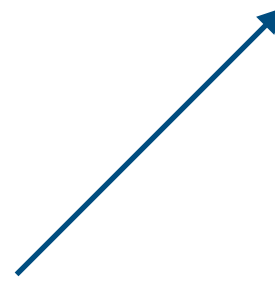


CS-411 Digital Education **Project**

An example

In every circonscription, the person with highest number of votes is elected



In a *first-past-the-post* electoral system
with two political partys
can one party win the elections with less than 50% ?

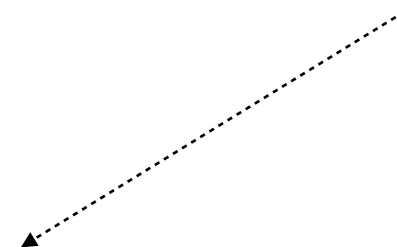
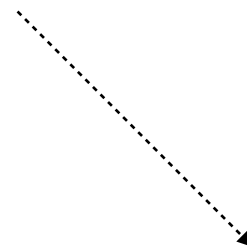
Two approaches

I-PS

- (1) Read the beginning of this page
- (2) Play this game for 10 minutes
- (3) Apply for real for 5 minutes

PS-I

- (1) Play this game for 10 minutes
- (2) Read beginning of this page
- (3) Apply for real for 5 minutes



click on this button

You followed 2 lessons

I-PS: Direct Instruction

1. The teacher tells
2. The students apply

PS-I: A time for telling

1. The students explore
2. The teacher tells
3. The students apply

In your project, you will to develop both
and compare their effectiveness

Topics for your project

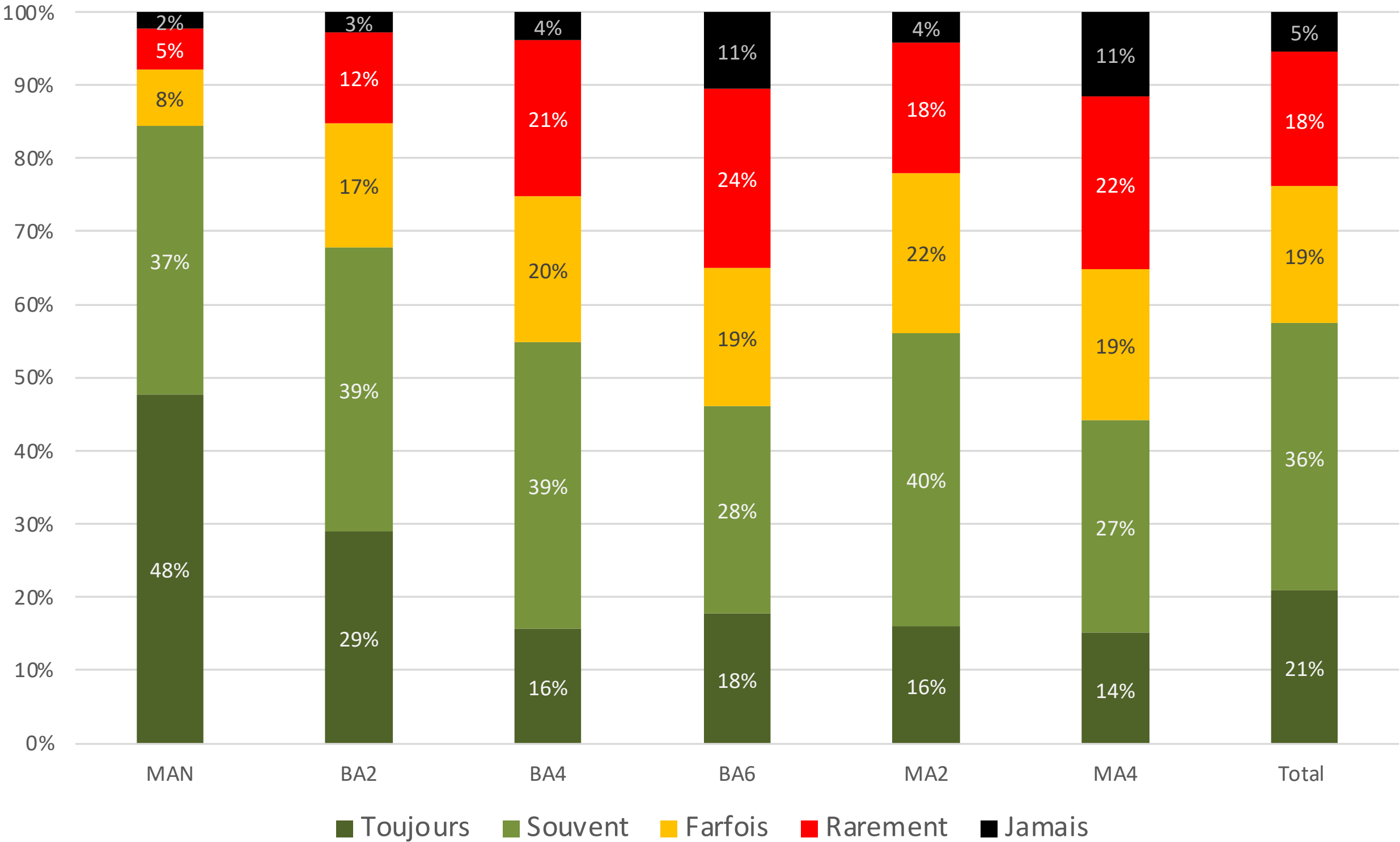
Difficult but discoverable

1. Variable
2. Bayes theorem
3. Recursion
4. Shannon's Entropy
5. Physics' Entropy
6. Local minimum
7. ...
- 8.

Two main difficulties:

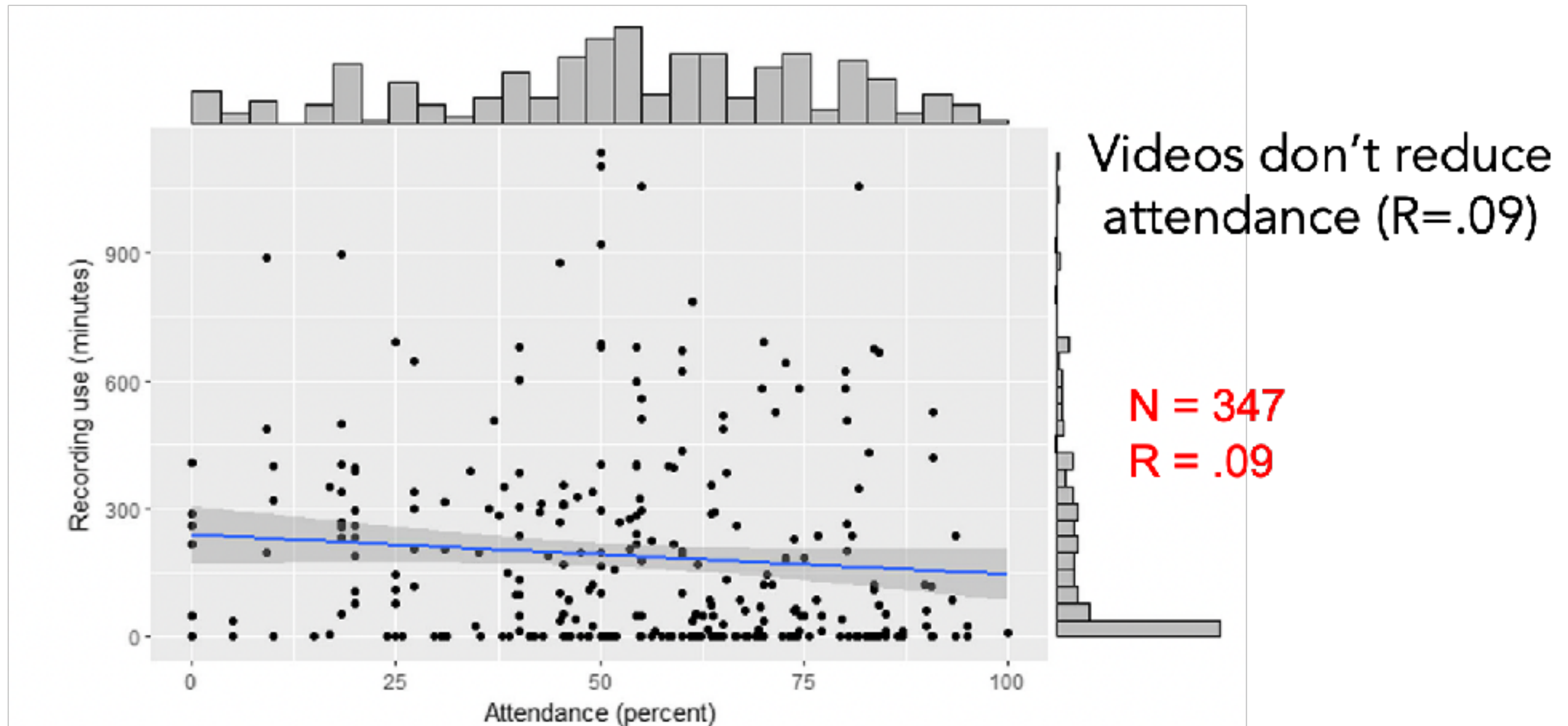
1. Design (and build) the problem solving activity
2. Find subjects for the experiments

Taux de présence (déclaré) selon l'année d'étude



EPFL Digital Strategy

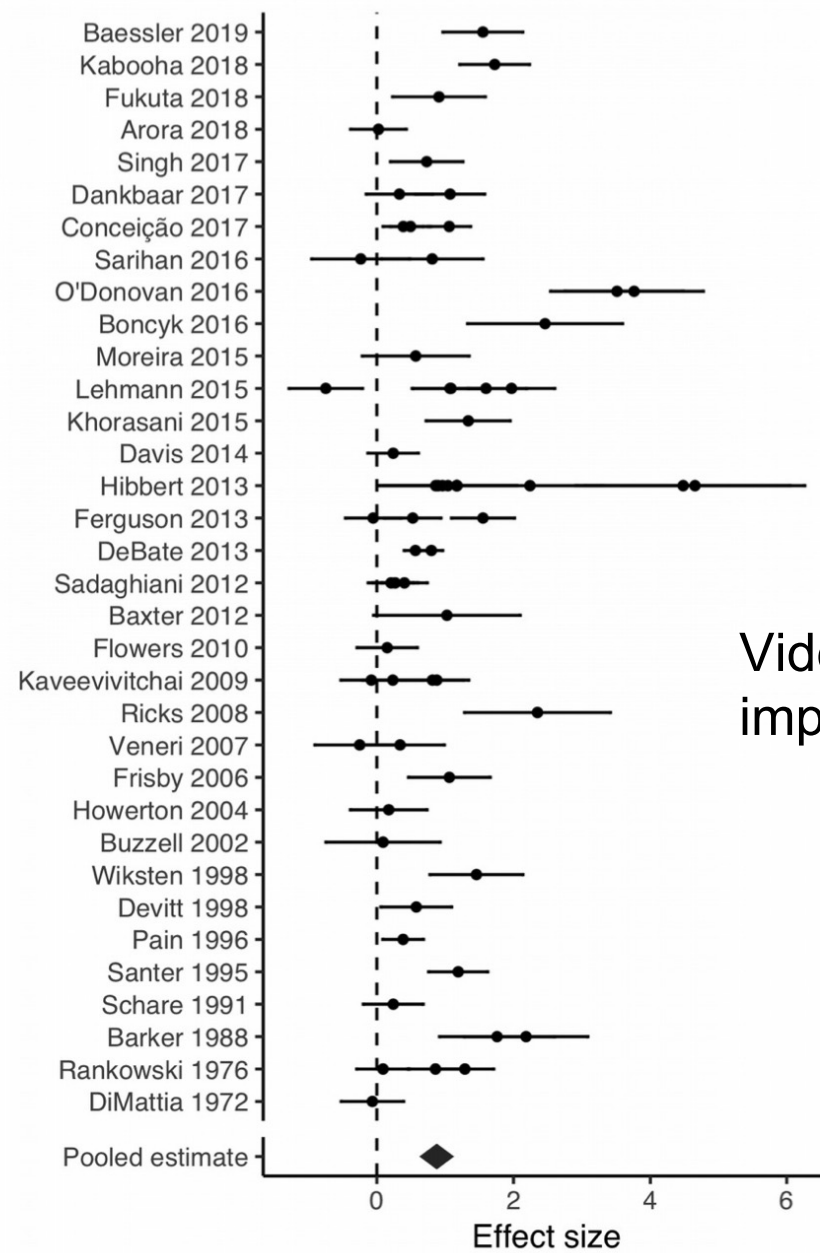
Goal : 80% of course recordings available



Nordmann, E., Calder, C., Bishop, P., Irwin, A., & Comber, D. (2019). Turn up, tune in, don't drop out: The relationship between lecture attendance, use of lecture recordings, and achievement at different levels of study. *Higher Education*, 77(6), 1065-1084.

Figure 3

Effect Size for Each Study That Provided Videos in Addition to Existing Content



EPFL Digital Strategy

Goal : 80% of course recordings available

Videos as a complement
improve learning ($g=0.8$)

Noetel, M., Griffith, S., Delaney, O., Sanders, T., Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Video improves learning in higher education: A systematic review. *Review of Educational Research*, 91(2), 204-236.

1. Education is a data science
2. Technologies have no intrinsic effect
3. We don't « believe » in effects, we measure them

Project 411

- Develop & Implement
- Test with learners
- Compare - statistical analysis
- Report

All instructions in Moodle

See you in INM 200 at 10:15