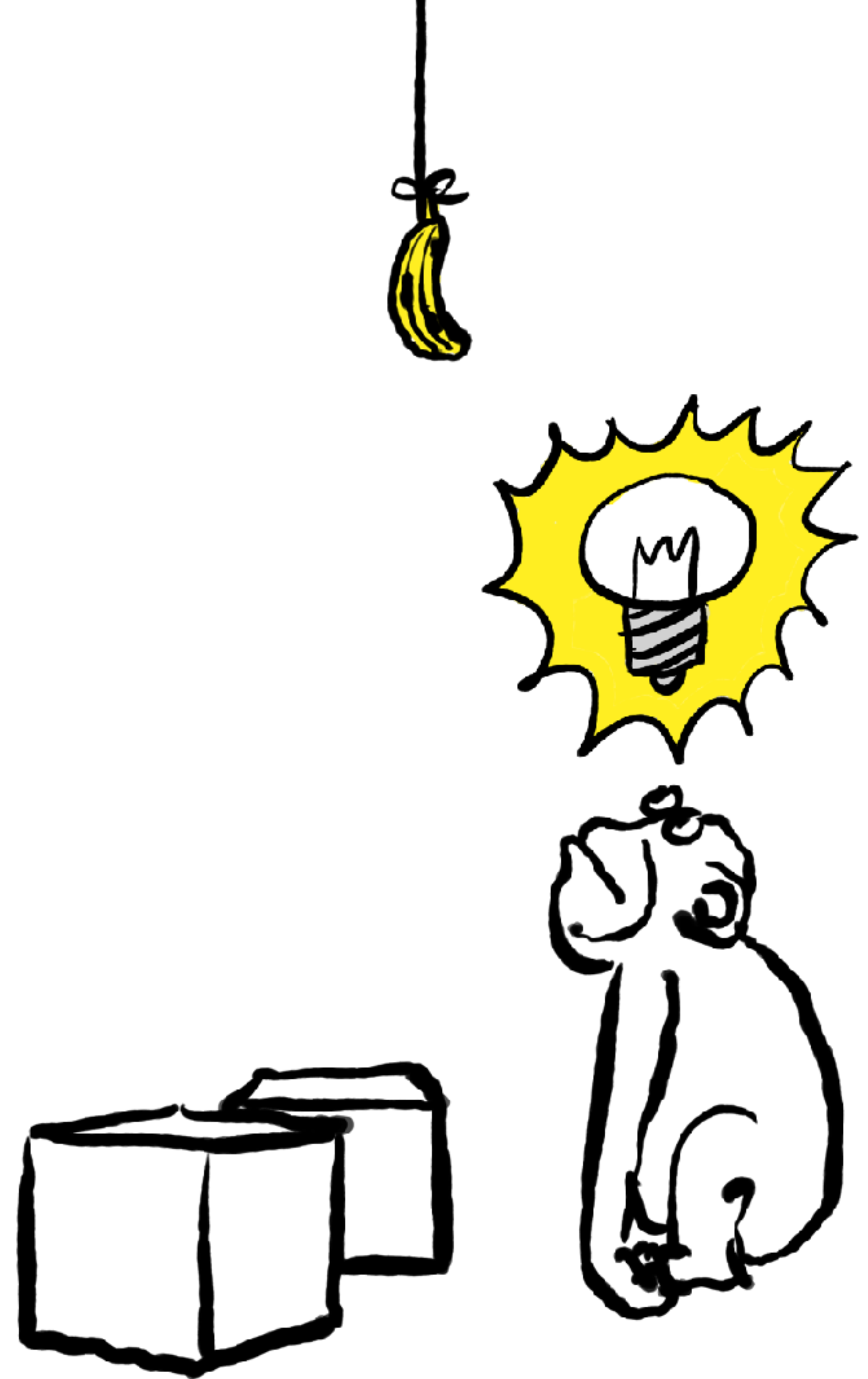
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Learning by Insight

Insight is when you think deeply about a problem, and then make new connections between previously not related items.

This was researched in monkeys and is favoured for teaching students.



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Using Media

Media store knowledge and insight.

- Classroom notes
- Slides given as PDF
- Scientific papers

Students leave behind most of these when turning from study to application.



Goal

This talk aims to give you ideas how to:

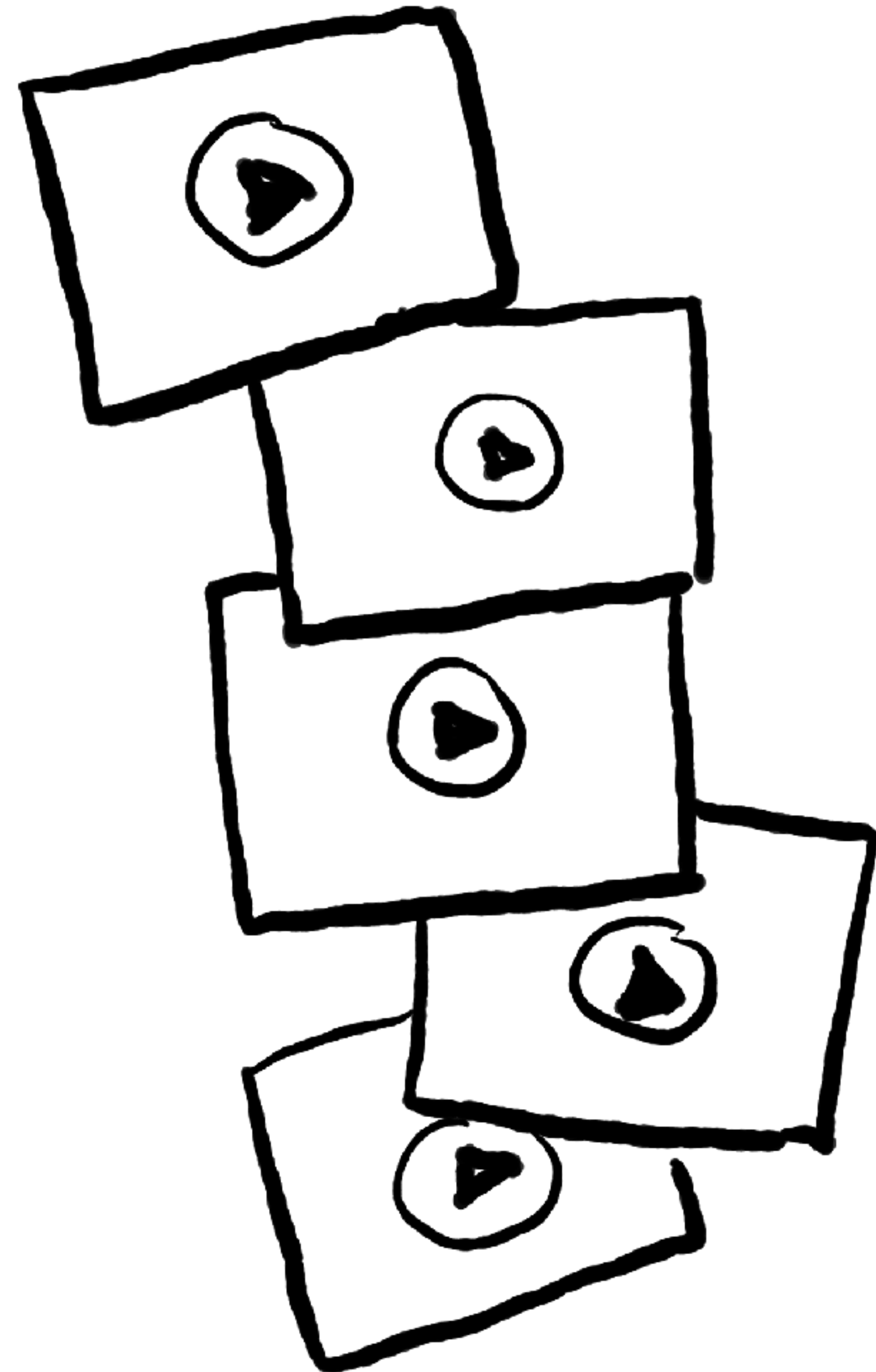
- provide more and better repetition to students.
- couple insight and repetition.
- provide media that students take with them.



What we did

Introduction seminar in education science:

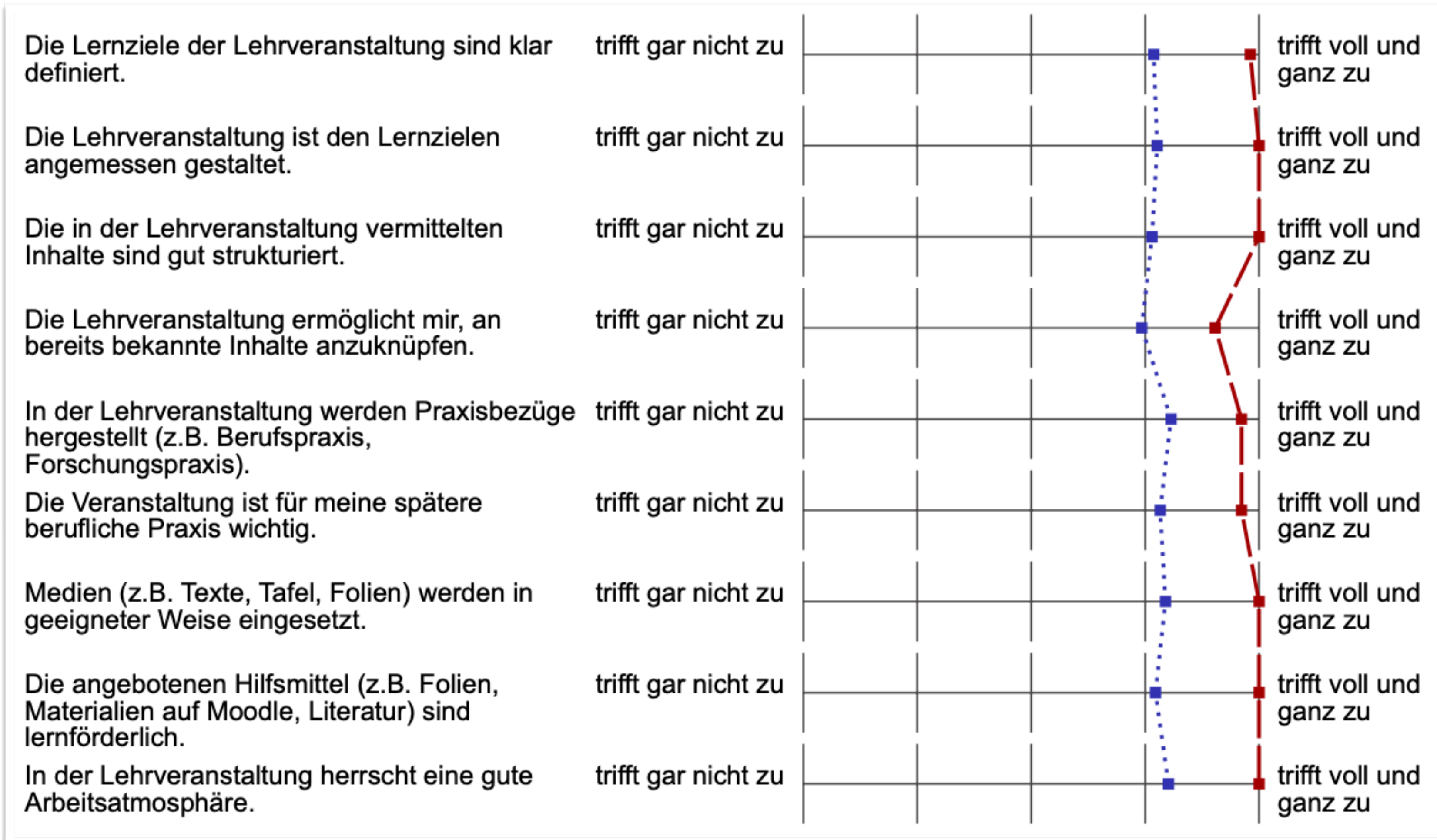
- 10 basic, (mostly) unrelated concepts.
- Reader (150 pages) with a scientific text for each.
- 10+ cartoon videos.



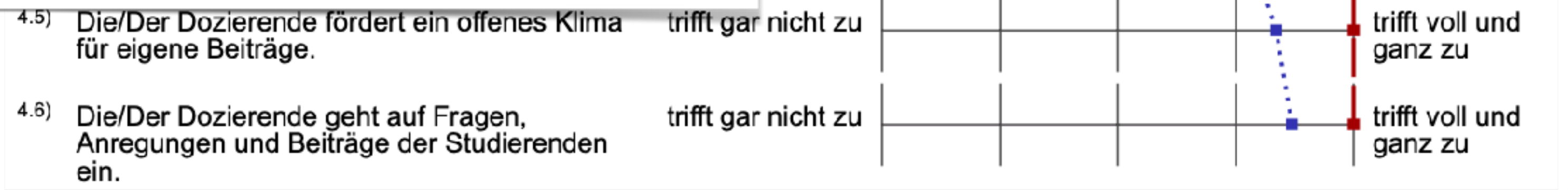
Our videos

What worked

Students liked the course(s)



most recent
evaluation
results



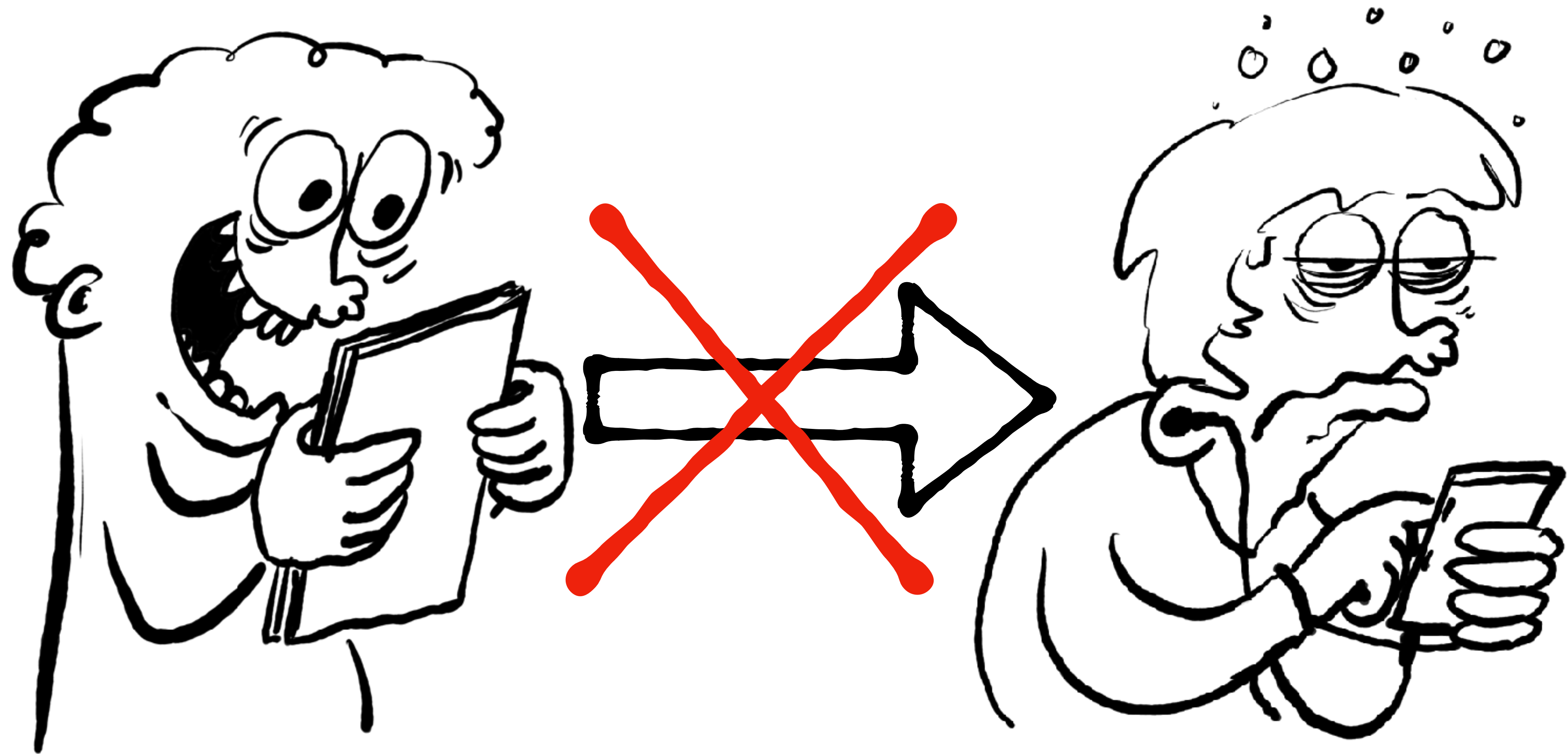
Students were highly motivated



(according to Deci/Ryan)

... probably because they felt more in control of their learning, we were spending more time on what they were good at and they felt more included than by just discussing texts.

Students kept reading the texts



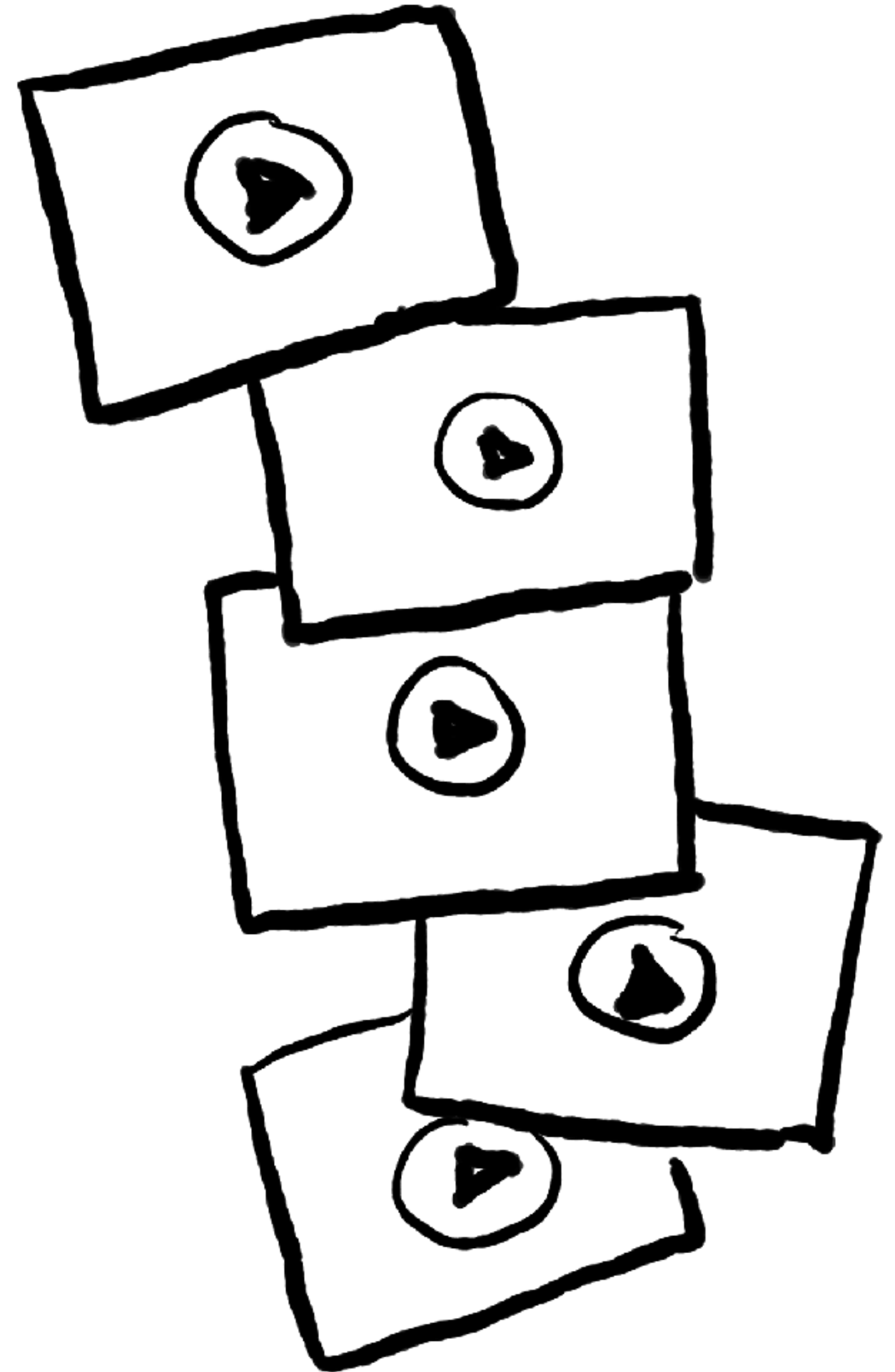
Students did not turn into YouTube zombies.

Almost all students read texts almost all of the time.

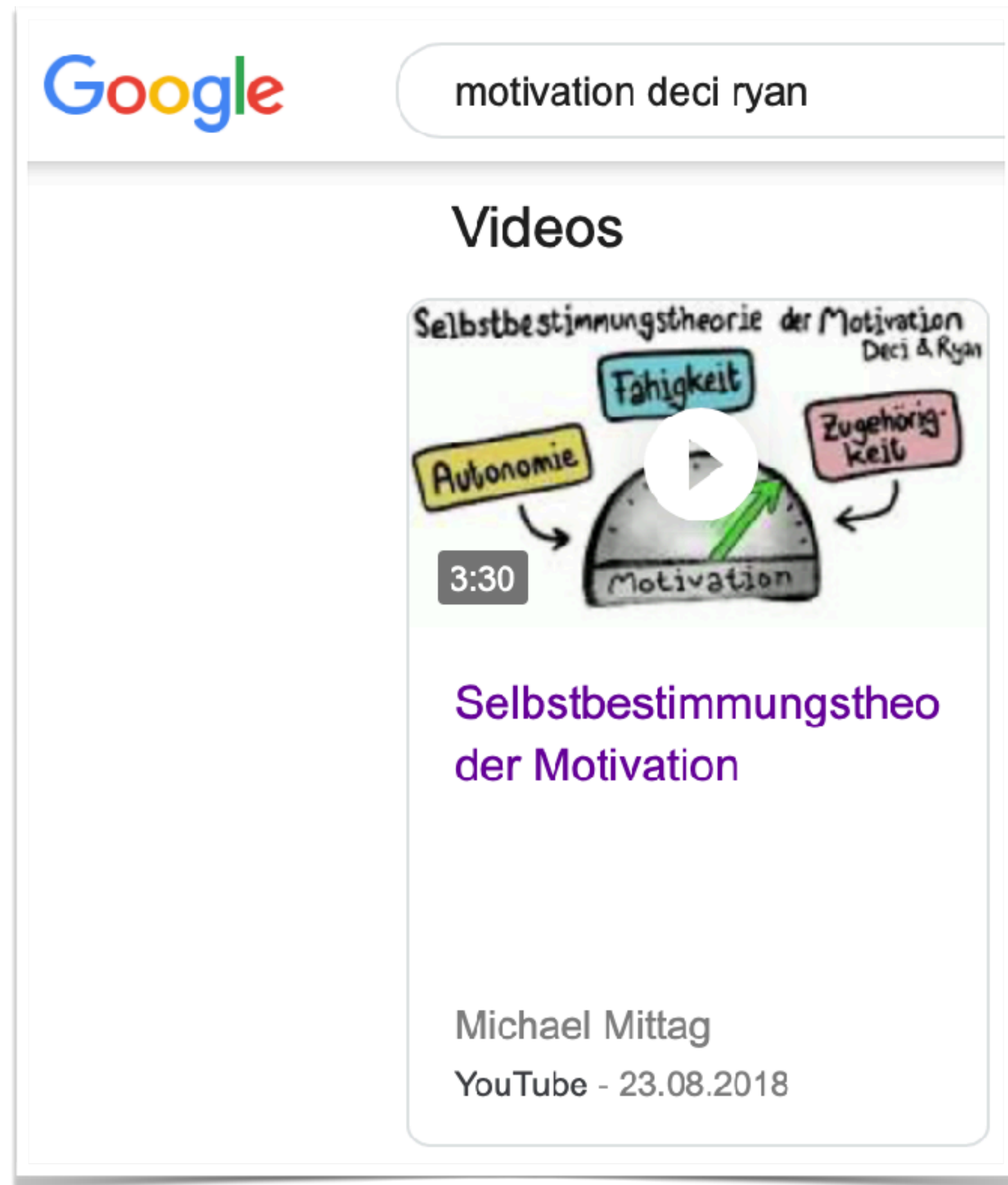
All content was repeated every time

I typically spent the first half hour repeating all the previous content.

In courses that have a more unified content, less is required.



Media & message start to spread



Students tell me that people I don't know use my videos for their courses and for teacher formation ;-)

Former students use my videos to spread messages to their colleagues.

Google starts to notice

What did not (always) work

(Some) exam results

One (bi-weekly) course had highly motivated students, but subpar exam results.

I think we just did not rub the content in sufficiently. That is, students felt they knew more than they did and we did less of the hard work that would have been required.

Buildup of content

The media would allow to carry the messages over between courses.

So anyone could refer back to Deci/Ryan, or Dewey, or parenting styles any time (and refresh if necessary).

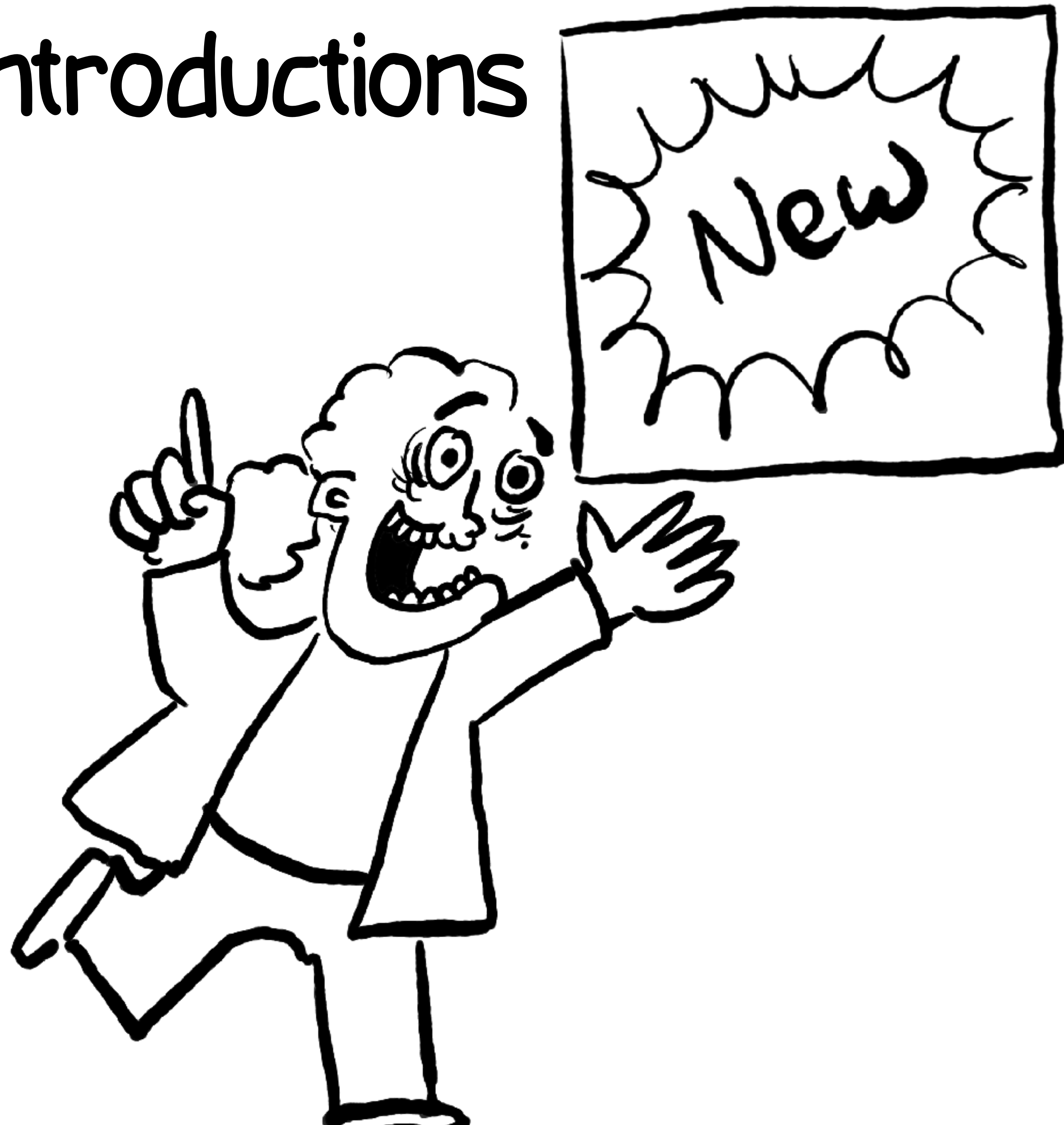
This is a very cool teaching scenario and probably not happening enough.

Lessons learned

Letting go of cool introductions

Most lecturers like to give cool, motivating, well thought-out introductions to new and exciting concepts.

This is now replaced by a three-minute video.



Less „close reading“



A lot of higher education teaching boils down to reading a difficult text closely and finding out what the important message is.

Now the message is in a video.

Less „close reading“



Side note: If you want students to be better at reading academic text, teach them how **you** do it:

- What to read (not everything, not front-to-back)
- How to deal with difficult passages (mostly, skip them)
- How to be done in 10 mins
- How to locate and identify good text

Creating a toolbox of games

- Collection craze: Groups of students write all they know about a subject on a sheet.
- Flyswatter quiz: A B C D quiz with fly swatters.
- Taboo: Hand out concepts, students pair up and explain them to each other.
- Story quiz: Choose you own adventure.
- Your game(s)?



Toolbox of applications

- Application vignettes: Let students debate real-world scenarios.
- Making Plans: Let students describe how they plan to apply what they have learnt.
- „Change something“: Let students change an aspect of their lives.
- Create media: Let students create movies, summaries, Wikipedia entries, cartoons, poetry.



Plan for the long run...

- Ideally, students will encounter your core concepts frequently throughout their studies and their professional life.
- Other lecturers will use the videos to refresh your core concepts. Students will advertise for you.
- If that does not happen, talk to your former students about what they really use from what you taught them.

Plan for the long run...



It's worth the effort. Also, it's the only thing that counts.