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① WHICH UNIT TO FLIP FIRST

Pick the unit your students historically struggle with most — the one where you lose half the room in the live lecture. That's your first flip. Commit to one unit, not the whole course.

The rule:

Flip one unit. Get it stable.
Then flip the next one.

② VIDEO LENGTH RULES

- ▶ **One concept per video.** Not two, not a unit overview — one thing.
- ▶ **5–10 minutes maximum.** If it runs over, split into Part 1 and Part 2.
- ▶ **Check retention analytics.** The drop-off point = where to cut.
- ▶ **Test it first.** Have a struggling student watch and tell you where they got lost.

③ REDESIGN CLASS TIME

The video moves the lecture out of class. Now class time is for the hard part — application, problem-solving, peer work. **Don't fill it with review.** Start with a 1-minute warm-up problem. Then work.

Accountability loop (pick one):

- 1-min warm-up problem
- One-question entry ticket
- Quick partner check-in

④ 5 MISTAKES TO AVOID

- 1 ~~Flipping all your courses at once.~~
✓ Flip one unit. Get it stable first.
- 2 ~~42–45 min videos.~~
✓ One concept, 5–10 min max.
- 3 ~~Treating the flip as content delivery.~~
✓ Redesign class time — or the model does nothing.
- 4 ~~Assuming students will watch.~~
✓ Build a visible accountability loop. Not punitive.
- 5 ~~Teaching math the way you learned it.~~
✓ Have a struggling student watch first. Re-record from where they get lost.

THE RESEARCH

2016 Springer RCT — n=91, p<.05

Statistically significant performance gain in high school algebra. Positive attitude shift toward math. Peer-reviewed, randomized controlled trial.
Esperanza, Fabjan & Toto (2016). Springer LNCS Vol. 9894

⑤ YOUR 7-DAY STARTER PLAN

DAY 1

Watch

Watch a Numberbender video the way a student would. Could you make something like this?

DAY 2

Pick

Choose one unit. Write down its 3–5 concepts. Each one = one video.

DAY 3

Write

Pick the easiest concept. Write your whiteboard explanation. Time it. Under 10 min?

DAY 4

Record

Open your laptop camera. Record once. Don't redo it for small flubs. Done.

DAY 5

Watch yourself

Watch your video back. Note one unclear moment. That's your edit note.

DAY 6

Upload

Post to YouTube (Unlisted). Send to one student. Ask where they got confused.

DAY 7

Use it

Send the link the night before class. Run class as practice on that concept.

After 7 days you have:

- One video
- One redesigned class period
- A real data point on whether the model fits

FREE RESOURCES

youtube.com/c/pedrothenumberbender

330K+ subs · bilingual

■ youtube.com/c/numberbenderEN

English-only · global

■ **The Power of the Flipped Classroom**

Free Apple Book

■ flipped-classroom-math.html

Full guide on numberbender.com