

Main Project: Enhancing Teaching and Learning through Assessment
Sub-project: Enhancing Teaching and Learning of Dissertation Through Portfolio Assessment with the Application of Criterion-Referenced Assessment Model

Investigator(s): CHEUNG LO Ann Chien, Ann, Department of Building and Real Estate (BRE)

Introduction/Background

The Dissertation is a 6-credit subject in the Department of Building and Real Estate's four undergraduate degree programmes. It is a compulsory and is taken by all the Level 4 (Year 3) students. It is a major piece of individual research work for them. The **Aim** of the Dissertation in the Programme's curricula is to: "Enhancing the student to take a critical and analytical view of an issue relevant to the construction and real estate industry and of particular concern to the Hong Kong and its neighbouring environments."

It follows that the **Learning Outcomes** of the subject are for students to demonstrate their ability to:

1. Demonstrate competent development and knowledge of a specific area of in-depth of study.
2. Carry out and report on a small research project.

Process

Duration:

This piece of individual research work is to be carried out by the student himself/herself within a time frame of about twelve-months duration. Generally, each student submits his/her dissertation proposal around April to May, mid-term of Semester 2 in his/her Level 3 (Year 2) study. The final draft of the dissertation is handed in subsequently in the following April, mid-term of Semester 2 of the student's Level 4 (Year 3) study.

Supervisors:

Upon the approval of dissertation proposals, supervisors are then allocated to students. The allocation of supervisors is based on the criterion of the staff's research interest(s), the relevance of students' proposed dissertation topics to the staff and the categorization of dissertation topics within the five disciplines of the Department (these are Management, Law, Economics, Real Estate, and Technology). The assignment of supervisors is usually completed in June/July of the summer semester of Year 2 so as to allow the prospective students to be in contact with their respective supervisors and thus enable the students to carry on their research activities even during the summer semester holiday.

It is the responsibility of the final year student to meet his/her respective supervisor regularly, usually once a week or bi-weekly to discuss and report research progress including research activities, methodology, procedures, concepts and ideas, problems and issues, etc. The supervisor gives guidance and supervision to his/her research student.

Assessment

The assessment strategy adopts what Biggs (2002) has referred to the "criterion-referenced" approach of assessment. The grade "an individual obtains reflects how well the individual meets preset criteria, those being the objectives of teaching" (Biggs, 2002) as well as learning. It follows that the

assessment of the Dissertation assesses student performance resulting from learning tasks. It is based on their ability to develop and demonstrate the following attributes:

- (a) to critically evaluate information;
- (b) to take personal initiative and to think independently;
- (c) to be able to identify the scope and limitation of collected data;
- (d) to make value judgement; and
- (e) to communicate clearly in argument and draw logical and substantiate conclusions.

The Dissertation will be marked by the supervisor and a second marker to ensure fairness of marking. The student's final grade is the average of the two markers. When there is a grade difference of more than two grades, a third marker will be called upon to make a balanced judgement.

There seems to be a clear alignment between objectives and assessment. The criterion-referenced assessment seemed to work well for years. But what then is the problem?

Issues

1. In view of the institutional system, the Dissertation is continuously assessed (CA) although in fact the student only hands in a copy of the Dissertation draft as the final product of the individual piece of research work and is assessed and graded on this only.

It seems only that end product is concerned. The process of learning research has not been taken on board. The problem is that some students (at the extreme end) simply avoid or elude their responsibilities to meet their supervisors to let know how they are getting on and what they are doing. For the Dissertation, the process and the end product are both significantly important. i.e. the issues of formative assessment and summative assessment.

“Constructive Alignment emphasizes process” by the verbs are in-built into the objectives and used for the learning outcomes which are in fact “ways of requiring students to think in required ways, not just to achieve outcomes.” However, in this instance, the “process” seems to lose its vision without the actual award of grades. But then how to grade such a process?

2. Moreover, the non-grading of the ‘process’ results can give doubt with regard to whether the students work is genuinely their own or, has there been plagiarism.
3. Some students regard their supervisors as sources of information and rely heavily on them. Hence they do not develop their independent and creative thinking abilities. Others may become ‘research slaves’ of their supervisors. In both cases, the learning outcomes of the students are marred.
4. The addendum of No. 3 above is that the “halo” phenomenon of appreciativeness is so significant that there are too many A+ and A in dissertations. Although “good teaching should reduce variance” and that grades should not be distributed along the normal curve (bell curve) or some other predetermined distribution (Biggs, 2002), the numerous high end gradings are alarming to some of the teaching faculty and the external examiners as the quality standards of both teaching/learning and the Dissertation becomes questionable.
5. There begins gradual migration from criterion-referenced assessment to norm-referenced assessment. This happened partly due to (i) some teaching faculty still unconsciously prefer to quantify performance. “In the case of learning, outcomes have to be quantified using either a subjective and arbitrary rating scale” (Biggs, 2001) and (ii) some external examiners from the industry prefer the measurement model (Tayler, 1994) where percentages are allocated to

the criteria because of the traditional thinking that quantification is ‘easy’ to measure the extent of the graduate’s ability and performance. Such ability marking produces the familiar bell shape curve and students are stereo-type classified to facilitate the employers’ choices. This is not quality learning. It loses the meaning of education.

6. The media of English as a communication means needs to be addressed. Undergraduate dissertations show a deterioration in the use of English and are often very lengthy with unsorted data and information.

Proposed Assessment Model

To be accordance with the PolyU’s Strategic Objective 1.1 “Academic departments and relevant centres to review and strengthen curricula, teaching and assessment methods and to ensure the inclusion of components that could help students to attain the qualities listed in the objectives,” the existing assessment model should be changed to more holistic assessment using a criterion reference model so as to rectify the above issues. This will be implemented in the coming academic year 2003-2004 as a pilot study. In order to better achieve the aim and objectives of the Dissertation as well as the intrinsic quality of the curriculum and to avoid the above mentioned issues, the following change of assessment model is proposed:

1. Portfolio assessment: the student is assessed in both the research ‘process’ and the dissertation itself. Both of which are documented:
 - (a) Two progress reports both endorsed by the prospective supervisor with comments and indication of satisfactory progress at a specified period of time.
 - (b) A copy of the Dissertation with a word limit between 5,000 to 8,000 words for the main body excluding abstract, appendices, references and bibliography.
2. Review and re-define the levels of understanding and performance that are to be attained and hence the corresponding grade criterion, e.g. what level of understanding and work needs to be displayed to obtain grade A, or B+ etc.
3. The use of English will form as part of the assessment criteria.
4. Assessment:
 - (a) Supervisors will not mark their respective student dissertations. This is a radical change of dissertation assessment in the Department.
 - (b) Supervisors only grade their respective student’s progress reports as satisfactory and unsatisfactory. Students may be required to do presentations if their supervisors request them so as to answer queries on originality of work, suspect of plagiarism, serious deficiency of research work, etc. Only upon the satisfaction of the progress reports by the supervisors, dissertations will then be marked by designated markers.

Therefore, supervisors will only assess the “process”, a major learning activity of the project. The supervisors will then no longer be regarded as a source of information, but, rather as a research guide to support the project. This is a fundamental cultural change for the undergraduates’ learning attitude as well as the teaching support from the staff of the faculty.

- (c) One assigned marker will grade the Dissertation with the grade criteria based on the subject/course objectives. The marker will mark/grade in a holistic manner with qualitative thinking (Biggs, 2002) instead with a ‘halo’ phenomenon of

appreciativeness. The marker will be assigned only after the portfolio (Dissertation and Progress Reports) is handed in by the student.

- (d) In cases where there are disagreements or differences between the supervisor's expectations and the marker's grading, a third party will be included to moderate.
5. Guidelines as to the role of the supervisors will be provided. In particular, guidelines need to be designed to re-define the roles of supervisors when students "research" their dissertations. It is anticipated that there will be a cultural change in that students will regard their supervisors only to provide guidance in research instead of sources of information and an approval authority as supervisors will not now mark their students' dissertations.

Aims and Objectives

1. To evaluate whether the proposed assessment method can better complement the aim, objectives, and learning outcomes of the Dissertation.
2.
 - (i) To examine and improve the constructive alignment of the teaching system i.e. the aim(s)/objectives, learning outcomes and assessment of Dissertation.
 - (ii) To review the criteria for criterion-referenced assessment.
3. To explore students' perspectives on:
 - (i) supervisors not marking dissertations;
 - (ii) the enhancement on learning with the introduction of the progress reports in the dissertation portfolio assessment.

Schedule of Activities

Activities	Aug. 2003	Sept. 2003	Oct. 2003	Nov. 2003	Dec. 2003	Jan. 2004	Feb. 2004	Mar. 2004	Apr. 2004	May 2004	June 2004	July 2004
1. Preparation & design of guidelines to both supervisors & markers												
2. Recruitment of Project Assistant												
3. Literature Review and Review teaching system of Dissertation												
4. Design of questionnaires & design/preparation of qualitative interviews												
5. Data collection on process: dissertation/teaching & learning/research activities												
6. Data entries & analysis												
7. Assignment of dissertation markers												
8. (i)Data collection on Dissertation Assessment (staff) (ii)Interviews & feedback questionnaires (students)												
9. Data entries & analysis												
10. Report compilation of project results & findings												

Evaluation

1. A questionnaire will be designed to collect students' feedback on:
 - (a) the fact that supervisors are not marking dissertations but another markers are assigned to do this; and
 - (b) the usefulness of portfolio assessment with the newly introduced component of progress reports.

This feedback will be used for improvement.

2. Focus group interviews will be conducted with the teaching faculty to solicit views and feedback to this proposed assessment model for further improvement and implementation.

Dissemination of Results

Findings will be disseminated through the sharing sessions organized by the Main Project, its website, and other educational conferences.

References

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