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

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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”