Flipping CORE? The Good, The Bad and The Ugly

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Flipped Learning

A **pedagogical approach** in which **first contact** with new concepts moves **from the group** learning space to the **individual** learning space in the form of **structured activity**

- Lessons are transformed into **dynamic**, **interactive, collective** learning experiences
- Educator **guides and challenges** students as they apply concepts and engage **creatively** with the subject.

Flipped Learning is …..

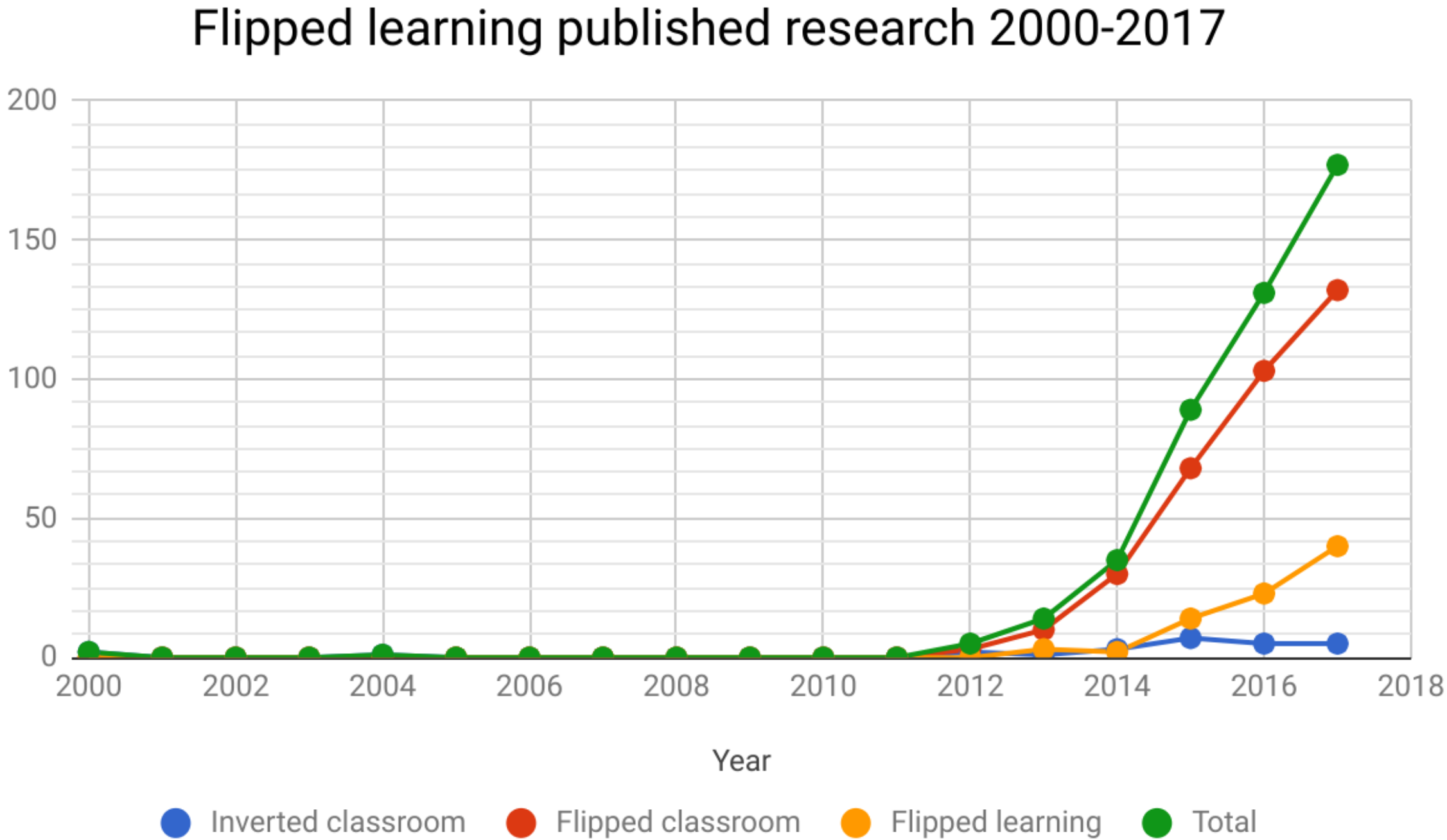
- Focusing on learning not ‘classrooms’ nor ‘teaching’
- Embracing self-study with structure
- Focusing on active learning both in and but especially out of the classroom
- Technology neutral

Flipped Learning is NOT …..

- Simply giving students readings/homework to complete before class
- Giving students videos to watch, exercises to do and coming to lectures to ask questions
- Rehashing old content in a new high tech platform
- A quick fix – FL takes several interactions to work well

Examples of Recent Literature Reviews

- Bishop, J. L., and Verleger, M. A. (2013), “The flipped classroom: A survey of the research,” Paper presented at the 120th American Society for Engineering Education Annual Conference and Exposition, Atlanta, GA, 2013
- O’Flaherty, Jacqueline & Phillips, Craig. (2015). The use of flipped classrooms in higher education: A scoping review. The Internet and Higher Education. 25. 10.1016/j.iheduc.2015.02.002.
- Akçayır, Gökçe & Akçayır, Murat. (2018). The flipped classroom: A review of its advantages and challenges. Computers & Education. 126. 10.1016/j.compedu.2018.07.021.



http://rtalbert.org/what-does-the-research-say/

con

How does FL impact **student outcomes**?

- Most studies show greater gains in (several alternative) measures of learning when compared with traditional teaching (or else the differences are not statistically significant)
- Effect size is modest
- Very few reports of FL students doing worse than traditional classes

How does FL impact **student engagement**?

- A lot of studies report **increased attendance**
- Whether students do the self-study activities or not: results vary widely and depend on the implementation
    - Completion rates are tied to structure, integration and whether it is part of summative assessment or not

What about **student preferences and attitudes**?

- Perceptions of FL are somewhat mixed, but are generally positive overall
- Students show higher satisfaction with FL and active learning once FL is in place
- Students express satisfaction with increased group work, more interaction, ownership of the learning process.

BUT

- **Students often negative about FL when first introduced**
- Persistent minority have **strong negative views** even when acknowledging increased group work, more interaction and better grades.

What about ????

FL in introductory classes Vs. FL in advanced modules?

FL in UG Vs. FL in PGT?

High tech Vs. Low Tech?

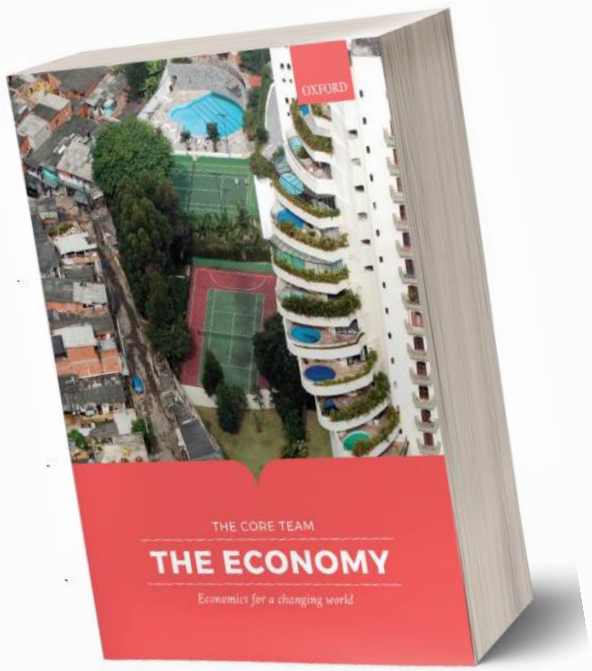
Research shows no significant differences in outcomes

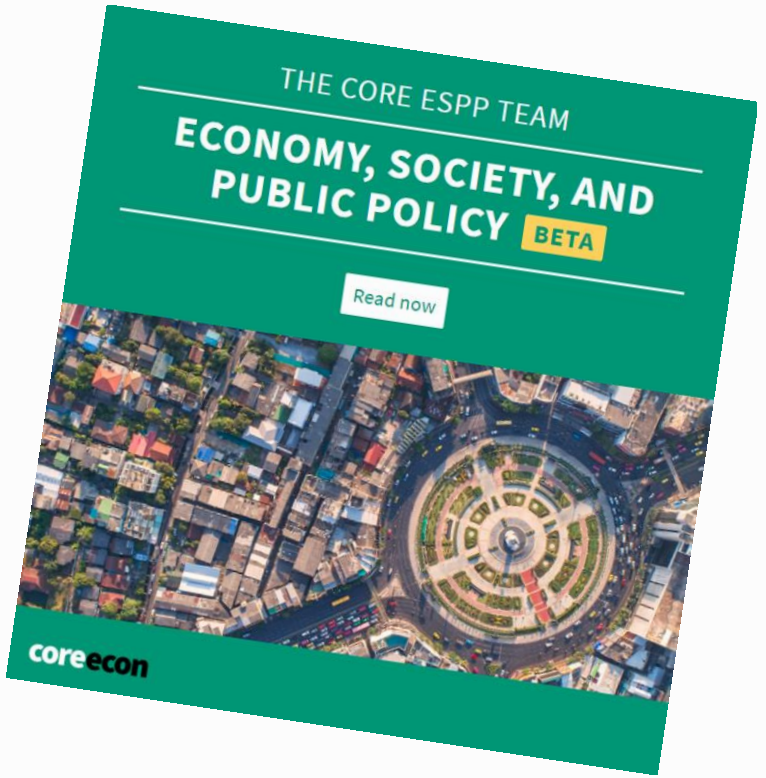
My Experience of FL

Motivation:

- First year students often dissatisfied with the teaching of introductory course of economics
  - Students with A-level Economics often **bored** as module greatly overlapped with high school syllabus
  - Very large, heterogeneous classes made it hard to pitch at the right level

"I used to love Economics until I got to University – now I hate it"





Free online,
go to www.core-econ.org

What is the most pressing issue that economists today should address?

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New graduate recruits Bank of England, Tuesday 27th September 2016

University of Exeter,
24 September 2018 (Cohort 1)

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Core Approach

- New content (institutions, power, incomplete information, etc) and
- New problems (inequality, climate change, wealth creation, instability, etc)
- New analytical way to teach the content
- New way for students to interact with the content (online, multimedia, experiments, etc)
- New way for instructors to interact with students

How it was implemented

- 465 students (economic minors) from 8 programmes (FCH, Geography, PPE, BusEcon, AccFin, BusAcc, Liberal Arts and EcPol)

- Decided on **Partial Flipping** as research shows **(e.g. Lombardini, Lakkala and Muukkonen (2018)) that** students outcomes are better (and student satisfaction is higher) when compared with full flipping.

How it was implemented

- 2 weekly lectures + fortnightly tutorials

- Summative Assignment
  - Average of 19 homework tasks = 16%
  - Final Exam = 84%
    - MCQs with multiple correct answers
  - 2 empirical (Excel) individual assignments = 0% (Pass/Fail = compulsory)

The Good

- Much higher attendance
- Students were generally very positive about the topics covered and the material (book), homework, empirical assignments.
- Vast majority of students did the pre-reading and completed homework before lectures
- I did not need to ‘cover’ everything in lecture

The Good

- Students reported studying a lot more for this module than other modules (up to 3x on average)
- Students enjoyed experiments run in class (but not the computer based ones)
- Students enjoyed guest speakers and videos shown in the lecture
- Hardly no one stated (2 students) they found the content boring (major complaint in previous years)
- Module was fun to teach

The Bad

- Most negative comments related to the lack of previous exams, lack of a bank of practice exercises, etc
- Consistent calls for the need for more tutorials
- Some students complained that lectures overlapped too much with textbook (but most thought the balance was right)
- Some students complained about too much homework and too many Excel assignments (but most made positive comments about it)

The Ugly

- Class very heterogeneous with the same thing being mentioned as excellent and as poor (e.g. homework, empirical assignments)
- Small number of students with A-Level Economics complained the content was not what they expected (it did not build on their prior knowledge)
- Poor quality of some teaching assistants mentioned often
- Some students wanted more Maths content
- Double teaching of lectures in vastly different size groups made teaching consistency (and providing good student experience) difficult

What's next?

- Introduce weekly tutorials (and some Excel teaching in class)
- Find TAs and train them before the start of term
- Not use computer-based experiments in lecture theatre
- Introduce CORE for Econ Majors this year with high Maths content

Conclusion

- FL is not just offloading old content in a new format
- Structured student activity and active learning techniques are crucial for success
- Full FL incurs a major costs in time and effort - partial FL can be implemented gradually (and less costly) and seems to yield better results
- FL Instructors need support (time, training, risk abatement)
- FL requires more not less resources (more TAs, more activities, etc)
- FL is worthwhile investment and (initial) research suggests students perform better in the long term in their key skills (in Economics)