

Let's Talk About MOOCs
(After All, Everybody Else Is 😊)

Dan Grossman
University of Washington
Department of Computer Science & Engineering

October 5, 2012

My plan

- My roles related to MOOCs
- Personal take on why I will teach a MOOC
- Personal take on why my department is doing MOOCs
- Thoughts about some advantages / disadvantages / threats

Caveats:

- Would rather have more Q&A than say everything I think
- I do not speak for UW
- 12 months ago I had never heard of a MOOC and I haven't started teaching one: my opinions are evolving

My role

- Teaching *Programming Languages* on Coursera, January 2013
 - <https://www.coursera.org/course/proglang>
 - Sophomore-level functional programming and more
 - 200-500 sign-ups per day (already > 25,000)
- Leading department's efforts to prepare for 5 courses this year
 - This term: 0 courses but 5 TAs
 - (There are also other courses from UW)
- Why me? Good question. 😊
 - Having a blast between bouts of anxiety 😊

What makes a MOOC a MOOC

- **Semi-synchronous**
 - Social cohorts with modern lives
- **Scale**
 - Past, say, 5,000 students, more students makes a class better
 - Nothing can flow through the course staff
- **Online**
 - Video, discussion board, etc.
- **Free**
 - Can talk monetization strategies if you want, but not my role
 - UW is offering “enhanced versions” for credit if you pay

Why I'm excited

- I believe I have a superior course and want to have impact
 - 10x more students in one term than in last decade combined
 - Influence among other educators
 - More fun, less work, more effective than writing a textbook
 - Fame (not fortune)
- Be part of academic change
 - Not read about in NYT, CACM
 - No substitute for first-hand-experience
- My concerns
 - “Stage actor fails in transition to television”
 - Grading scripts
 - Errors for the world to see

My take on department's reasons

- Can have amazing **impact**
 - Teach 10,000s of people amazing and useful stuff
 - Be bigger worldwide leaders in CSE education
- “MOOCs” might [not] change how universities work in N years
 - We need **experience** in online courses
- Improve CSE and UW **reputation**
- **Feedback** to improve conventional courses
 - New modalities (video)
 - Massive data
 - Impetus for error-free instructions
- Yes, this costs money, but remarkably little

Does free mean doom?

“If these courses are free, why are people paying tuition?”

- Coherent 4-year curriculum
- Personal interaction with course staff
- Homeworks graded by humans
- Open-ended design and free-response questions
- Credit because we know you actually learned the material
- Courses adapt to student needs on the fly

- Plus other reasons to be at a university: social support, job fairs, advisors, independent study/research, etc.

None of these killed universities: public libraries, VCRs, Internet, ...

The false denominator

Why do MOOCs see completion rates $< 10\%$?

Students:

- Sign up for courses they are not qualified for
- Sign up for N courses and pick one later
- Have jobs, lives, constraints and get busy
- Just change their minds
- Sign up twice to cheat

Also plausible that:

- Some courses are poorly organized, taught, etc.
- MOOCs “work better” for some kinds of students
 - Self-motivated, experienced, ...

Remember the numerator

- Which has more impact?
 - 95% completion rate with 200 students
 - 3% completion rate with 50,000 students
- I accept my MOOC students will likely learn less and be less impacted by me than my conventional 50-70 students
 - *That's not my goal:* I want more impact than writing a book
 - *The comparison is moot:* We don't have capacity and students don't have the flexibility to make that choice

Some real concerns

- **Financial model** for higher ed if you move the 1,000-person lecture courses to MOOCs
- The **certification / assessment** issues
 - Rampant cheating
 - Too little free-response, design, iterative assignments, ...
- How many FieldX 101 **lecturers** do we need?
 - Argument for “flipped classroom”? (Not my immediate plan)

Problems lessen if we stick to viewing MOOCs as “**a better textbook**” with a “huge social component”