

Recasting a Traditional Course into a MOOC by Means of a SPOC

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- Louv1.01x – Paradigms of Computer Programming

Existing
traditional course



- Mature course
- Taught since 2005



Context

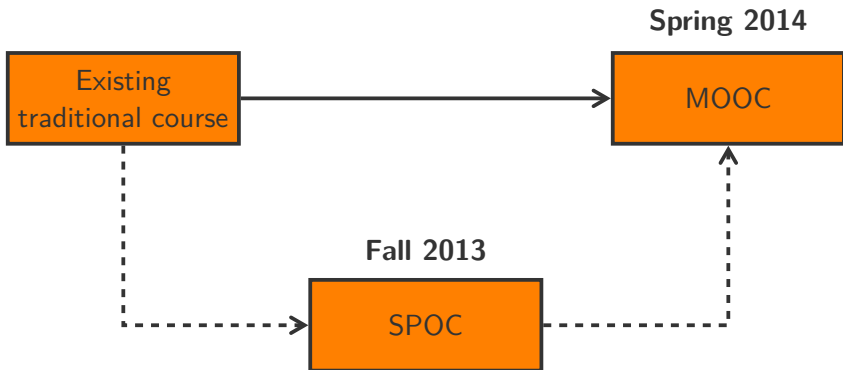
- Louv1.01x – Paradigms of Computer Programming

Spring 2014



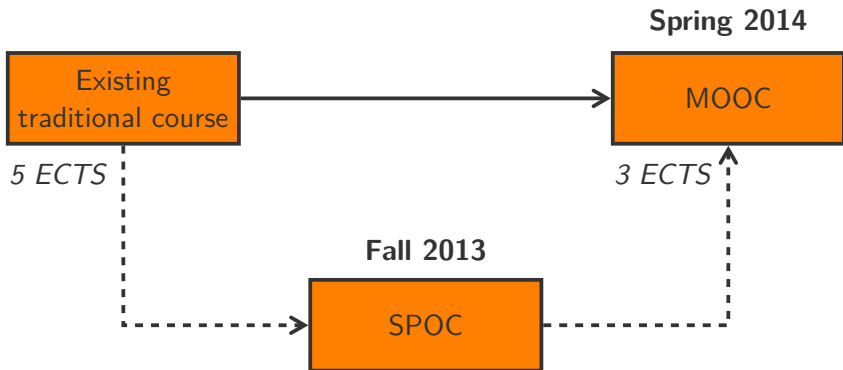
Context

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Motivation

- Gaining experience with MOOCs minimising workload/risks
- Having the opportunity to test the MOOC before the launch
- Enriching the learning experience of on-site students

Some numbers

- All 2nd year bachelor engineering students
- 300 on-site students, 21.000+ MOOC registered students
- 1 professor,
1/2 MOOC assistant, 1/2 research assistant,
4 teaching assistants,
and 11 student monitors (tutors)

Institutional support

- MOOCs **steering committee** at university level
- One part-time **MOOC assistant**
- **Pedagogical support** for the design of the course
- **Audiovisual center** for the course trailer

First challenge

- Integrating the SPOC into the existing course
- Flipped classroom approach

<i>Fri</i>	<i>Sat</i>	<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>
SPOC			Lab and Practical Sessions			Lecture
<ul style="list-style-type: none">• Discussion forum• MOOC assistant			<ul style="list-style-type: none">• Student monitors (tutors)• Teaching assistants			<ul style="list-style-type: none">• Professor

Second challenge

- Covering all the material needed for on-site students
- Two tracks running in parallel

	SPOC	Practical Session	Lecture
SPOC Track	<i>Video + exercises (i)</i>	<i>Feedback (i)</i>	<i>Restructuring (i)</i>
Traditional Course Track		<i>Advanced exercises ($i - 1$)</i>	<i>Advanced concepts (i)</i>

Third challenge

- Evaluating students, in particular for programming skills
- Pythia: an **automated code grader** with intelligent feedbacks



Evaluating students

- Midterm/final written exam, programming project
- Incentivisation scheme for the SPOC part
- Midterm and final exam on the SPOC serve as review exercises

“Good” practices

- Short videos (less than 5 minutes) followed by short quizzes
- Coding exercises with contextualization
- Permanent feedback grasping
- Trying to be two weeks ahead of the students

Conclusion

- Big success for the MOOC team
- Students globally satisfied, but high workload
- Many trials needed for some coding exercises
- 100% MOOC for on-site students next year

Conclusion

“Hofstadter’s Law: It always takes longer than you expect,
even when you take into account Hofstadter’s Law.”

Louv1.01x grand opening: February 17, 2014