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Online Educa Berlin 2014, Berlin, 3-5 December 2014
COM58: Bringing Innovation to Life in the Public Sector



Educational Innovation in a Public University: The Case of the UC3M

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uniTwin
Cátedra UNESCO de Educación Digital Escalable para Todos España
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NEW IT.1.1x: Introduction to Programming with Java - Part 1: Starting...
Learn to program in an easy and interactive way!

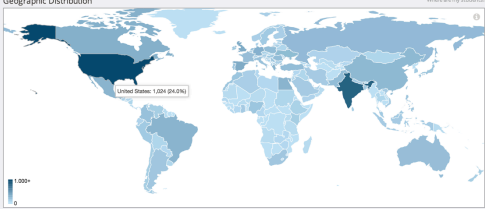
STARTS: April 2015 INSTRUCTORS: Carlos Delgado Kloos UC3Mx

```
public static void main(String[] args) {
    int[] array = {3,78,98};
    for (int i = 0; i < array.length; i++)
        array[i]=i+2;
    print(array);
}
```

learn more

bit.ly/javamooC

Geographic Distribution



Where are my students?

Geography Metrics

137 Total Countries Represented	United States Top Country by Enrollment 24% of students	India Second Country by Enrollment 17% of students	United Kin... Third Country by Enrollment 3% of students
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Europe



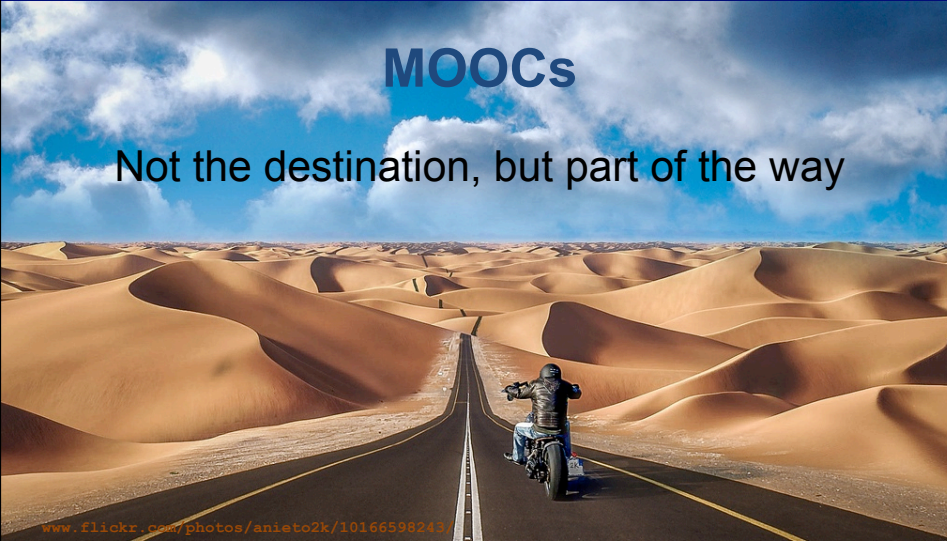
- Mostly public universities
- There might be fees, but much lower than in the USA
- Debt levels not like in the USA
- If our situation is different, why are we making MOOCs?
- The UC3M approach...

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MOOCs

Not the destination, but part of the way




www.flickr.com/photos/anieto2k/10166598243/

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The Napster Moment in Education!

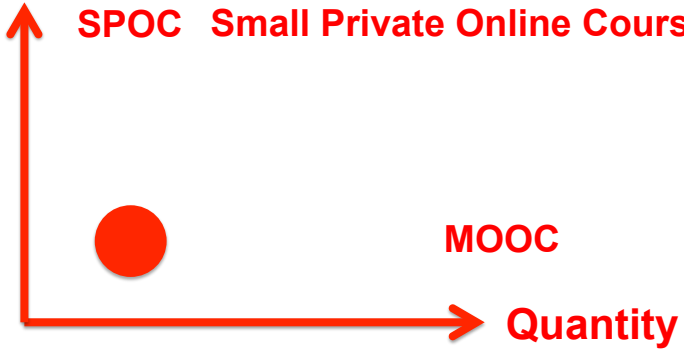


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Use Technology to Extend or **Enrich** Education

Quality


SPOC Small Private Online Course



MOOC

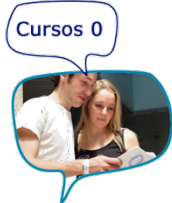
Quantity

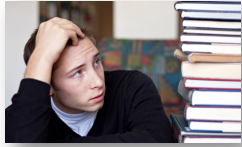
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0 Courses

- Freshmen come to university with the necessary prerequisites
 - Well, this is in theory!
 - Often there are gaps (esp. in STEM subjects)
- This is why in Spain many universities offer 0 courses
- Challenge: How to review lots of content in short time



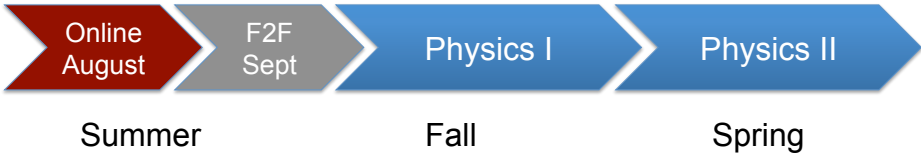


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Physics 0

Physics 0




Online August F2F Sept Physics I Physics II
 Summer Fall Spring

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R Courses

- R for Repetition, Reinforcement, Review
 - For fall semester courses
 - Digital material for spring semester
- Pilots in Physics (Mec.), Algebra

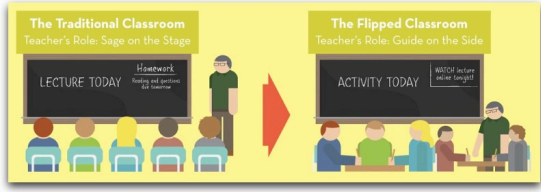


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B Courses

- B for Blended, eg. "flipped classroom"
- Teaching complement
- Pilot in Biomedical Engineering

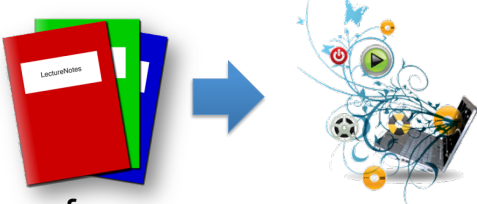


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Supplementary multimedia

- Let's replace lecture notes with rich multimedia content
- E.g.: Modern Theory of Detection and Estimation
- ocw.uc3m.es/teoria-de-la-senal-y-comunicaciones/teoria-moderna-de-la-deteccion-y-estimacion-2013

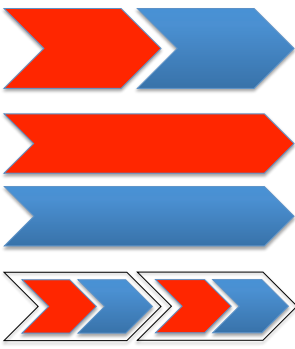


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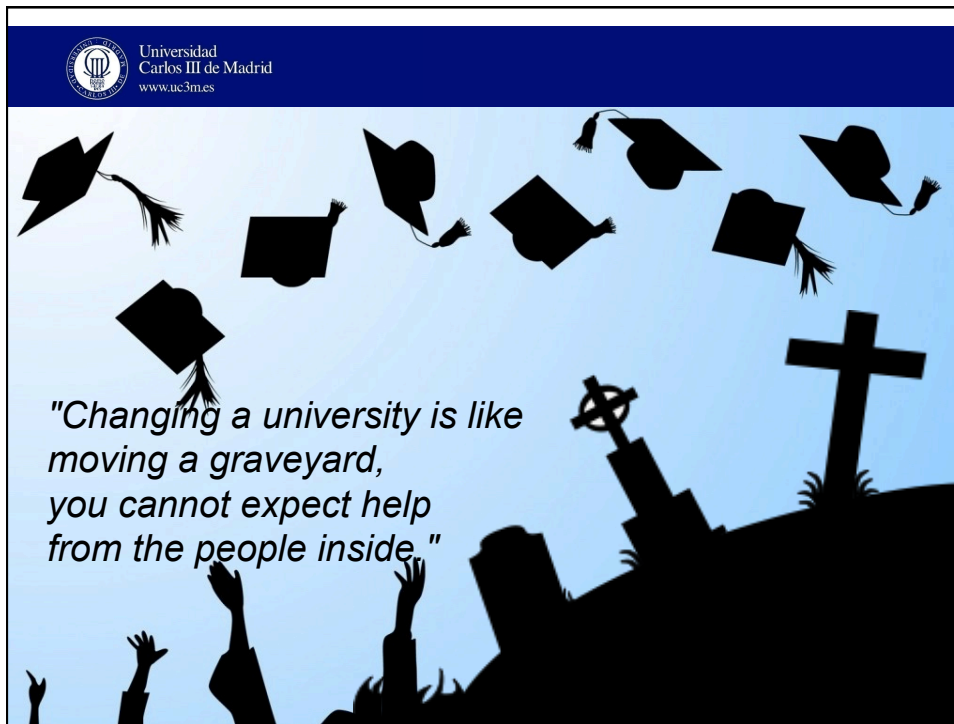

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Composition Modes

- Sequential Composition
 - Local Digital Prelude
 - Global Digital Prelude
 - Digital Sandwich
- Parallel Composition
 - F2F Parallel to MOOC
 - F2F Parallel to ExtOC
 - F2F Parallel to SPOC
- Interleaved Composition
 - Flipped Classroom
 - SPOCs as eBooks



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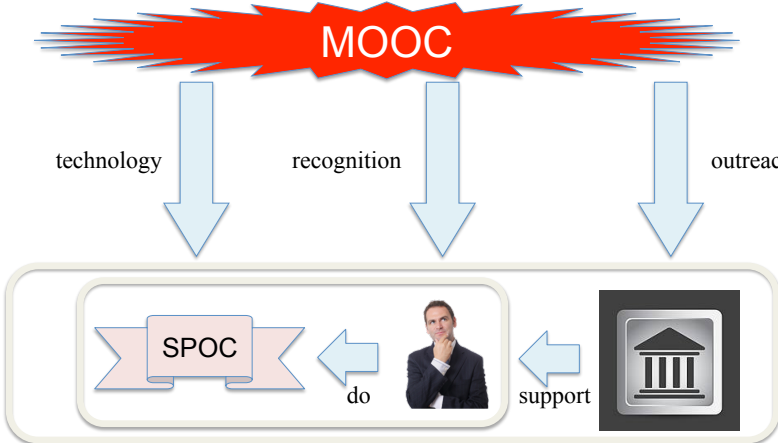
Towards a Blended University

- A Change of Culture for Faculty
- Collaboration among several stakeholders
 - Faculty is not completely in charge any more
- New skills
 - Acting, technological affordances, social networks


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Roles and Rewards

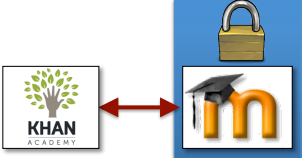



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Digitizing UC3M

- New support unit
 - UTEID
- New software tools
 - Apart from tool integration (eg. KA & Moodle)
- New spaces
 - In addition to existing studios

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Conclusion

- The MGGC BGGM has helped universities to start rethinking education
- Challenge: identify GOOD models of blended education
- The question is not *if*, but at *what speed* we need to act
- This is possible at a public university