

# Online peer assessment to promote student engagement outside the classroom

Eoin Jordan

Xi'an Jiaotong-Liverpool University

# Overview

1. What is student “engagement”?
2. My context
3. What is online peer assessment?
4. Benefits of online peer assessment
5. Moodle Workshop
6. Example of usage
7. Analysis
8. Summary
9. Q&A

# What is student “engagement”?

- Attendance?
- Many perspectives... behavioural, psychological, socio-cultural...
- “time and effort students devote to educationally purposeful activities” (Radloff, 2010)
- Need to provide educationally purposeful activities outside the classroom
- ...like peer assessment

# My context

- Xi'an Jiaotong-Liverpool University (XJTLU) – an English-medium international university in mainland China
- Language Centre (LC) – most resources committed to enhancing English language and study skills of undergraduate students
- Embedded English language support provided through “Joint Delivery” modules with departments
- Moodle-based VLE

# What is online peer assessment?

## **What is peer assessment?**

- “...an arrangement in which individuals consider the amount, level, value, worth, quality, or success of the products or outcomes of learning of peers of similar status” (Topping, 1998, p. 250)

## **Why was I interested in peer assessment?**

- Desire to provide students with more feedback, and opportunities to assess others' work
- Staff workload constraints – massification of higher education (Altbach, 2007)

## **Why was I interested in online peer assessment?**

- More flexible and convenient than paper-based approach (Mostert & Snowball, 2013)
- Can engage students outside of class time, and can be monitored easily

# Benefits of online peer assessment

## **1. Students can receive more individual feedback on assessments**

- Is this feedback accurate?
- Peer assessment scores often correlate reasonably well with “expert” scores - two meta-analyses:
  - $r = .69$  (Falchikov & Goldfinch, 2000)
  - $r = .63$  (Li et al., 2016)
- More agreement with expert scores than self-assessment (Dunning et al., 2004)

# Benefits of online peer assessment

## 2. Students can enhance their self-assessment skills (Reinholz, 2016)

Table 1. Key aspects of peer assessment.

Component	Examples of how it supports self-assessment
Task engagement	<i>Performance awareness</i> : students explain their ideas <i>Gap closure</i> : revisions during engagement/problem solving
Peer analysis	<i>Goal awareness</i> : experience analysing a variety of examples
Feedback provision	<i>Performance awareness</i> : explaining ideas and receiving feedback on explanations <i>Gap closure</i> : developing constructive feedback to improve work, not just critique it
Feedback reception	<i>Performance awareness</i> : students are able to view their own work from another's perspective
Peer conferencing	Opportunities to discuss analyses and feedback can increase the impact of peer analysis, feedback provision and feedback reception
Revision	<i>Gap closure</i> : students use analyses and feedback to improve their work

# Benefits of online peer assessment

## **3. Students gain exposure to examples of work from other students**

- E.g. students anonymously assess 4-5 of their classmates assignments

## **4. Students gain a better understanding of the assessment process**

- Need to understand and apply marking criteria to actual student assignments

...In general, students may learn more from assessing others' work than they do from being assessed (L. Li et al., 2010; Rouhi & Azizian, 2013)

# Moodle Workshop

Setup phase 	Submission phase 	Assessment phase 	Grading evaluation phase 	Closed
<ul style="list-style-type: none"><li>✓ Set the workshop description</li><li>✓ Provide instructions for submission</li><li>✓ Edit assessment form</li></ul>	<ul style="list-style-type: none"><li>✓ Provide instructions for assessment</li><li>✗ Allocate submissions<ul style="list-style-type: none"><li>expected: 16</li><li>submitted: 12</li><li>to allocate: 1</li></ul></li><li>ⓘ There is at least one author who has not yet submitted their work</li><li>ⓘ Submissions deadline: Tuesday, 6 December 2016, 11:00 PM (93 days ago)</li><li>ⓘ Late submissions are allowed</li><li>ⓘ Time restrictions do not apply to you</li></ul>	<ul style="list-style-type: none"><li>ⓘ Assessment deadline: Monday, 12 December 2016, 9:00 AM (87 days ago)</li><li>ⓘ Time restrictions do not apply to you</li></ul>	<ul style="list-style-type: none"><li>✗ Calculate submission grades<ul style="list-style-type: none"><li>expected: 16</li><li>calculated: 11</li></ul></li><li>✗ Calculate assessment grades<ul style="list-style-type: none"><li>expected: 16</li><li>calculated: 11</li></ul></li><li>✓ Provide a conclusion of the activity</li></ul>	

# Example of usage

- Undergraduate Y1 Joint Delivery module “Key skills for life sciences”
- 133 students
- Assignment to write a CV and cover letter applying for a research project
- Students had to:
  - Submit assignment
  - Complete a marking standardisation task
  - Self-assess their own assignment
  - Anonymously peer-assess 4 other students’ assignments and leave feedback comments

# Analysis

## Student participation

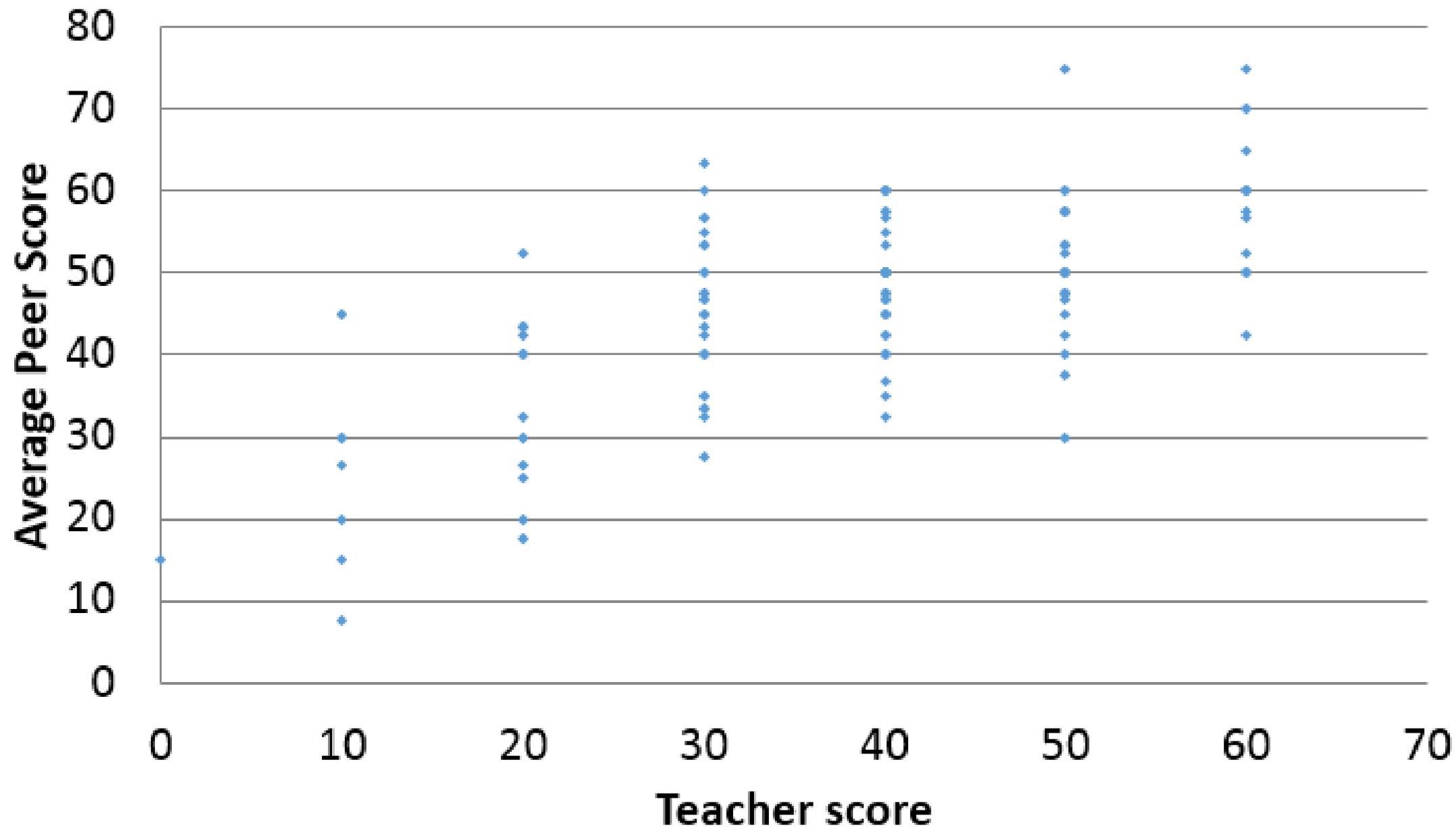
Item	No of students (%)
Students in class	133
Submitted assignment on time	124 (93%)
Completed some or all peer assessments	108 (81%)
Completed all peer assessments	104 (78%)

# Analysis

## **Were student assessments and feedback “accurate”?**

- Peer marks correlated reasonably well with those that I awarded ( $r = .66$ )
- Peer-assessment marks were closer to my “expert” average marks than self-assessment marks
- The majority of student feedback comments were relevant, and many were also specific/detailed

# Teacher score vs Average Peer Score



<b>Category</b>	<b>Average for all students who completed peer/self assessment (/80)</b>
Teacher score	40.28
Peer review score	46.56
Self review score	55

# Analysis

I used the following rating scale to evaluate each student feedback comment:

- 4 = relevant and specific
- 3 = relevant but not specific
- 2 = irrelevant
- 1 = minimal and unspecific (e.g. uncritical/fewer than five words)
- 0 = no comment given
- X = did not complete assessment at all

(adapted from Saito (2008))

# Analysis

<b>Student feedback quality</b>	<b>% of all students</b>
Relevant and specific	40.12
Relevant but not specific	32.86
Irrelevant	10.28
Minimal and unspecific	2.42
No comment given/did not complete assessment	14.32

<b>QUESTIONNAIRE FEEDBACK</b>	<b>Comfortable</b>	<b>Useful</b>	<b>Important</b>	<b>Fair</b>	<b>Overall mean</b>
Giving marks for other students' work	5.28	5.58	5.27	5.58	<b>5.43</b>
Writing feedback comments about other students' work	4.78	5.62	5.32	5.65	<b>5.34</b>
Receiving marks from other students	5.38	5.35	5.37	5.57	<b>5.42</b>
Receiving feedback comments from other students	5.57	5.55	5.68	5.52	<b>5.58</b>
Not knowing whose work you were assessing	6.10	5.60	4.72	5.55	<b>5.49</b>
Not knowing who assessed your work	6.15	5.63	4.73	5.85	<b>5.59</b>
Using the marking criteria you were given	6.08	6.67	6.47	6.35	<b>6.39</b>
Receiving general feedback comments to the whole module from the teacher	6.32	6.58	6.63	6.30	<b>6.46</b>
Assessing example assignments on ICE before starting peer assessment	6.50	6.48	6.40	6.42	<b>6.45</b>
Discussing the marking criteria in the week 3 lecture	5.88	6.03	6.05	6.10	<b>6.02</b>
<b>Overall mean</b>	<b>5.81</b>	<b>5.91</b>	<b>5.66</b>	<b>5.89</b>	

# Summary

- Online peer assessment is one option to enhance student engagement outside the classroom
- In my context, online peer assessment was:
  - An opportunity for students to enhance self-assessment skills
  - An opportunity for students to receive meaningful feedback on their work
  - Generally viewed positively by students

# References

- Altbach, P. G. (2007). Globalization and the university: Realities in an unequal world. In J. J. F. Forest & P. G. Altbach (Eds.), *International handbook of higher education* (pp. 121–139). Springer.
- Dunning, D., Heath, C., & Suls, J. M. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*, 5(3), 69–106. doi:10.1111/j.1529-1006.2004.00018.x
- Falchikov, N., & Goldfinch, J. (2000). *Student Peer Assessment in Higher Education: A Meta-Analysis Comparing Peer and Teacher Marks*. *Review of Educational Research* (Vol. 70). <http://doi.org/10.3102/00346543070003287>
- Li, H., Xiong, Y., Zang, X. L., Kornhaber, M., Lyu, Y., Chung, K. S., & Suen, H. (2016). Peer assessment in the digital age: A meta-analysis comparing peer and teacher ratings. *Assessment & Evaluation in Higher Education*, 41(2), 245–264.
- Li, L., Liu, X., & Steckelberg, A. L. (2010). Assessor or assessee: How student learning improves by giving and receiving peer feedback. *British Journal of Educational Technology*, 41(3), 525–536. doi:10.1111/j.1467-8535.2009.00968.x

# References

- Mostert, M., & Snowball, J. D. (2013). Where angels fear to tread: Online peer-assessment in a large first-year class. *Assessment & Evaluation in Higher Education*, 38(6), 674–686. doi:10.1080/02602938.2012.683770
- Radloff, A. (2010). *Doing more for learning: enhancing engagement and outcomes*. Australasian Survey of Student Engagement: Australasian Student Engagement Report. Australian Council for Educational Research (ACER), Camberwell
- Reinholz, D. (2016). The assessment cycle: a model for learning through peer assessment. *Assessment & Evaluation in Higher Education*, 41(2), 301–315. <http://doi.org/10.1080/02602938.2015.1008982>
- Rouhi, A., & Azizian, E. (2013). Peer review: Is Giving Corrective Feedback Better than Receiving it in L2 Writing? *Procedia - Social and Behavioral Sciences*, 93, 1349–1354. doi:10.1016/j.sbspro.2013.10.042
- Saito, H. (2008). EFL classroom peer assessment: Training effects on rating and commenting. *Language Testing*, 25(4), 553–581. <http://doi.org/10.1177/0265532208094276>
- Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, 68(3), 249–276. doi:10.3102/00346543068003249