MOOCs and online Olympiads in Latvia

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What are MOOCs?

- MOOC – Massive Open Online Courses
- MOOC is still current topic in e-learning
- MOOCs are offering a possibility to acquire (informal) education outside existing boundaries of universities and organizations, regardless of geographic location, without a need to meet any formal immatriculation/enrolment requirements
- Number of MOOCS has increased considerably during last years

What are online Olympiads?

- We have long and ongoing tradition in organizing traditional educational Olympiads in school subjects like physics, biology, informatics, etc., in national level, and participation in world level

- Online Olympiads are attempt to continue this long standing tradition, but using more modern technologies like Internet and web technologies (paper is still present in some form, by the way)

- Not all of the traditionally organized Olympiads are online

"Writing a chapter such as this can be a fool's game; by the time the book is published, the hype-driven world of education may well have moved on to newer buzzwords. Currently, though, MOOCs represent and reflect the angst of educators and administrators in attempting to understand the role of the university in the Internet era."

Siemens, G. (2013). Massive open online courses: Innovation in education. *Open educational resources: Innovation, research and practice*, *5*, 5-15.

Similarly, we are also in ongoing process and effort to understand what educational Olympiads mean in Internet era, and how can we transform and advance them for better student experience.

MOOC characteristics

- MOOC usually have two distinct characteristics:
  - open access – anyone can participate in course, paying is not required,
  - scalability – courses are created in such a way that can support almost unlimited number of participants (Yuan and Powell, 2013).
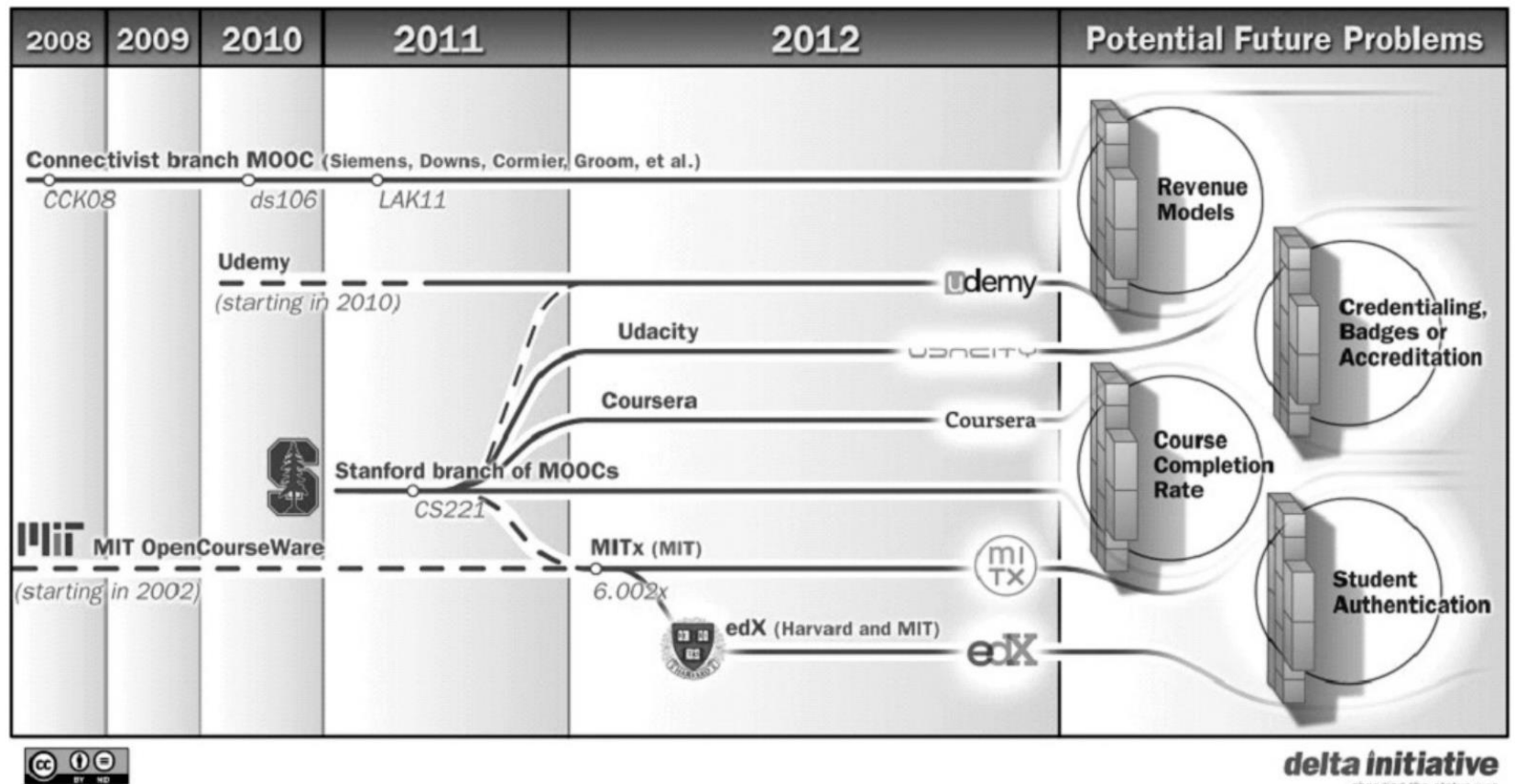- Online Olympiads organized in Latvia also have these two characteristics, in a way

Yuan, L., Powell, S.: "MOOCs and Open Education: Implications for Higher Education", (2013), http://publications.cetis.org.uk/wp-content/uploads/2013/03/MOOCs-and-Open-Education.pdf

Types of MOOC I

- MOOCs are different and can be classified in different categories
- cMOOC – connectivism MOOC
  - views knowledge as a networked state and learning as the process of generating those networks and adding and pruning connections
  - cMOOCs are distributed, and they emphasize, the importance of learner autonomy (Siemens 2013)
- xMOOC – traditional university model, structured content, lectures are available as video materials, tests for evaluation
  - "teacher as expert" and "learner as knowledge consumer" (Siemens 2013)
- cMOOC/xMOOC hybrids – attempts to combine both ideologies to gain benefits, for example, lower dropout rates

Types of MOOC II

- quasi-MOOC – technically not MOOCS, but OER
- hMOOC – hybrids (MOOCs 3.0) – combine online and face-to-face lectures
- *BOOC* (big open online course), *aMOOC* (adaptive), *bMOOC* (blended), *sMOOC* (semi-massive), etc.
- {insert-any-other-prefix}MOOC - …
- Online contests, technically, are not MOOCs, ether, but can be similar in many ways

Figure 1.1: History of MOOCs (from Hill 2012).

Siemens, G. (2013). Massive open online courses: Innovation in education. Open educational resources: Innovation, research and practice, 5, 5-15.

Online Olympiads in Latvia I

- Online Olympiads in Latvia are organized by National Center for Education of the Republic of Latvia (NCE or VISC) and University of Latvia in partnership with regional educational centers and schools

- Students from higher grades usually participate in these Olympiads – they mostly are form 9-th, 10-th, 11-th and 12-th grades

- First official online Olympiad in Latvia was in physics in year 2012

Online Olympiads in Latvia II

- In year 2013 biology joined to the list of online Olympiads
- This (2017-2018 study) year six online Olympiads are taking place – Biology, Physics, Chemistry, Economics, Geography, Latvian language and Literature, and selection for The European Union Science Olympiad (EUSO)
- Number of participants have steadily grown all past years

http://skolas.lu.lv/course/index.php?categoryid=51

Bioloģijas 39. valsts olimpiāde

Bioloģijas 39. valsts olimpiādes otrā (novadu, pilsētu vai novadu apvienību) posma dalībnieku saraksts

Šobrīd uz olimpiādi reģistrējušies: 2950

Aizkraukles novada apvienība, 9. klases

Nr.	Vārds	Uzvārds
1.	Agate	Albekeite
2.	Māra	Auziņa

http://skolas.lu.lv/olimp/biologija_posms2_2016.php

Bioloģijas 40. valsts olimpiāde

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Bioloģijas 40. valsts olimpiādes otrā (novadu, pilsētu vai novadu apvienību) posma dalībnieku saraksts

Šobrīd reģistrējušies: 2994

Aizkraukles novada apvienība, 9. klases

Nr.	Vārds	Uzvārds
1	Anija	Aizkalne
2	Monta	Apeināne

The two main aspects of online Olympiads

- Content
- Technical implementation

Challenges of online Olympiads

- User authentication and credibility
- Personal data management
- Transformation of traditional content and assessment for specifics of online
- Scalability of process

Scalability of online Olympiads

- Organizational process scalability
- Assessment scalability
- Technical (server) scalability

Organizational Scalability

- To make process scalable from organizational standpoint, structure of strict responsibilities were established:
  - NCE (National Center for Education) add and invite district managers
  - District managers add and invite school managers
  - School managers add teachers and students
  - District managers invite students to participate in online Olympiad

Organizer (NCE)

Add and invite

District managers

Invite to participate

Add and invite

School managers

Add

Add

Teachers

Students

Are teachers for
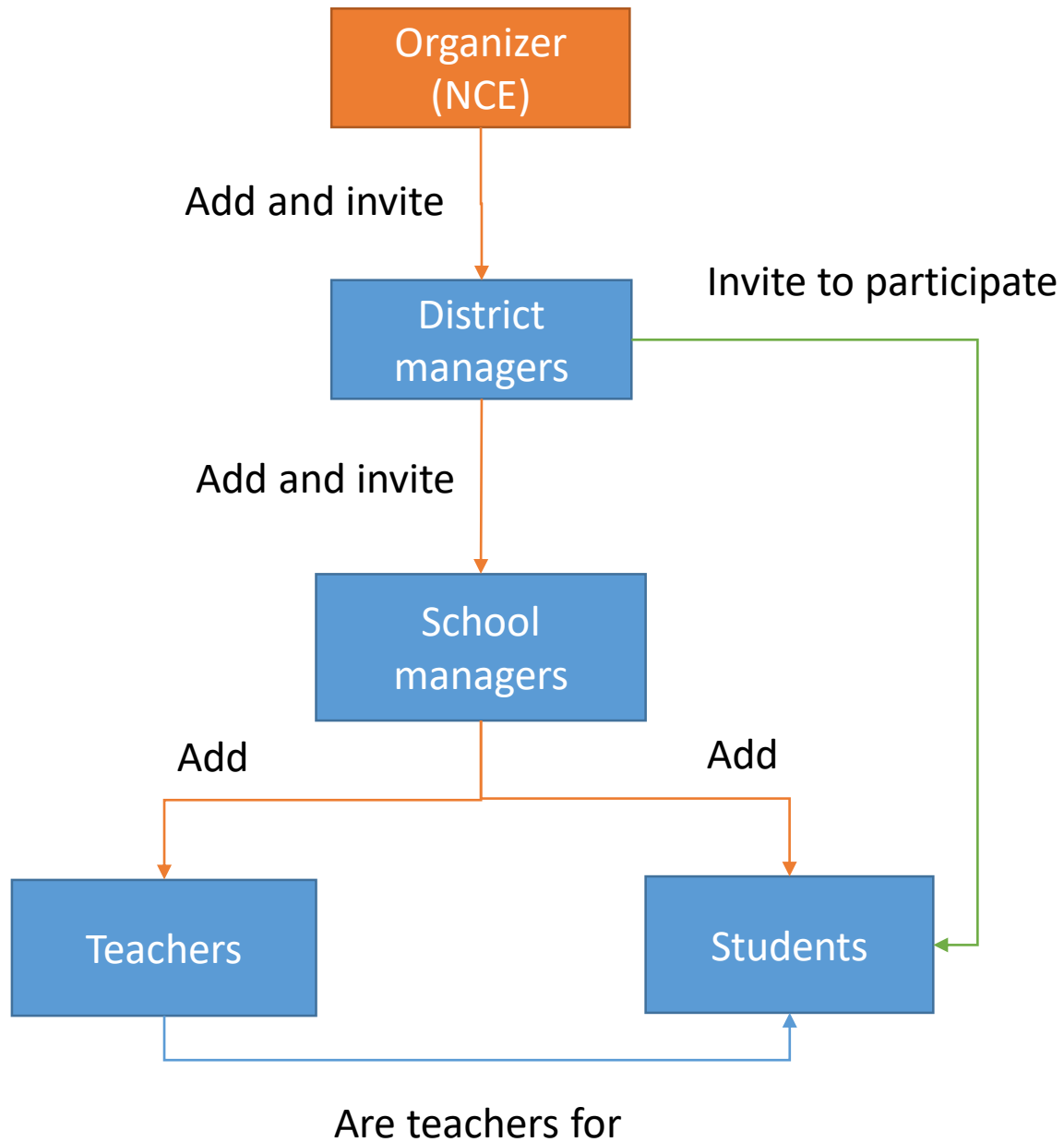
Current development

- We currently are expanding Olympiad management module considerably

- Levels are introduced:
  - school level
  - regional level
  - national level

- Regions and regional managers are introduced

- Support for school scientific research project conferences in regional and national levels is being added

Further work

- During past years we have created and collected a considerable amount of assessment materials – verified question database – in different subjects. New methods should be researched and new ways to utilize them should be found to improve student experience with online Olympiads

- As online Olympiads have many similarities with MOOC, advanced MOOC methods should be considered for use in Olympiads

- Some of promising methods worth of further investigation are adaptivity, profiling and gamification

Thank you!