Norm-Based vs. Criterion-Based Assessment

Background

The UGC has mandated that Hong Kong Universities adopt an Outcome-Based Approach to Teaching and Learning. By implication, this requires curricula to be assessed using criteria that are shared with students and then used for determining the final grade. In other words, students are graded on the basis of attaining well defined learning outcomes (i.e., knowledge, skills, attributes criteria) rather than how they compare with their peer group. There are several principles governing a move from norm-referencing to criterion-referencing:

1. All instructors have criteria that guide their grading. Traditionally those criteria have been more unconscious than conscious ("I know an A paper when I see it"), but the criteria exist.
2. Fairness to students requires that those criteria be worked out consciously and articulated publicly in advance of actual grading. The result of this process is often called a rubric. (This means that a student should be able to figure out why s/he got a certain grade on an assignment, and if s/he isn't, it is easy for the instructor to show the student.)
3. Again, fairness to students (as well as program coherence) requires that teachers in a given program not fluctuate wildly in their grading practices: that one instructor not give all A's while another gives all C's and D's.

If these three principles are accepted, there are historically three ways of achieving them in practice. Two of them involve forms of "norm-referencing". One form of norm-referencing is preceded by laisser-faire grading. People grade however they grade and then the results are forced into a curve. This approach is the most expedient. It relies on principles (1) while bypassing (2), and makes (3) a purely allocation of a letter grade or numeric (and therefore impersonal) process.

Another, "hybrid" form begins with explicit criteria. Instructors discuss and arrive at an agreement among themselves on what they are looking for in an assignment, and then tell the students before they submit their assignments. Students know how many points they get for various aspects of how they have tackled their assignment and the total number of points that they receive determines their place in the "pecking order" within a section. The curve is then applied. This hybrid approach honours principles (1) and (2) but adopts a somewhat expedient approach to (3).

In contrast with these two forms of norm-referencing is an alternative approach, generally called "criterion-referencing". In this approach, instructors in a program sit down together to read a sample of students' papers, and compare their grades and how they have interpreted the grading criteria that they have already agreed. Once clear norms and benchmarks have been agreed about what constitutes various levels of actual performance on the various criteria, and strong inter-rater reliability has been established, then instructors may apply a criterion-referencing approach to the students within their section, without resorting to the curve, since they have established the reliability of their own judgement calls. The approach is, initially at least, the most time-consuming, it not only requires consensus in the grading criteria but it also subjects the application and interpretation of the criteria to group mediation. However, it goes much further than hybrid norm-referencing in seeking to honour principle (3), though cogent program-wide discussion and consensus building within programmes.

At Lingnan there has been considerable discussion about norm-based referencing for the purposes of avoiding grade-inflation, addressing individual differences that may exist between different teachers, and ensuring fairness of assessment for students. However, there are equally many complaints about the requirements of arbitrarily awarding grades based upon a curve that may or may not reflect the classroom environment or the nature of the

students enrolled. Additional confusion also occurs at Lingnan since the majority of classes have class sizes of less than 30 students in which case academic staff are not bound by the requirements of norm-referencing. In short, the entire norm-referencing/criterion-referencing debate at the university is mired in confusion, exceptions and dissatisfaction.

Criterion-based and Norm-based assessment: The impact on OBATL:

There is considerable literature on the strengths and weaknesses of norm-referencing (often known as 'grading on the curve') and criterion-based referencing. Lingnan University has been mandated by the University Grants Committee to develop an Outcomes-Based Approach to Teaching and Learning (OBATL). By implication OBATL requires that assessment processes be based on clearly expressed criteria. In light of this requirement, it is useful to articulate some of the issues around the two modes of grading before discussing assessment guidelines. Table 1 below is a simple example that contrasts criterion-referenced assessment with norm-referenced assessment using the same criterion and also shows how grades are differentiated on the basis of the two approaches.

Table 1: Criterion-Referenced and Norm-Referenced Assessment

Criterion: Comprehension of the Causes of World War II (WW II)[*]
Answer: WWII was caused by multiple factors, (1) including the Great Depression and the general economic situation, the rise of nationalism, fascism, and imperialist expansionism, (2) and unresolved resentments related to WWI. The war in Europe began with the (3) German invasion of Poland

Student Answer	Criterion-Referenced Assessment	Possible Grade Allocation (against criterion)	Norm-Referenced Assessment (against other student performance)	Possible Grade Allocation
Student 1: *WWII was caused by Hitler and Germany invading Poland*	*Meets only one aspect of the criterion*	**C**	(1) *Best perceived answer from all students* (2) *Better than perceived third best student answer but worse than perceived best student answer*	**A** **B**
Student 2: *The war in Europe began with the German invasion of Poland. However, this was the trigger that resulted from a number of factors including the Great Depression and other factors such as the general economic situation, the rise of nationalism, fascism, and imperialist expansionism. Additionally, Germany had unresolved resentments related to WWI.*	***Correct***	**A**	*Perceived best answer from all students*	**A**
Student 3: *WWII was caused by the assassination of Archduke Ferdinand*	***Incorrect***	**F**	*Perceived worse answer than other students in the course*	**F**

Norm-referenced grading: Issues

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[*] Adapted from an example provided in Wikipedia (http://en.wikipedia.org/wiki/Criterjon-referenced_test, accessed, 12-12.2012)

Norm-referenced grading is also based on criteria. However, while norm-referenced grading may purport to support a rigorous approach to grading students and prevent grade inflation, it is not without problems, including:

- It provides insufficient information about actual student performance and the problem essentially lies in the first row above. This is where no student in the class/course actually gets it right but a relatively poor or incomplete answer, using the norm-referenced approach, is still the best answer in the class/course. This student is thus allocated an A but using a criterion-referenced system would only attract a C.
- Students may be unsure about their performance i.e., the actual process by which final grades are arrived at may be opaque to students.

While considerable efforts are made by staff to mitigate these problems (e.g., External Academic Advisors, Programme-level committees, or accreditation exercises), there are long-term and ongoing problems with norm-referenced grading.

Ensuring that Criterion-referenced grading is effective

Criterion-referenced grading requires that the criteria be clearly defined and that rubrics be developed that facilitate assessments that are as objective as possible. A good model i.e., one of the units from CEAL, is attached. See Appendix 1.

In line with OBATL, the University continues to encourage academic staff to adopt the following initiatives which are necessary for moving towards criterion-based assessment, while recognising that full adoption of criterion-referenced grading may not be feasible or desirable, certainly not at this stage of Lingnan's development in this area:

- develop explicit, rigorous criteria that are shared with students and colleagues;
- develop rubrics that allow academics to make objective assessment of student performance against criteria;
- provide opportunities for academic staff to engage in discussions about the relationship between criteria/marking scales and how those criteria/marking scales are interpreted and applied in order to produce grades;
- after their initial use, refine rubrics, if necessary, to improve their sensitivity and to accommodate good work that addresses learning goals in hitherto unexpected ways.

Largely this process has taken place in CEAL and has resulted in the rubric contained in the Appendix to this paper. Inclusion of this Appendix is not to suggest that this is the model for all programmes but should be viewed as an example of good practice specifically within the CEAL context.

Senate: March 2014
Updated in August 2019

LCE1020 Unit 3 – Agree to Disagree
Intended Learning Outcomes
By the end of this unit students will be able to:
- Write a persuasive essay to present an opinion about a controversial topic supporting that opinion with detailed and relevant examples. +
- Read and listen to texts in order to understand people giving their views about a controversial topic.*
- Read, listen to and understand articles and reports concerned with contemporary problems in which the writers or speakers adopt particular stances or viewpoints. *

+assessed at end of unit.
*assessed at end of course.
Teaching and Learning Activities
In this Unit, students will:
In this unit students will:
- Talk about the reasons and ways people protest about things
- Read about:
  - An environmental group
  - Two opposing views of nuclear power
- Listen to:
  - A talk about nuclear energy
  - A podcast about climate change
- Study grammar used to discuss and write about controversial issues:
  - Noun phrases
  - Modal verbs
- Study language to write about controversial issues:
  - Vocabulary
  - Paragraph structure
  - Topic sentences
  - Quoting and paraphrasing
  - Introductions and conclusions
  - Citations and references
- Write about:
  - Their opinion about a controversial topic

<u>**LCE1020 Unit 3 – Task sheet**</u>

In this unit called "Agree to Disagree", you will be asked to complete an individual task.

TASK: write a persuasive essay (minimum 1000 words) on this question: "Environmental groups like *Greenpeace* are taking the wrong positions on environmental issues." Discuss this statement.

- This is an <u>individual task</u>. Your aim is to write an essay which presents your position on a controversial issue.
- Its purpose is to convince anyone who reads your essay that you have thought seriously about this issue, and that the position you hold is a reasonable one which you can defend strongly.
- Your essay should contain an introductory paragraph, a minimum of two main body paragraphs, and a concluding paragraph.
- The essay should contain relevant reasons and examples which support your position. It should also contain a minimum of one quotation from a source text (written or spoken), and a minimum of one paraphrase from a source text (spoken or written).
- It should also show that you can use the target language forms for this unit (noun phrases and modal verbs).

The process for completing this task is as follows*:

Step 1:
- Read the articles associated with the Unit (web links are available in Moodle) concerning the disagreements about environmental issues. Make notes concerning the positions taken by the different authors.

Step 2:
- Think about the issues raised by these authors, and decide your position on the statement, "Environmental groups like *Greenpeace* are taking the wrong positions on environmental issues." Once you have decided on your position, you are ready to write your essay.

Step 3:
- Write the first draft of your essay. Pay attention to all aspects of your paragraphing and sentence grammar as you are writing, and pay special attention to your use of modal verb forms and noun phrases, which you practiced in this unit.

Step 4:
- Submit a copy of your first draft to your Instructor via the Dropbox feature of Moodle by _____, 2013 (your Instructor will show you how to do this). Within two weeks, you will receive feedback from your Instructor on what you did well, and areas where you need to improve. Make whatever changes your Instructor has suggested.

Step 5:
- Submit your final draft to your Instructor via the Dropbox feature of Moodle by _____, 2013.

These steps will include tasks which are done in-class and tasks which are done as homework. This task will be graded by your instructor and is worth 25% of your final mark for the course LCE1020.

LCE 1020 Unit 3 Writing Assessment – Rubric

Task fulfillment

These are the basic requirements for the task as outlined in the task sheet and instructions included in Unit 3.

Requirement (1 mark each)	Included	Not Included
Introduction		
Two or more body paragraphs		
Conclusion		
Reference list		
Word count at least 1000		
Sub-total (5 marks total)	**/5**	

Language

Marking Scale		Criteria	0	1	2	3	4	5
0	Does not attempt use	Topic Vocabulary						
1	Attempts but unsuccessfully	Taught Grammar						
2	*Approaching*	Pre-requisite Grammar						
		Citation and Paraphrasing						
3	Attempts with partial success	Signposting						
4	*Approaching*	**Notes on criteria**						
5	Attempts with complete success	Topic vocabulary – Use of terminology appropriate to the topic; and accuracy of spelling.						
Please see your marked first draft for feedback on language.		Taught Grammar – Use of the grammar features taught in the unit(s) preceding the task. Prerequisite grammar – Use of other grammar features needed to complete the task. Citation and Paraphrasing – Use of source material sufficiently altered in presentation and cited correctly Signposting – Use of signposting words or phrases to add cohesion to the text						
Sub-total (25 marks total)		**/25**						

Communicative Purpose

	0	1	2	3	4	5
Introduction . Introduces topic in a general way . Explains background of the issue discussed . Thesis statement						
Body Paragraphs . Topic sentence with topic/controlling idea . Topic expounded upon . Support/evidence presented . Concluding Sentence						
Conclusion . Re-statement of thesis . Summary of main points . Concluding thoughts						
Sub-total (15 marks total)	/15					

Total Marks	/45
Percentage	%
Deductions	%
Final Percentage	%