Peer-assessment Models in MOOCs for Improving Learning

Dr. Irja Leppisaari
Centria University of Applied Sciences
Finland

Prof. Yeonwook Im
Hanyang Cyber University
Korea
Peer-assessment in the Center of MOOC Pedagogy

• The use of **peer-assessment** has been recognized as one feature which affects the effectiveness of MOOC pedagogy.

• Peer assessment can be defined as the **process** whereby students are involved in grading and giving feedback from the work of their peers.

• **Learning-oriented assessment** is about
  - putting learning at the centre of assessment and
  - reconfiguring assessment design so that the learning function is emphasized.

• However, we remain limited in our ability to assess *complex and open-ended student assignments*.

• A clear need to improve **models** for peer-assessment in MOOCs.

(Admiraali et al., 2014; Creelman et al., 2014; O’Toole, 2013; Keppel, 2015; Herrington et al., 2010)
Research

• Do rapidly spreading MOOCs with massive target groups demand new thinking about assessment?
• How do open learning environments challenge assessment in MOOCs?
• The solution to this challenge is not machine grading, but peer-assessment.
• We have reviewed a great deal of literature in peer-assessment in MOOCs and examined peer-assessment models of MOOCs in HE contexts.
• Based on these and our own project experiences we are seeking for practical peer-assessment guidelines/quality indicators which are usable in MOOCs.

(Bachelet et al., 2015; Admiraali et al., 2014)
Based on our literature review we have recognized **seven essential factors** to develop peer-assessment models for MOOCs.

1. Staff competencies
2. Peer-assessment training
3. Rich pedagogical models
4. Criteria for peer-assessment
5. Multiple assessment methods
6. Technical platforms
7. Policies for verifying peer-assessment skills

7 factors to develop peer-assessment models for MOOCs
Development of Peer-Assessment Models for MOOCs

1. **Staff competencies for developing and implementing peer-assessment practices for digital age**

- Peer-assessment practices demand **new pedagogical skills** from teachers for promoting effective digital-age peer learning.
- Assessment formats have to be **engaging** and motivating and **self- and peer-assessment** have to be promoted.
- **Staff support** is very critical.

(Leppisaari & Vainio, 2015; Rosewell & Jansen, 2014)
2. Peer-assessment training or scaffolding

- The professors must clarify that peer-assessment is the **one of the most important dimensions** of the whole learning process.

- **Scaffolding** must be offered to make students accustomed to peer-assessment
  - **by online support** in the form of FAQ pages, how-to videos, an interactive grading rubric, and a discussion thread forums, technical guidelines for using the tools etc, and
  - **by** asking more experienced participants to be **mentors**.

(Bachelet et al., 2015)
3. Rich pedagogical models for peer-assessment (part 1)

The common model usable in MOOC is as follows:
A) Student are required to submit an assignment each week, in relation to a topic covered in the week’s course.
B) After that, each student is randomly allocated 3 or 4 assignments submitted by other students.
C) Criteria for peer-assessment have been drawn up and are available.
   At the same time the criteria guides students in making their own learning task or product.
D) Students have e.g. 5 days to complete the peer evaluation process.
E) Finally, students are asked to have a fresh look at their own work (self-assessment) and grade it.
Development of Peer-Assessment Models for MOOCs

3. Rich pedagogical models for peer-assessment (part 2)

- Peer-assessment practices can be classified on the basis of student roles or activities in different phases of the assessment cycle.
- O’Toole (2013) has described six models for pedagogical meaningful peer-assessment:
  1) Peer grading,
  2) Mantle of expert,
  3) Micro feedback and rating of a student's contribution,
  4) Students assessing students in teaching threshold concepts,
  5) Multiple critical perspectives, and
  6) Peer-assessment of applying shared knowledge in diverse contexts.

(Kim, 2012; Tillemma, 2014)
4. Clearly articulated criteria for peer-assessment

- Peer-assessment methods must be described and explained.
- Students need clearly articulated criteria for peer-assessment to make the process sufficiently fair.
- The criteria should be both relevant to the curriculum and relevant to the student.
- The process should be transparent, and predictable.
Development of Peer-Assessment Models for MOOCs

5. Multiple assessment methods and practices

- There is a need to reflect on which forms of assessment are appropriate for different participants (formal, informal learners) in MOOCs.
- Different forms of assessment, such as
  * self-assessment,
  * peer-assessment or
  * assessment by outside experts,
should be developed to make the assessment of the more open assignments possible.
- Various assignments or tests are better to enhance reliability.
6. Technical platforms for peer-assessment

- Digital learning technologies must enable the integration of self- and peer-assessment across the organization for formative, summative or non-formal assessments → the flexible development, testing and redevelopment of prototypes are required.

- Learning organizations must utilize learning analytics also for promoting learning by different peer assessment practices.

(Kampylis, 2015)
7. Policies for verifying students’ peer-assessment skills

- Peer-assessment requires a great deal of **effort and time**.
- Peer-assessment and feedback skills are also an **essential part of 21st Century Skills**.
  - It is important to **count this into the summative evaluation** of the course or the **open badge** given to the student.

- **Good examples** of peer review might **be rewarded** by feedback, from the assessed student, other peers, or tutors.
- Students might become **recognized as skilled assessors**.
  - They might qualify for various community awarded **“badges”** which they can display on their personal e-portfolio, web pages or CV.

(Griffin et al., 2010; O’Toole, 2013)
Peer-assessment Case from Finland


• How to integrate non stop MOOC studying, authentic task and peer-assessment in open learning environments?

Criteria based peer-assessment in discussion forum (Moodle)

a) Submit your writing task by starting a new discussion.

b) Evaluate two writing tasks of your classmates by using the peer-assessment criteria (3 evaluation perspective derived from learning outcomes, 0-3 scoring and arguments, development tips).

c) Self-evaluate your own writing task.
   - Use the feedback you have got from two peers and identify 2-3 development challenges of your task. What did you learn through peer-assessment?
   - The teacher will give you feedback based on your self-evaluation and final reflection.
Conclusion

• Peer-assessment shows promising potential to improve and consolidate learning in MOOCs.

• In this presentation we created the development model for MOOCs using the above **7 factors for creating quality peer-assessment conditions**.

• Examination of the model with real data that is experiences from cases in which we have used the above 7 factors will be our next phase in the study.
Thank You!

Kiitos!

대단히 감사합니다.
References


