

Accommodating MOOCs into HEI

is blended learning the solution?

Juan Antonio Martínez (Juanan.Martinez@uab.es)

IT Planning Area – IT Directorate

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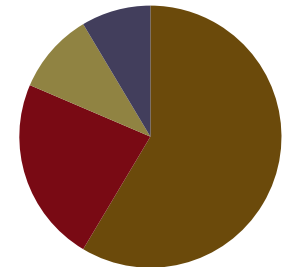
- A previous word on this presentation
- Strategy: can MOOCs fit (or even help)?
- Costs of teaching: MOOCs & classical
- Blended learning: a real experience using MOOCs
- Back to strategy
- Conclusions

A previous word on this presentation

- First of all, let's focus: the topic is too broad!
 - “Very interesting paper about **MOOC costs** and SPOC **acceptance by students** in the university”
 - “(...) **overstating the impact** MOOCs have on HE. It is no way certain Universities will be **forced to develop MOOCs** (...). The paper rightly points out MOOCs may generate innovations in online learning (...). It would **generate debate.**”
 - (...) Universities are facing the question **MOOCs yes or no, and if so why and how?** The experience will be of great interest especially regarding the impetus it gives to **flipped learning**(...)”
- ... and we've got 20 minutes!



Strategy

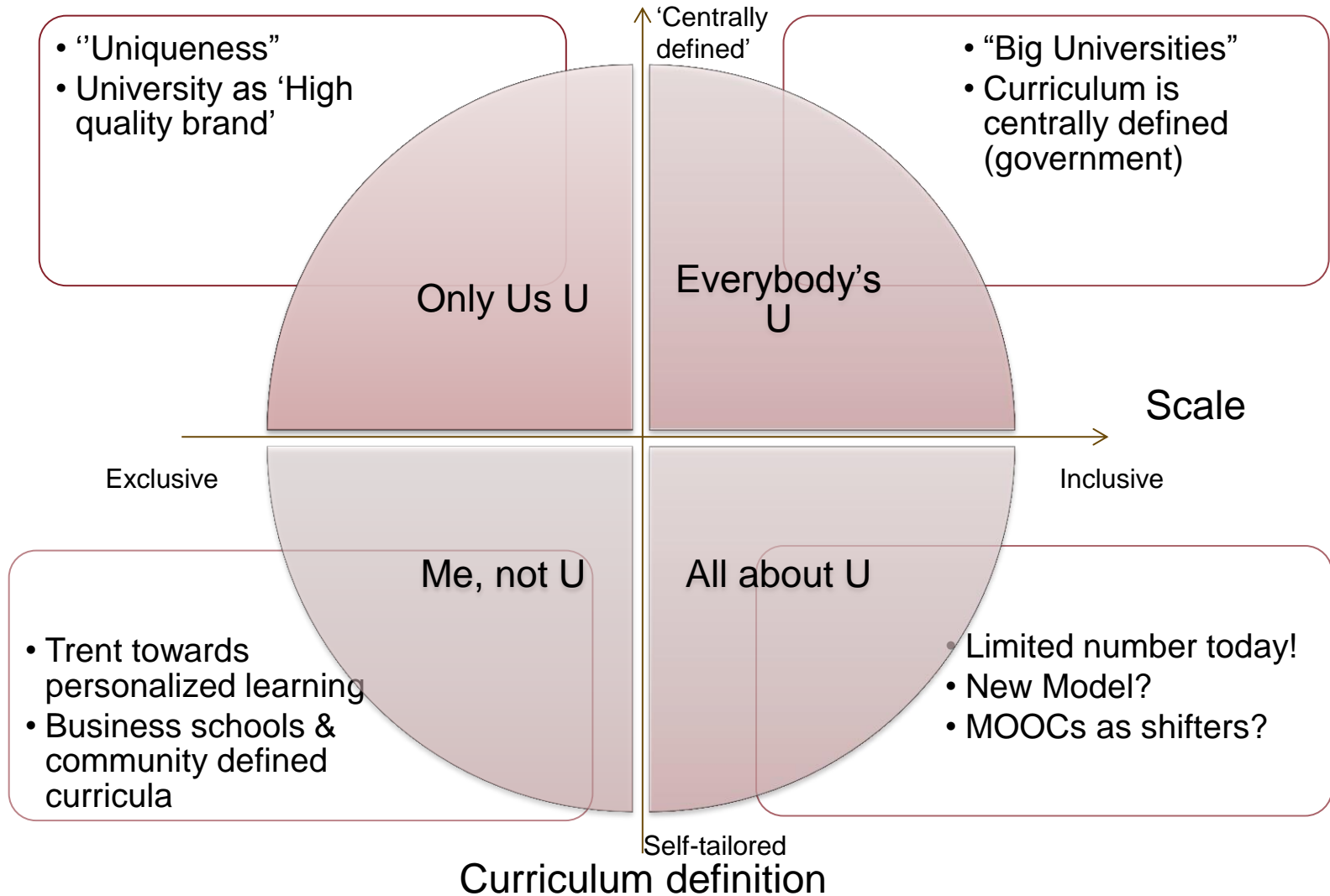


Costs



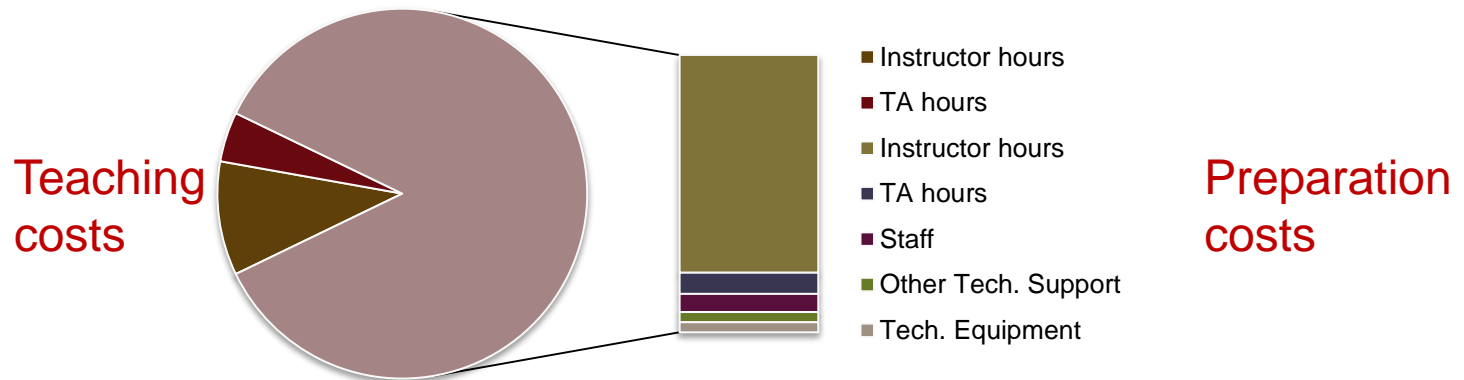
Learning experience

Strategy: can MOOCs fit (or even help)?



Costs of teaching: MOOCs

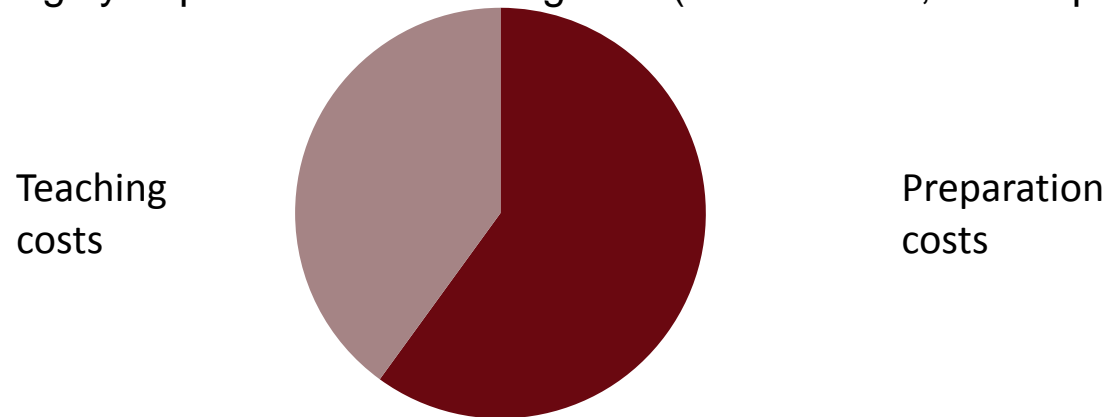
- Cost can vary highly: you can have 'domestic videos' or complex audiovisual products
- We'll assume a theoretical "cost-unit" (CU) as *currency*. As a reference, we'll consider one hour of teaching has a cost of 100 CUs. Costs of other profiles have been estimated proportionally (i.e. technical staff is considered to have a cost of 60 CU/hour)



- Real costs depend on recording model and real university profile costs. According to our data, cost-range is [35k€-75k€] for an 8-week MOOC depending highly on audiovisual complexity. Please note MOOC requires a remarkable initial effort (almost 70% of cost) to create and around 30% - even less! - to run further sessions

Costs of teaching: classical

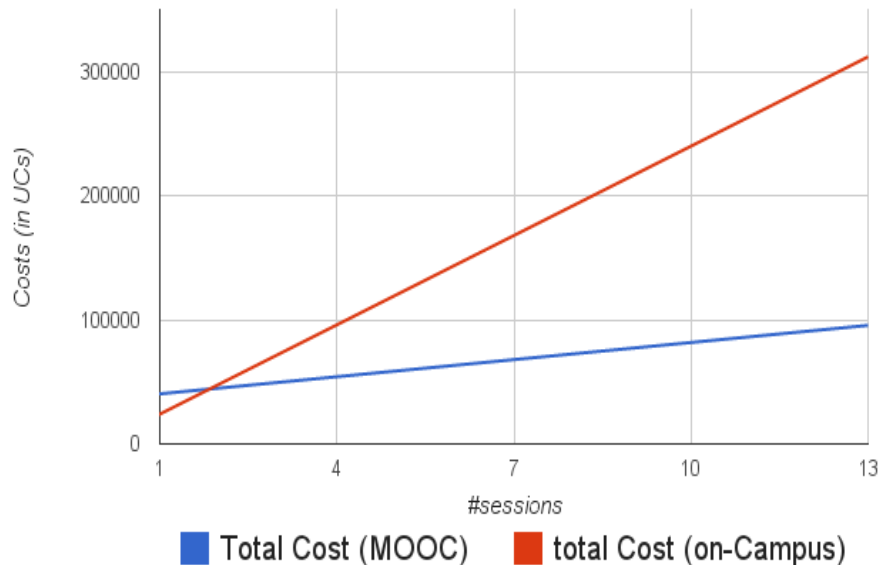
- Same costs assumptions as in the MOOC case in order to compare. In addition, we have assumed an 8-week course in order to be able to compare numbers.
- While teaching costs are directly computed from teaching hours, preparation costs are based on the ratio defined in the university teaching model. This ratio depends on factors such as group size, complexity and typology of the subject, but it's around 1,5 for most cases. Costs are highly dependent on teaching staff (in our model, as unique factor)



- At a glance, it's easier to prepare a 'classical' course than a MOOC – and that means lower cost- . On the other hand, it's more expensive to teach, as more instructor hours are required, and also more expensive to repeat. For simplicity, we have not considered costs such as space allocation or teaching equipment for the classical model.

Cost comparison

MOOC vs Classical teaching costs

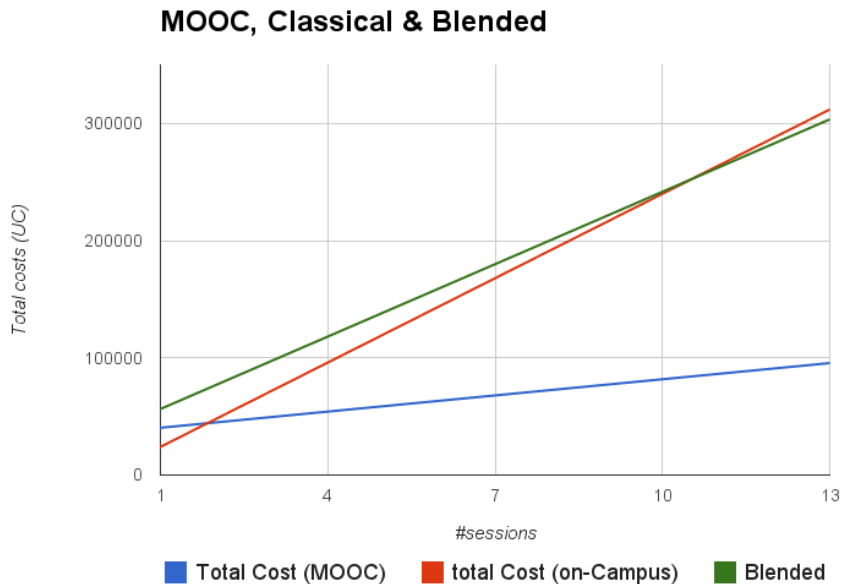


- MOOCs have costs. Obvious, but important
- Traditional learning has lower preparation costs, but repeating the course has higher costs.
- In the mid-term (3rd edition of the course) the MOOC based approach is cheaper, as long as we focus on MOOC model
- We focus only on on-campus costs&benefits. We are not considering (nor computing) social return, but no doubt it's a factor to think about (remember universities have also a social role)
- How does this fit inside Campus strategies? Is shifting towards MOOC a way for (mid-term) cost-reduction?

Let's pause for a while...

- First,... one of the goals was to generate debate (just anticipating...)
- Universities have dedication models. Should we review (or at least, think about) them?
- Which of your universities pays or simply computes (besides the dedication model) costs for creating:
 - Power point slides?
 - Quizzes for students?
 - Specific materials?
 - Video tutorials for students?
- Can MOOCs/SPOCs be considered a set of the above?
- OK, let's assume it's a hard work for teachers... But what do students think?
- In case of conflict, should we care about teachers... or about students?

Blended approach in numbers



- If you think blended and flip classes, you can get (a) quality in teaching and (b) dilution in costs
- The graphic is based on the analysis of a subject with 3 hours/week (2 theory+1 problems) shifted to 1 theory + 1 problems +MOOC work
- In the long term, costs of MOOC creation get absorbed when thinking blended
- Anyhow, we think of blended learning not as cost-reduction tool but as on-campus teaching quality-improvement tool
- And forgetting (or not) costs, what about student satisfaction?

Perceived quality in blended learning: defining the test

■ Scenario:

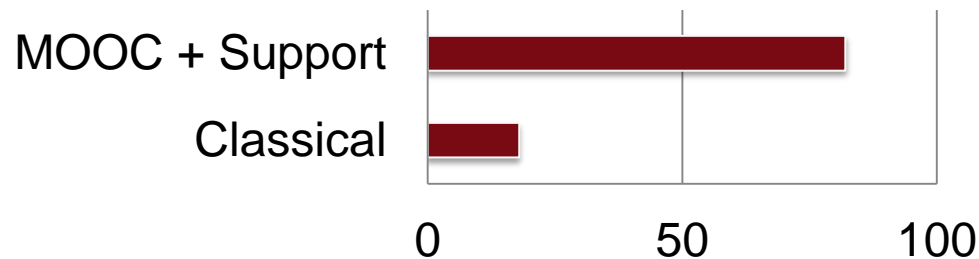
- Coursera MOOC on Digital Systems, running integrated with on-Campus subject (400 students, who enroll the MOOC)
- Bilingual course: you can follow it in either Spanish or English
- Teacher 'flips the classroom': 'master classes' via MOOC
- Not used for cost reduction, but for group size reduction
- Passing the MOOC does not mean passing the subject

■ Questions to solve:

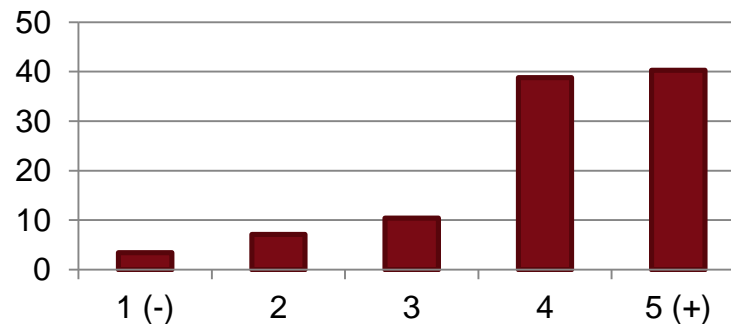
- Better MOOC or 'classic format'?
- In either case, why?
- Impact on qualifications?

Blended learning: experimental results (I)

- If you could choose either following the subject in classic format (2h theory+ 1 h problems) or MOOC format (video support+1h support class+specific doubts + 1h problems) which would you choose?



- Evaluate your experience in this 'MOOC format' (being 1 negative and 5 positive)



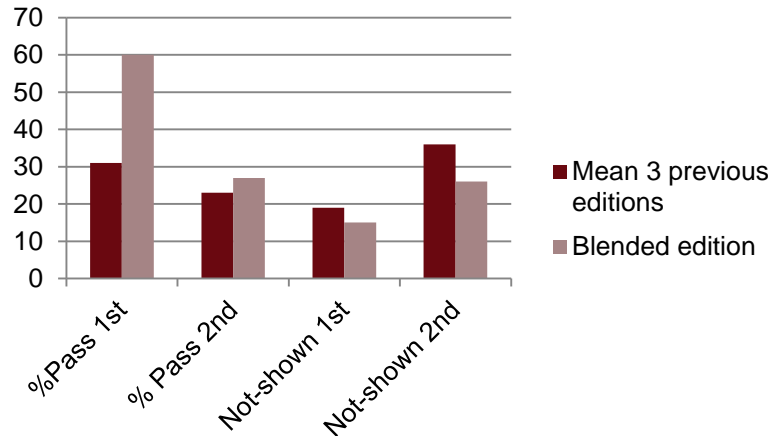
Blended learning: experimental results (II)

- But... why do students like MOOC format?
 - Being able to review videos as many times as expected (score 4,6 ; 74,9% score 5)
 - Being able to watch explanations anytime and in different devices (score 4,6 ; 74% score 5)
 - Getting immediate results of the quizzes (score 4,6; 75,8% score 5)

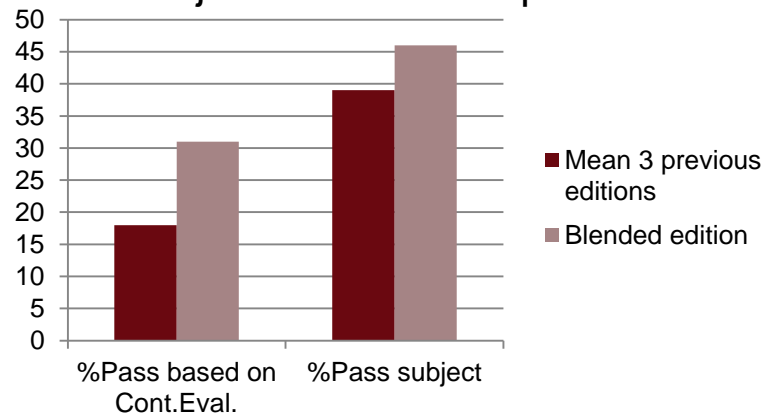
- And on the other side... :
 - Have forums where I can solve doubts thanks to thousands of people interested in this topic around the world (score 3,2; 24,2% score under 3)
 - Having small-sized support classes that support the MOOC (score 3,4; 19,4% under 3) !!

Blended learning: experimental results (and III)

Intermediate tests results

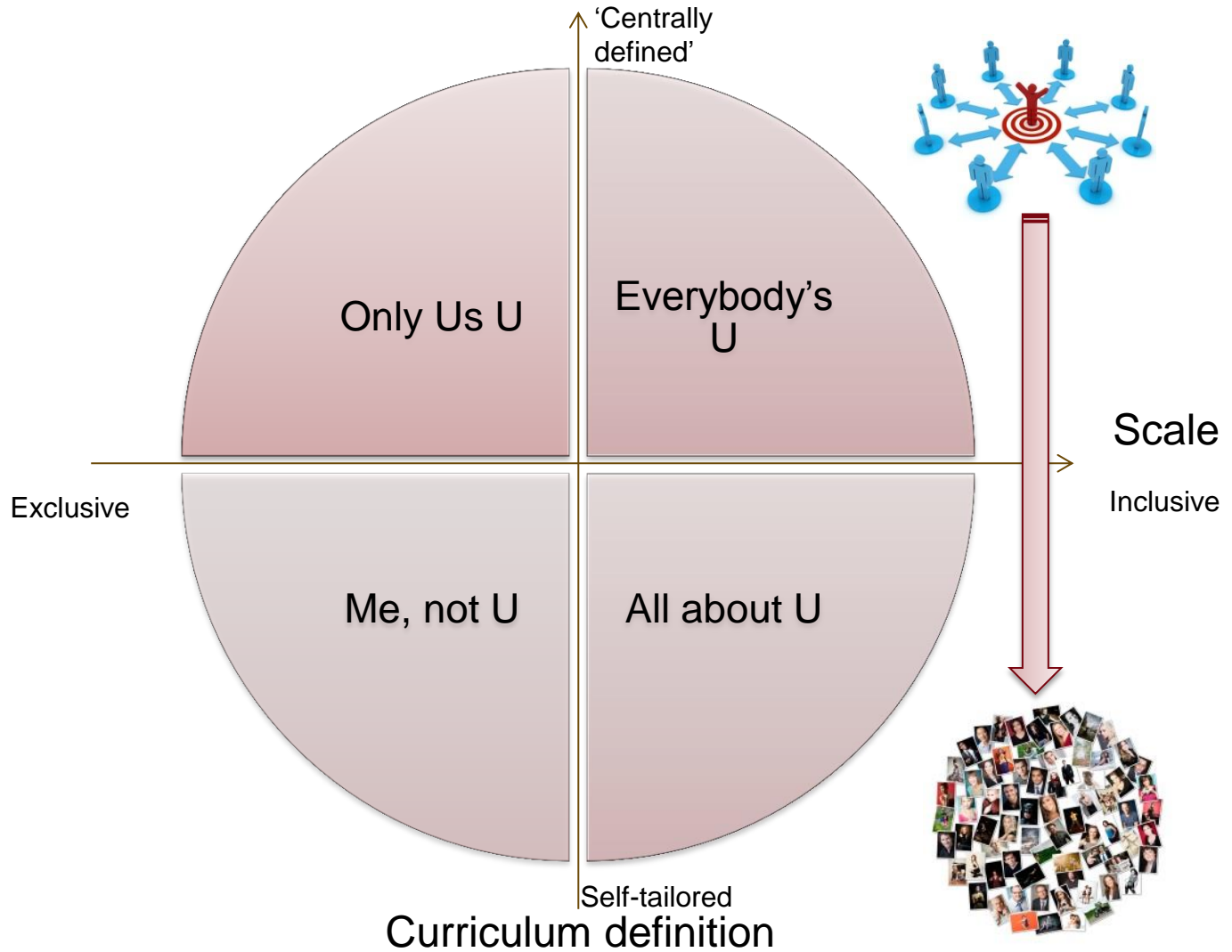


Subject Pass % Comparison

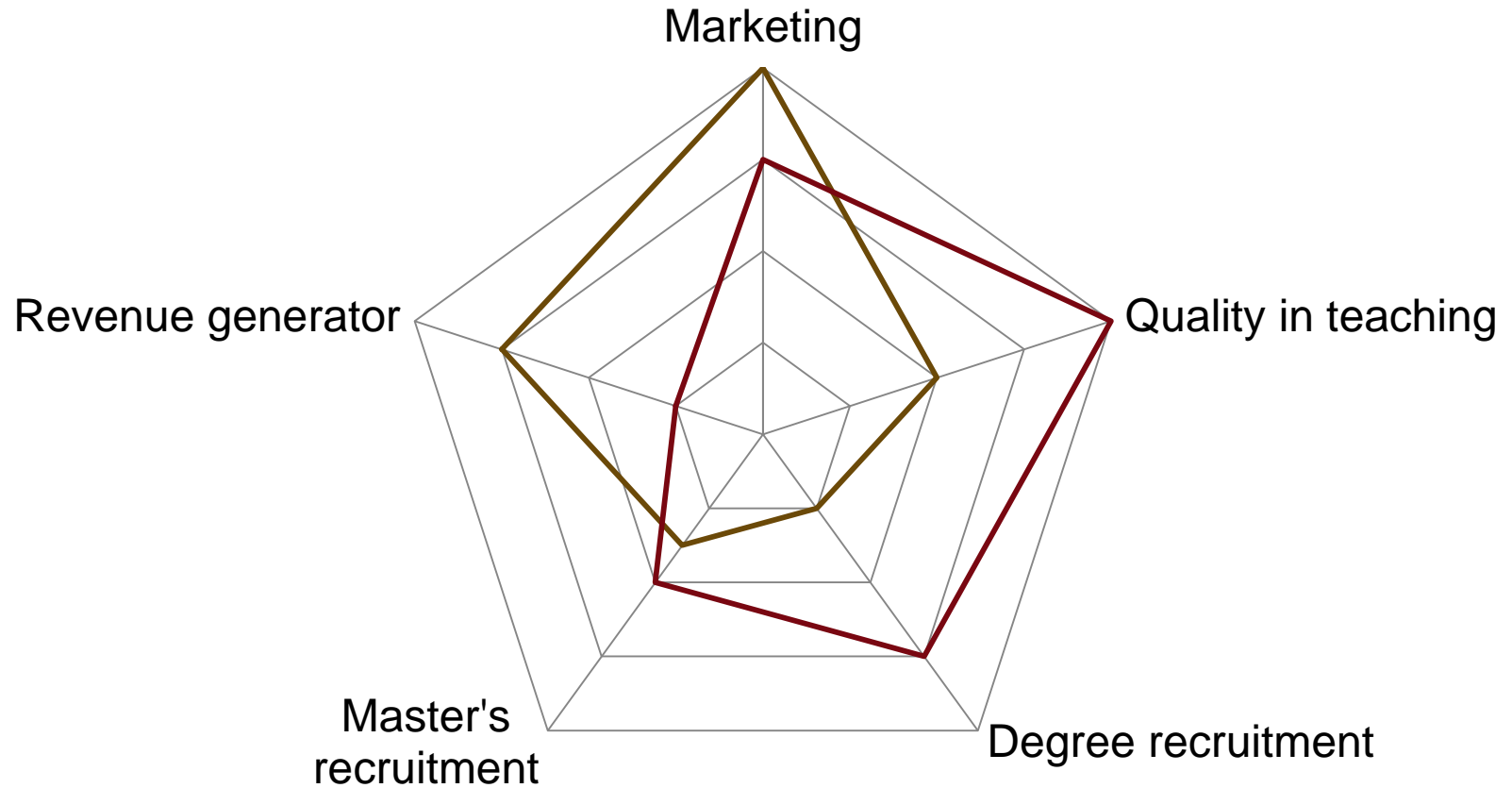


- Decrease in 'not-shown' and decrease in people who retire from 1st partial to 2nd.
- Higher ratios of success in continuous evaluation mode and in general
- Higher global number of students who 'PASS' based on continuous evaluation: 69% this run, 48% in the two previous.
- Global satisfaction with the blended experience, both from the student survey satisfaction and from statistical analysis of impact

Back to strategy (I)



Back to strategy (and II)



The question is: what are MOOCs for your institution?

Conclusions

- MOOCs have costs. They are open for public, but not free for you
 - High cost of creation. Specific amount depending on audiovisual complexity
 - High cost to prepare, not so much to run (opposite to classical approach)
- On the other side, they can provide you real benefits:
 - Improve quality in teaching
 - Teaching innovation
 - Better student perception
 - Revenues (intentionally not considered in the presentation)
- The University has to take into account:
 - Which MOOCs to offer (if any) and why
 - How to compute MOOC creation in academic model (teachers)
 - MOOC credit recognition (!)
 - New roles for teaching staff
- At the higher level, MOOCs open an opportunity for Universities to enter new markets and also to show the quality of your teaching in your classical markets. In addition, they can support your on-Campus teaching strategy, as facilitators of innovation