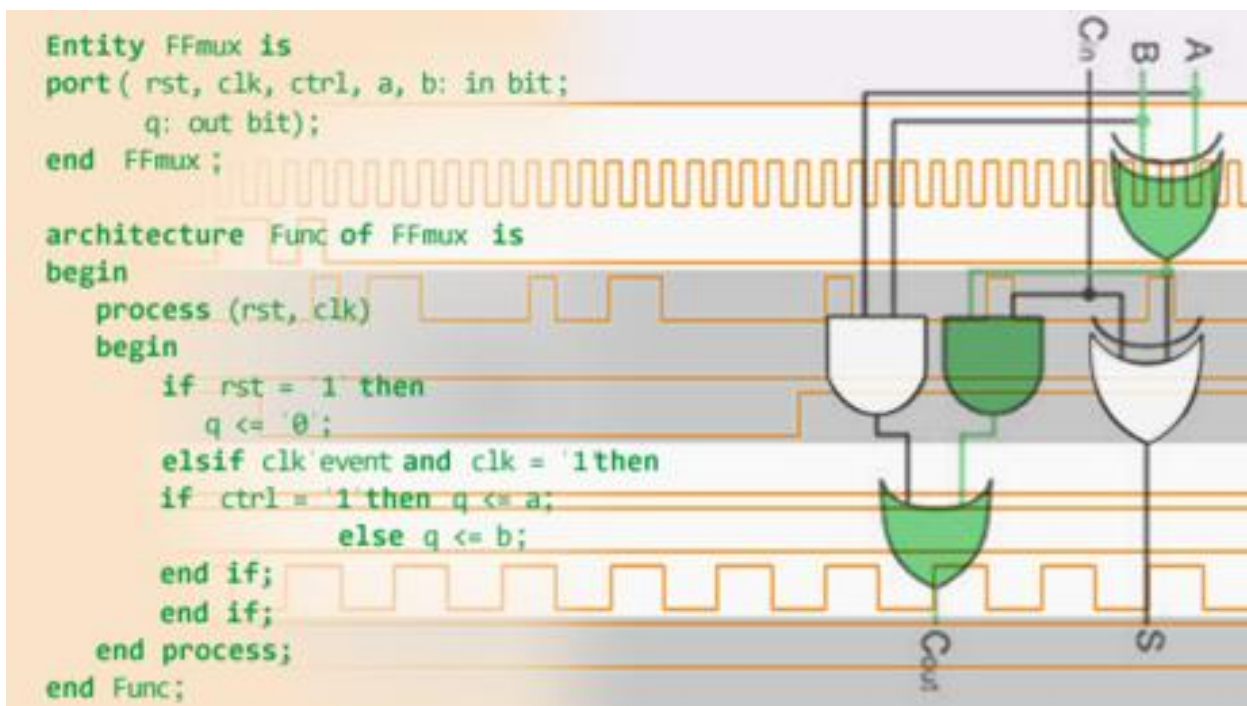


Using MOOCs in on-campus teaching: An experience

E. Valderrama, M. Rullán, J.P. Deschamps, L. Terés, J. Saiz, D. Bañeres, J. Martínez.

UAB: Autònoma University of Barcelona (Spain).

Abstract



During the period Feb-2014 to June-2014 and Sept-2014 to Jan-2015 the MOOC **Digital Systems: From Logic Gates to Processors** has been used in 2 courses at the Engineering School of the UAB.

This Poster summarizes this experience.

<https://www.coursera.org/course/digitalsystems>

Course	# students	Semester	Degree
Computer Fundamentals (CF)	≈ 400	1st year, 2n semester	Computer Engineering
Digital systems & HDL (DS-HDL)	≈ 100	2nd year, 1st semester	Telecommunications Engineering

OBJECTIVES

- 1) Use MOOCs in formal university courses to motivate students, improve academic results and expose the students to an international network of learners unattainable with traditional teaching methods.
- 2) Involve students in the learning process by developing self-assessment tools that provide real-time feedback on their progress while allowing for a more flexible learning experience.
- 3) Improve classroom dialogue by reducing the students-per-class rate.
- 4) Bring closer formal high education teaching and one of the university's most important missions: the large-scale dissemination of knowledge and culture throughout the world, across boundaries, providing access to knowledge for individuals with economic, geographic or personal barriers that difficult the access through more conventional paths.

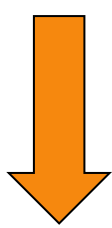
UAB

Universitat Autònoma de Barcelona

Re-structuring the on-campus teaching

Re-structuring classroom

Computer Fundamentals					
	M	Tuesday	W	Thursday	F
9-10am		GROUP 41 (≈ 100 st)			
10-11am					
11-12am				Sub-group 412 (≈50 st.)	
12-13am				Sub-group 411 (≈50 st.)	

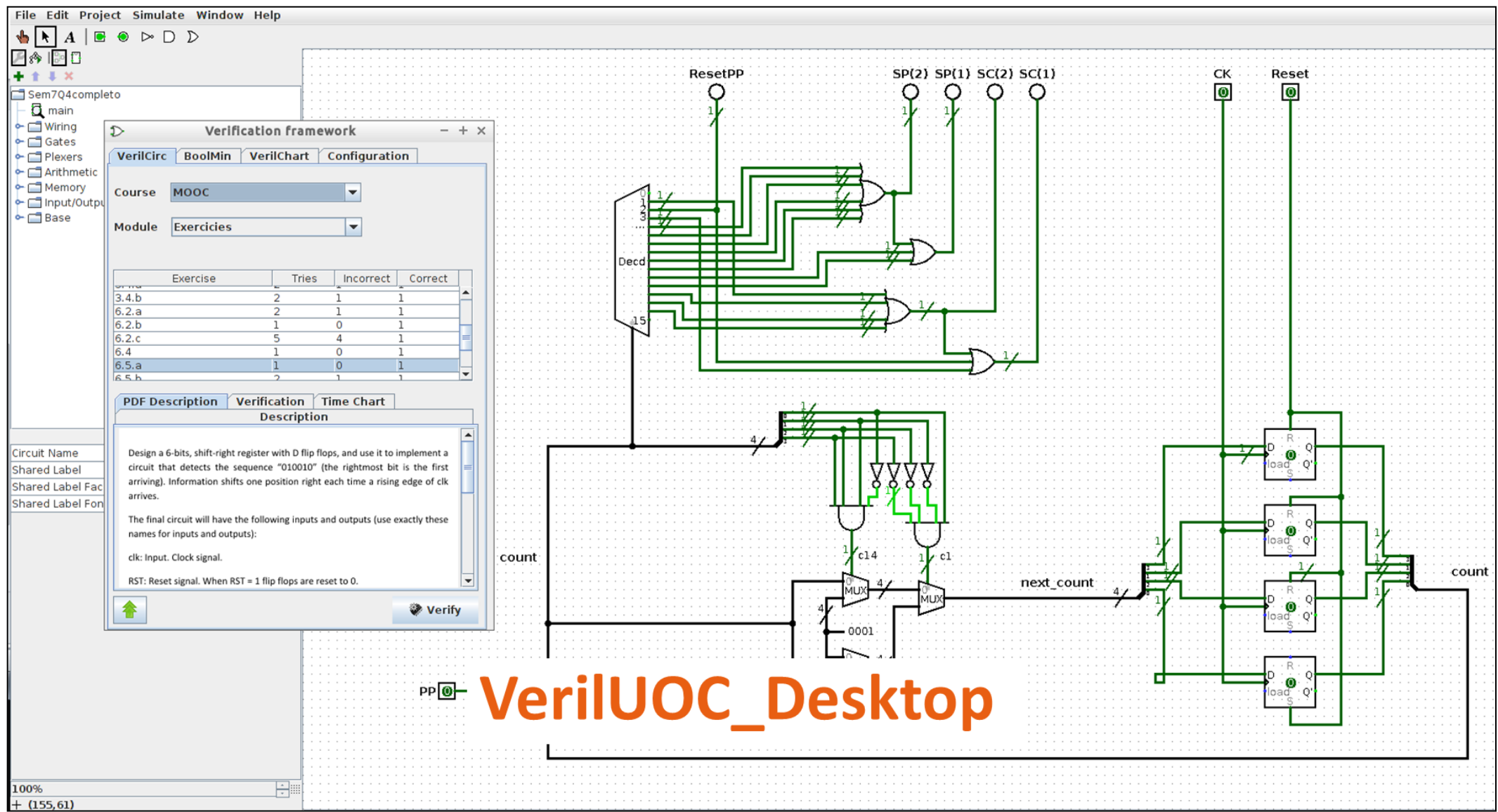


Computer Fundamentals					
	M	Tuesday	W	Thursday	F
9-10am					
10-11am		Sub-group 411 (≈50 st.)	Sub-group 412 (≈50 st.)		
11-12am				subgroup 412 (≈50 st.)	
12-13am				subgroup 411 (≈50 st.)	

Re-structuring activities

Students ...

- Enroll in the MOOC,
- Watch the video-lectures by themselves,
- Deliver the MOOC weekly assignments (on-campus classes support).
- Take 2 validation tests, **in classroom**, to demonstrate that they were really the authors of the submitted assignments.



Analysis & Conclusions

Students' attendance (classroom)

- Students' attendance was monitored daily
- Students should indicate whether they had previously watched the video-lectures
- **Class attendance was similar to that of previous years**
- **The percentage of students who reported having seen all the videos before attending to class varies between 21% and 64% (see table)**

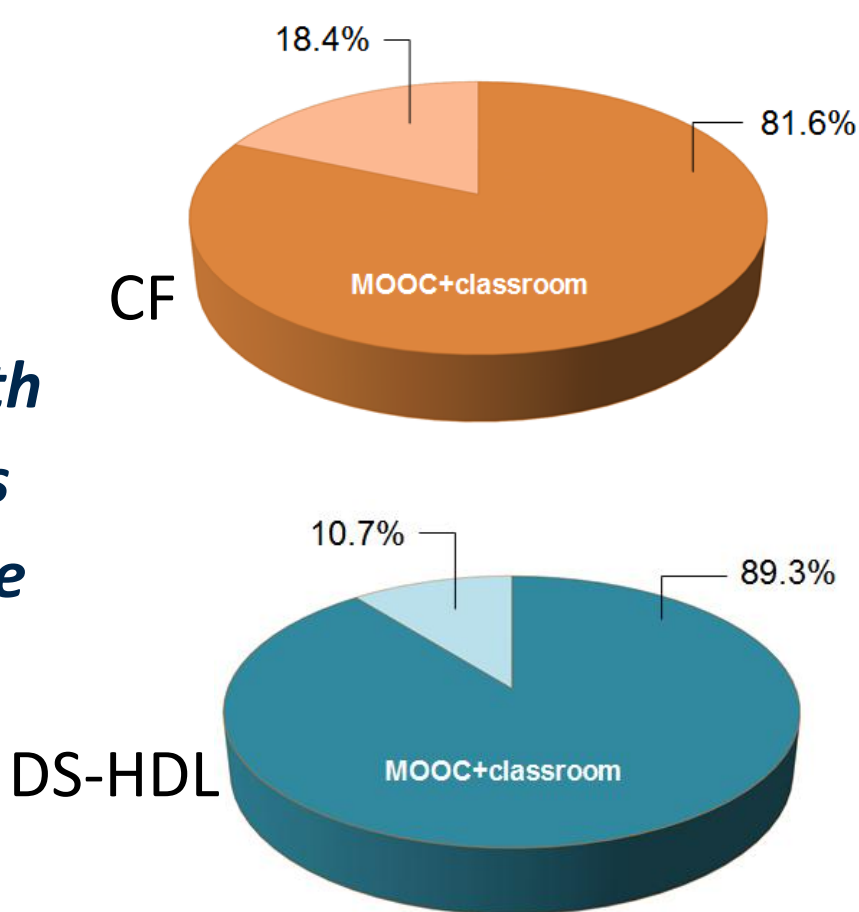
How to improve it ???

	Tuesday	Thursday
Weeks 1-4	23%	58%
Weeks 5-8	22%	64%

Students' satisfaction

- A satisfaction survey was conducted
- Response rate: CF 72,4% (283); SD-HDL 91,8% (90)

- *Now that you know what is a blended course, if you had been given the opportunity to choose between following the course with the conventional format or in this blended format, what would have chosen?*



- **What do students like the most**

Being able to ...	CF	DS-HDL
Check the exercises on-line	54%	85%
Watch the videos many times	54%	81%
Watch the videos when and where I want to (multiplatform)	47%	84%

- **Forums were poorly valued**

Academic results

Aquí van un par de gráficas con AP el último año y el promedio de los 3 anteriores de FC y de SD-VHDL.
En CF: 46% vs 39% (+7%)
En sd-HDL: 70,6% vs (me falta el dato-Mercè)

Y una segunda gráficas con los abandonos del primer parcial al segundo

Aquí falta una frase que resuma la satisfacción global por la experiencia