
# COOL – Collaborative Open Online Learning


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# Back to the roots of MOOC

*Instead of talking connectivism, we wanted to create an experience that was essentially connectivist: open, distributed, learner-defined, social, and complex.*

George Siemens (2012, March 5).
MOOCs for the win! *ELEARNSPACE*.

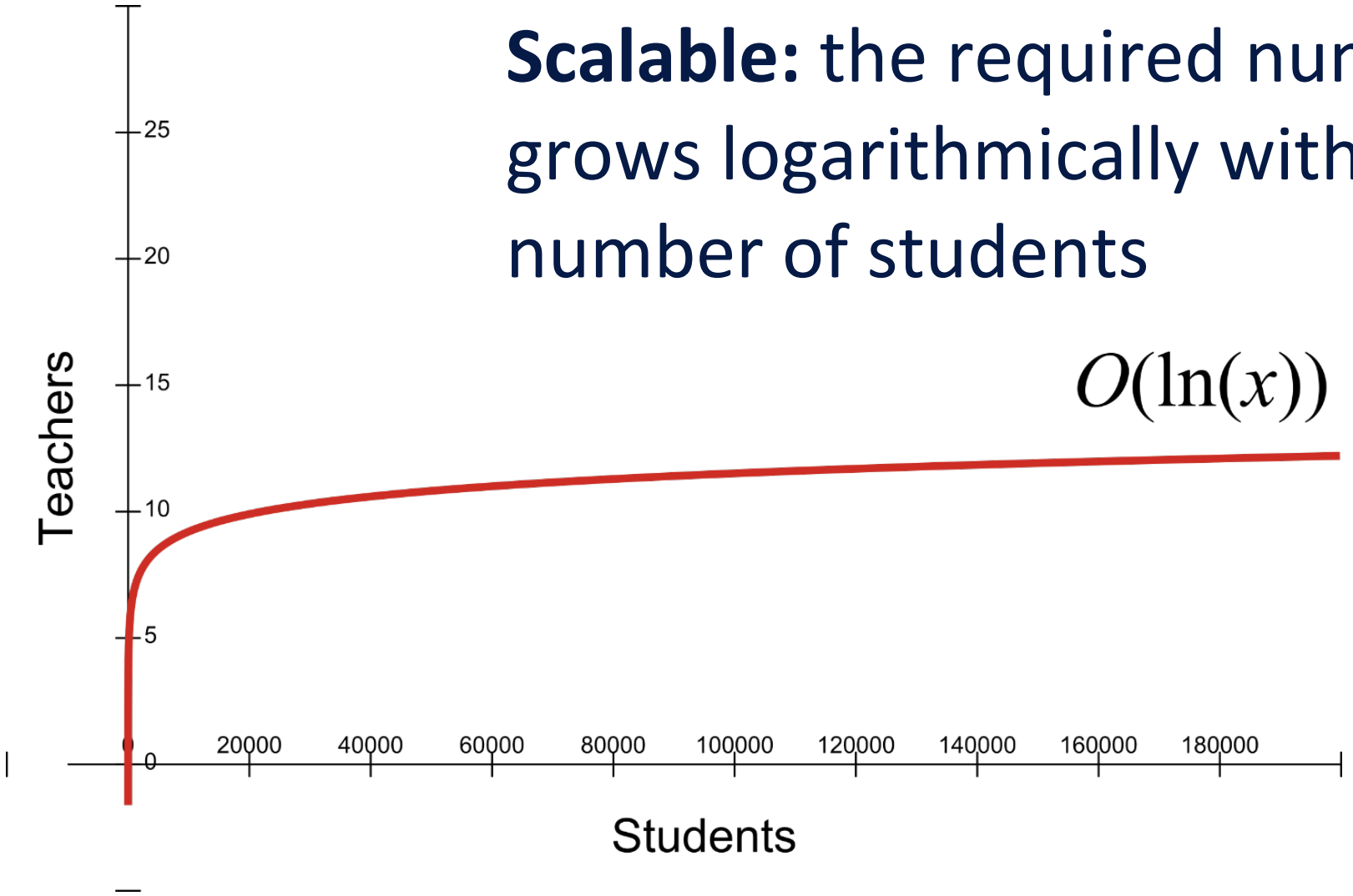
# MOOC – Massive Open Online Courses

- **Courses:** process is included, not only content, occurring in time, with a beginning and an end
- **Online:** make use of the Internet, particularly the Web (2.0) as educational platforms
- **Open:** Any person may register to them, at no cost
- **Massive:** No limit on the number of students who can take a course simultaneously

Their *massiveness* had ranged from a few hundreds to around 150,000 students, so **scalable** seems to be a better term than massive

# Scalability

**Scalable:** the required number of teachers grows logarithmically with respect to the number of students



# How to achieve scalability

- Moving away from a teacher-centred approach
- **Distribute** teacher functions and responsibilities among others
  - Environment
  - Students
- Teachers as the cherry on the cake rather than its basement

# Scalability through the environment

- Acknowledge the **supporting environment** as an **intelligent agent** that can
  - monitor what happens in the course → **big data**
  - analyse data → patterns of behavior
  - interpret patterns → knowledge representations
  - make decisions → actions

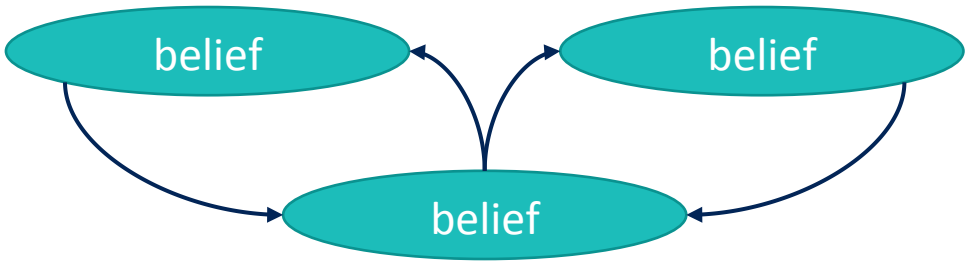
# Big data

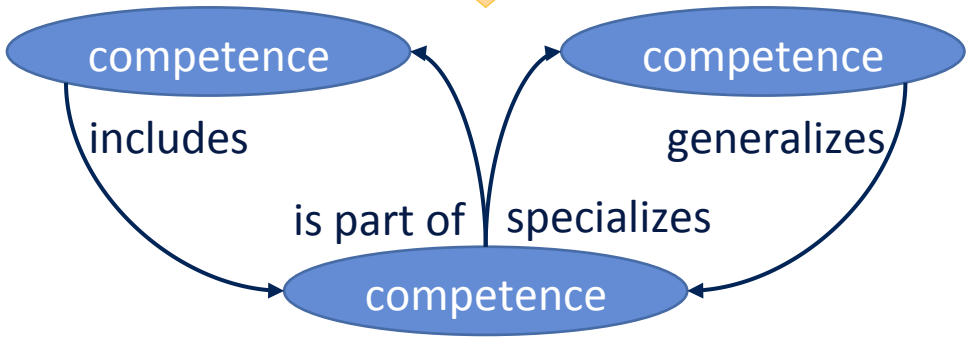
- Session histories
  - Login
  - Tools navigation
  - Tool usage
  - Logout
- Multimedia usage
  - Online reading
  - Watching videos
- Text production
  - Assignments
  - Forums
  - Blogs
- Web usage (inside sessions)

# Actions

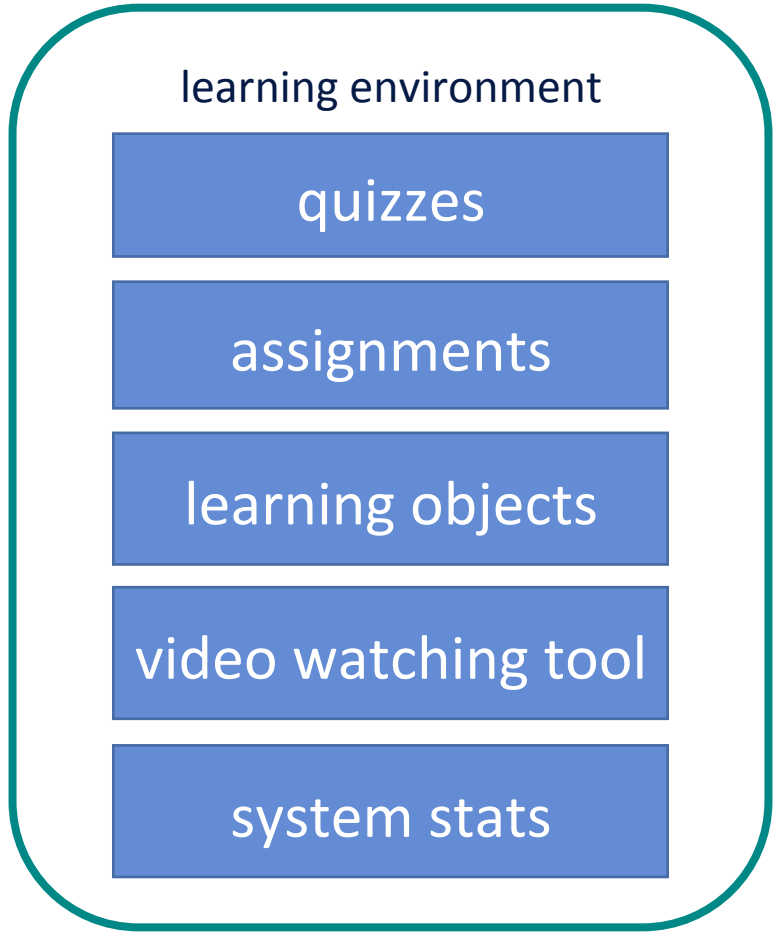
- Personalization
  - Content
  - Media
  - Layout
  - Recommendations
- Recommendations
  - Contents
  - Activities
  - Behaviour adjustements

# Some attempts





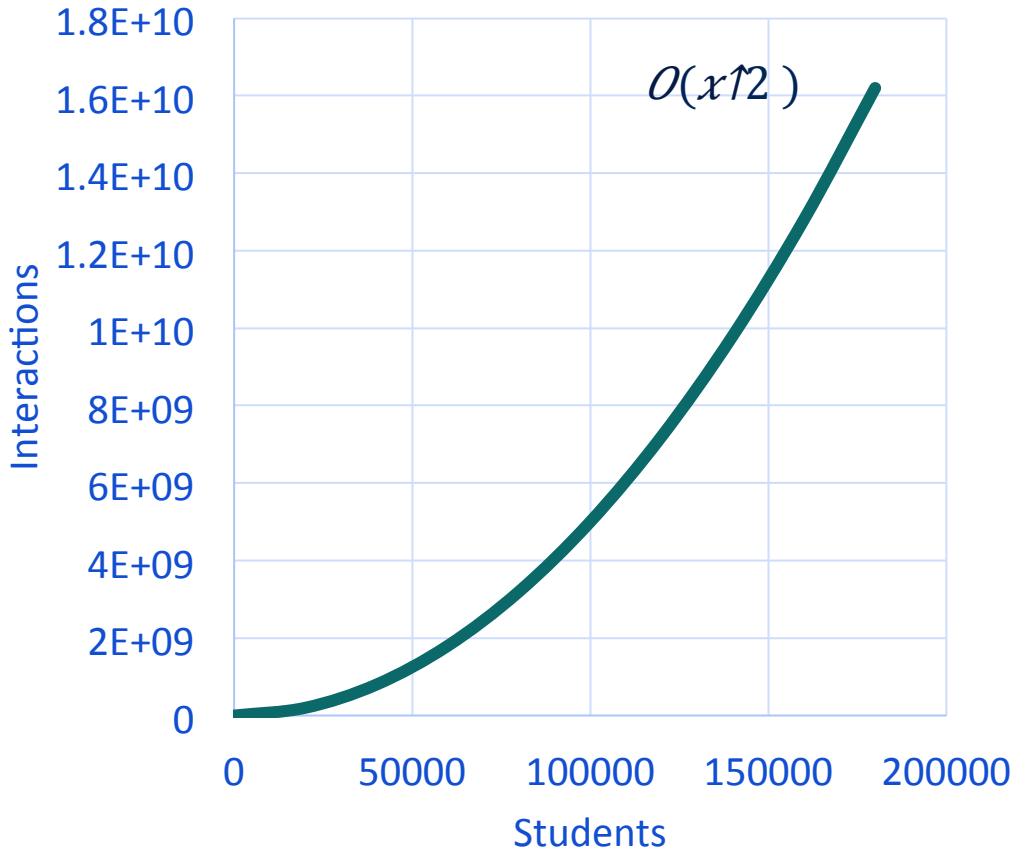




# Scalability through peer students

*In a class of thousands, there are so many students who really grasp the material the first time it is presented. Then, they actually turn around and tutor the students who need more clarification.* **Chuck Severance**

Dean Tsouvalas (2013, Oct 31). MOOCs: Turning Students into Teachers – Thought Leader Interview: Dr. Charles Severance. *Student*

# Expected interactions growth

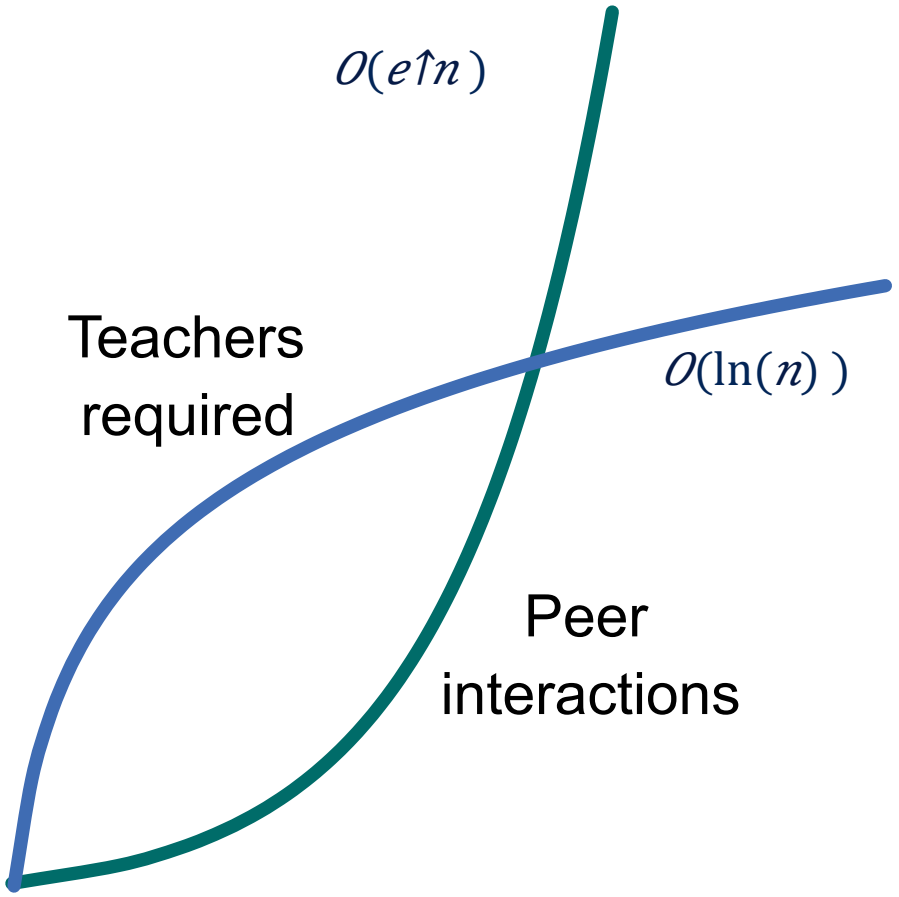



- They will occur even against the odds (e.g. xMOOC)
  - Facebook groups
  - Chats
  - Face to face meetings
- **But we can promote them**

# Collaborative Open Online Learning

- Exploration and description
  - Social web browsing
  - Join narrative
- Text production
  - Collective document edition
  - Wiki production
- Multimedia production
  - Group video production
- Graphical representations
  - Group mind mapping
  - Group conceptual mapping
- Field study
  - Shared collections of data
  - Shared reference database
  - Curation
- Analysis & Synthesis
  - Group reading
  - Discussion
  - Online debating
  - Colloquia
  - Brain storming
  - Voting

# COOL!



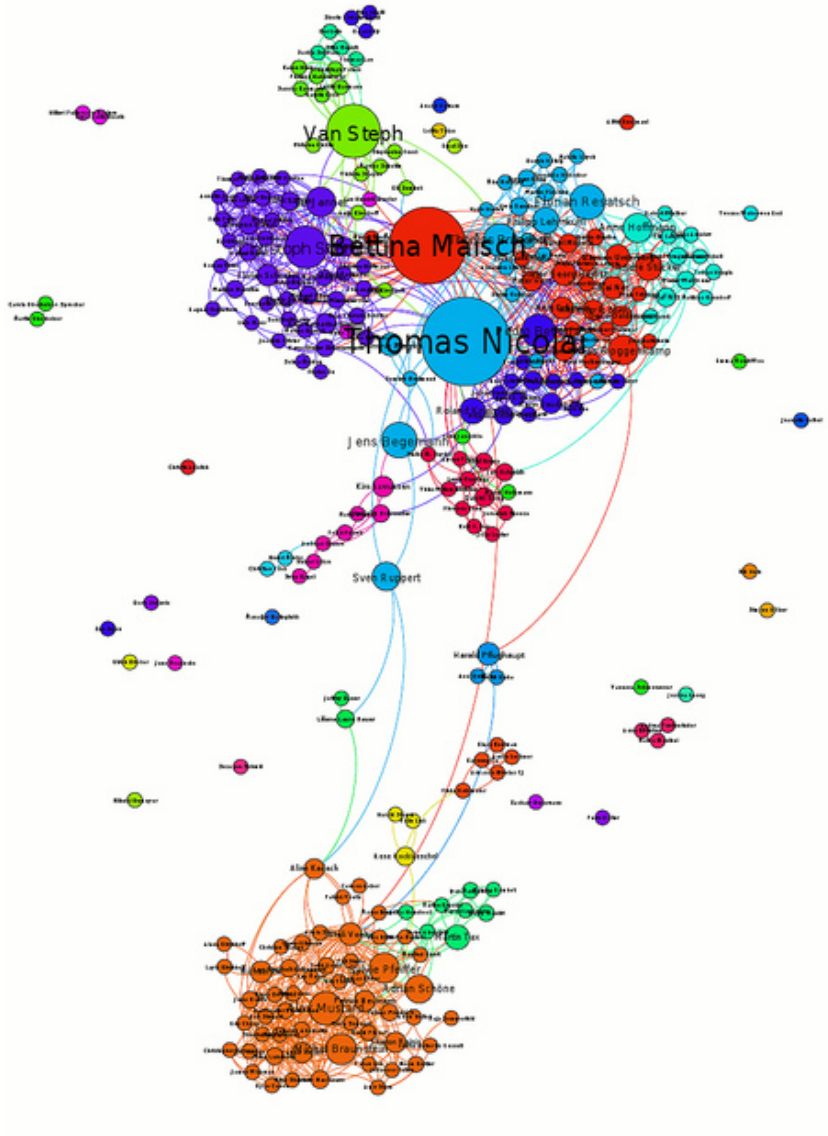

- A much larger quantity of interactions means **really big data**… if we can gather it!
  - Most activities on-site
  - Custom made LMS
  - Experience API

# Really big data

- Social networking
- Interaction histories
- Argumentation
- Collective Web browsing

# Actions

- Early detection of special cases
  - Bright students
  - Isolated ones
  - Boycotters
- Support for
  - Finding suitable peers
  - Better group formation
  - Better group working
  - Better collective information search and management



# Conclusions

- COOL students can generate a **massive amount of data** that could be used to improve both individual and collective learning
- Interactions generate more **complex data**
  - Harder to analyse
  - Harder to interpret
- Much activity would occur **off-site**, so a way would be needed to capture this data
  - Experience API?
  - Privacy issues
- COOL would benefit from big educational data analysis


# Thank you!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# Credits

- Dolphins and logo image in slides 1 and 17, courtesy of CUDI
- Cherries image in slide 5 gathered from Wikipedia
- Digital social tree in slide 14 gathered from Ninja Marketing
- Social network diagram in slide 15 gathered from Flickr

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