



Students to Design and Implement Assessment in a Student-Oriented Course

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Outline



- The Assessment Project at the Science Faculty of CUHK
- Evaluation
- Implementation in a General Education Course
- Reflection and Research Questions



The Assessment Project at CUHK Science Faculty



- A TDG Project launched in 2005
- Involve all departments of the Science Faculty
- Enhance assessment
 - A variety of methods
 - Promote assessment as a learning activity
- Promote active learning
 - Encourage students' participation

Two Assessment Strategies



- **Strategy 1:** Students participate in the formulation of assessment criteria

- **Strategy 2:** Students conduct self- and peer-assessments (based on the set of criteria)



■ Strategy 1: Assessment Criteria

- Ask students to propose and develop the set of criteria
 - Discuss in class
 - Time consuming
- Provide students with a set of criteria for students' deliberation and decision



- The discussion process is useful
 - Students critically think about what constitute quality work
 - Students pay attention to aspects that would be assessed
 - Writing skills in addition to content
 - Presentation skills
 - Use of IT, time management
- Students know in advance the set of criteria to be used for assessing their performance
 - Enhance transparency and fairness
 - Enhance learning



■ Strategy 2: Self- and peer-assessments

- Self-assessment is graded based on whether students can assess themselves properly
 - Compared to peer-assessment score
 - Compared to teacher-assessment score
 - Students must pay attention to peer's work in order to assess themselves properly
 - More critically
 - Improve fairness in peer- and self-assessment

Works: Completed and Ongoing



- Three pilot case studies completed in 2008
 - A paper* published
- At least 20 case studies completed during the trial period
- Teachers continue to apply the strategies

*Poon, W.Y., McNaught, C., Lam P., & Kwan H.S. (2009). Improving assessment methods in university science education with negotiated self- and peer-assessment. *Journal of Assessment in Education: Principles, Policy & Practice*, 16:3, 331-346.

The Case Studies



- In courses offered by different programmes at different levels (year 1 to postgraduate)
 - Biochemistry
 - Biology
 - Chemistry
 - Environment Science
 - Food and Nutritional Science
 - Mathematics
 - Physics
 - Statistics



- Have been used to assess a variety of learning activities
 - Group presentation
 - Individual presentation
 - Group project written report
 - Individual written assignment
 - Laboratory experiment report
 - Poster presentation
 - In-class activities in student-oriented courses
 - Debate
 - Role-play
 - Portfolio of activities designed to explore a topic



Evaluation

Students' Positive Comments



- “Quite **interesting and innovative.**”
- “Innovative, can allow students to **identify and think about what really matters.**”
- “This can force students to **pay attention to the presentations of the others** instead of daydreaming or chatting to each other.”
- “It allows students to be more **aware of their performance towards their peers**, such that the presentation is more interesting and interactive.”
- “It helps us to **focus on the aspects other than the content itself**, like the presentation skills and how the questions from audience are answered. Through this process, we could learn much more from each other.”

Students' Suggestions or Negative Comments



- “As an undergraduate student, it is **a bit difficult for us to assess other’s work.**”
- “Students **may not have enough knowledge** to comment other’s group topic.”
- “A **weighting** can be assigned to each **marking criterion** to better reflect the importance of each criterion.”
- “There may be strong disagreement among group members in deciding the scores ... I think the assessment will be much fairer if it is **carried out individually.**”



- Increasing trend in students' ratings
 - on the construct “active learning”
 - on the construct “assessment”
- No intension to conclude that the initiatives are the “causes” of the “effect”
 - Among the many that contribute



Implementation
in a
General Education Course
in 1st term 2012

Overview



- A student-oriented GE course “Ideas of a University”
 - 14 new students (4-year cohort)
- 4 groups, each leads the discussion of one topic of their choices
 - Eg. University life: difficulties and solutions
- Less “technical content”, when compared to science subjects
- Assessment: Group work and a term-end report
- Class small, can discuss & develop the assessment criteria in class
 - Use of student response system
- In the first class, each group uses the CUHK’s uReply system to provide the criteria
 - one set for assessing the “Group Work”
 - one set for assessing the “Final Report”

Assessment Criteria for Group Work



uReply report for session
470

Question number: 2

Total answered response(s): 4

Question text:

Criteria for assessment

1. class work

Respondents list

Total response(s): 4

GUEST_1112 (GROUP4) 一、內容 二、合作性 三、方式 四、互動性 五、氣氛	Group one (Group one) Group one: 1. Presentation skills 2. Creativity 3. In-depth understanding of the topic 4. Activeness of participant 5. Relaxing atmosphere
GUEST_1111 (Group 2) 合作性 內容具啟發性 時間管理及場面控制 與其他組別的交流 趣味性 group 2	GUEST_1113 (Group 3) 1. Sufficient research material 2. Cooperation skills 3. Inspirational 4. Interaction 5. Time management Group 3

- In-class analysis and discussion with students to come up with the final set of criteria

Assessment Criteria for Final Report



GECC1130-12B Idea of a university (2012/2013), Professor Wai-Yin Poon
Final Report Assessment Criteria

Group 2:

Punctual	1
In-depth understanding	2
Reflection	3
Delivery	4
Multiple perspectives	5

Group 1:

- delivery	4
- 見解獨到	6
- 反思 (自己及讀者)	3
- 多角度	5

Group 4:

一、對題目的理解程度	2
二、所得之感想及啟發	3
三、具體的例子	7
四、可讀性	4
五、其他	

Group 3:

1. Content	8
2. Structure and Organization	9
3. Self reflection and comments	3
4. Logical	10
5. Overall impression	

Summary: Please rate

	1: least important	...	5: most important		
1. Punctual	1	2	3	4	5
2. In-depth understanding	1	2	3	4	5
3. Reflection	1	2	3	4	5
4. Delivery / readable	1	2	3	4	5
5. Multiple perspectives	1	2	3	4	5
6. 見解獨到 Unique insights	1	2	3	4	5
7. 具體的例子 Specific examples	1	2	3	4	5
8. Content	1	2	3	4	5
9. Structure and organization	1	2	3	4	5
10. Logical	1	2	3	4	5

- Use uReply to invite groups to provide criteria
- Compile a list
- Based on students' rating on the relatively importance of each criterion to come up with the final set of criteria



Reflection and Research Questions



- Different approaches for generating the criterion set
 - Effectiveness in each activity?
 - Effectiveness in each discipline?
- Self- and peer-assessments are applicable to a wide range of activities and courses
 - Effectiveness in each activity?
 - Effectiveness in each discipline?
- Mainly applied in Science and General Education courses
 - Effectiveness in other disciplines?
- Self-assessment contributes to a small percentage of the overall course grade
 - Optimal percentage?



--- The End ---

Q & A

Thank you very much.

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