

**Implementing Criterion-Referenced Assessment in Enhancing Quality in College of
Distance Learning St. Mary's University (CODL- SMU)
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Introduction

Traditional norm- referenced- assessment method have come into question, and criterion – referenced- assessment has gathered considerable momentum as a method of marking, grading and reporting distance learners ' achievements over the past decade, in undergraduate education. The Queensland University of Technology (QUT) University Academic Board approved a new QUT Assessment Policy in September 2003, which requires a criterion-referenced approach as opposed to a norm-referenced approach to assessment. (Lee D. *et al.* 2002, Burton, K. *et al.* 2005).

In connection with this, QUT Implementation Plan (2002), the QUT School of Law-document highlighted the following:

“In 2004, in accordance with the QUT Implementation Plan, the QUT School of Law raised an awareness of criterion-referenced assessment and implemented CRA in first year core undergraduate law units. The Implementation Plan anticipates that all law units across all year levels will implement CRA between 2005 and 2007. Norm – Referenced Assessment (NRA) distinguished from CRA and why QUT is implementing justified. The authors designed, implemented and evaluated CRA in a first year core undergraduate law unit, LWB143 Legal Research and Writing, in 2004.” (Page 2)

Universities in Ethiopia, both public and private, at the present time are inclined to practicing a Criterion- Referenced Assessment (CRA)

In this study of Implementation of Criterion-Referenced Assessment, appropriateness Criteria to the criterion-referenced assessment sheet of Principles of Accounting II course has been analyzed based on the responses of 9 subject experts who are writing modules / teaching the course Principles of Accounting II, currently at SMU. All the criteria are found appropriate as ascertained by the analysis of the experts.

The Strengths of Criterion-referenced Assessment

Norm and Criterion-Referenced Assessment are two distinctly different methods of awarding grades that express quite different values about teaching, learning and student achievement.

Norm -Referenced - Assessment

Norm referenced assessment, or 'grading on the curve' as it is commonly known, places groups of distance learners into predetermined bands of achievements. Distance learners compete for limited numbers of grades within these bands which range between fail and excellent. This form of grading speaks to traditional and rather antiquated notions of 'academic rigor' and 'maintaining standards'. It says very little about the nature or quality of teaching and learning, or the learning outcomes of distance learners. Grading is formulaic and the procedure for calculating a final grade is largely invisible to distance learners (Bond, L.,1996).

Norm-referenced assessment ranks a student's performance against their peers and results in a normal distribution of grades, which is commonly referred to as using a bell curve or "grading on the curve".(Nightingale *et al.*, 1996).

Three problems are identified with norm-referenced assessment (Jackson, S., 2004). The first problem is that if academics use feedback from previous years to inform improvements in their teaching and learning, the success or failure of this cannot be measured by improved student outcomes. The second problem is that distance learners become more competitive and are less likely to work co-operatively with their peers because they perceive that their marks will increase if they hamper other distance learners. The third problem is that it does not recognize that the abilities of distance learners in a cohort in one year may vary from the abilities of distance learners in a cohort in a subsequent year.

Criterion-Referenced Assessment

Criterion-Referenced Assessment has been widely adopted in recent times because it seeks a fairer and more accountable assessment regime than norm referencing. Distance learners are measured against identified standards of achievement rather than being ranked against each other. In Criterion-Referenced Assessment the quality of achievement is not dependent on how well others in the cohort have performed, but on how well the individual student has performed as measured against specific criteria and standards (Linn, R., 2000).

Underlying this grading scheme is a concern for accountability regarding the qualities and achievements of distance learners, transparency and negotiability in the process by which grades are awarded, an acknowledgement of subjectivity and the exercise of professional judgment in marking (Bond, L., 1996).

The QUT Manual of Policies and Procedures (2002) defines criterion-referenced assessment as follows:

Criterion-referenced assessment requires the determination and communication of detailed and clear criteria, each with performance standards, in advance of the assessment. Well-

designed and clearly communicated criteria and performance standards will empower the assessment process with a great deal of objectivity, but of necessity the process must also rely on the professional judgment of those doing the assessing. (Page 3)

According to QUT, *Manual of Policies and Procedures* (2003), the use of criterion-referenced assessment is justified because it increases the validity of the assessment task. Validity measures whether the desired learning outcomes are achieved.

Another benefit is increased reliability of the assessment task. Reliability measures whether different markers mark a piece of work consistently and that the same marker is consistent in their marking. Criterion-referenced assessment also motivates distance learners by providing them with explicit and attainable standards in advance so that they can concentrate on improving their personal best performances rather than competing with their peers (DT Neil & DA Wadley, 1999).

A Criterion and a Standard

A criterion is a characteristic by which quality can be judged and a standard is a statement about the degree of quality to be attained.

In this study of Design and Implementation of Criterion-Referenced Assessment of Principles of Accounting II Course, there are five performance standards presented across the page that is, excellent, very good, good, and unsatisfactory and fail. Each performance standard has a descriptor indicating what is required to perform at a certain standard on a criterion.

The table below gives the simplified five performance standards that correlate to the five grades, percentages and letter grades.

Table 1: Performance standards of the five grades, percentages and letter grades

Performance Standard	Grade	Per cent	Letter Grades
Excellent	4	80 & above.	A+ = 90 & above. A= 80- 89,
Very Good	3	65- 79	B+ = 75- 79, B =65-74
Good	2	40-64	C+= 60-64, C=45-59, C-=40- 44
Unsatisfactory	1	30-39	D=35 -39, D- =30-34,
Fail	0	<30	F < 30

The design of Criterion-Referenced Assessment sheets is based on 5 Units of Principles of Accounting II Course. The criteria used are more likely to be compatible with the learning objectives of other units and therefore serve as a better example to other accounting academics that plan to change their assessment regime to one of criterion-referenced assessment.

The Criterion-Referenced Assessment sheet used in Principles of Accounting II Course is given on Table 3.

In this example, nineteen assessment criteria are presented in the first column, (on the left hand side of the page). The assessment criteria are aligned with the learning objectives for the unit.

This alignment ensures that the assessment task is valid because the tasks measure the “desired learning outcomes”. It also compels the distance learners to concentrate on the learning objectives of a unit.

The Design of Criterion-Referenced Assessment Sheet of Principles of Accounting II Course is constructed for the 5 Units with their corresponding Criteria and the corresponding Performance Standards values.

For example in Unit 1, the First *critterion* is “Identification of the Inventory Items and Costs” for which the learner will be assigned 4 points (Excellent) provided that “All relevant Inventory Items and Costs” are identified and to the extreme, the student will get 0 points (Fail) when “No identification of relevant Inventory Items and Costs”. Similar pattern follows for Unit 2, 3, 4 & 5.

Statement of the Problem

The major problem confronting Module writers in the implementing criterion – referenced assessment is setting a clear and precise criteria for the Module they are preparing and informing those criteria for the distance learners before the distance learner begins reading the modules.

The findings of this research titled “Implementing Criterion-Referenced Assessment in Enhancing Quality in College of Distance Learning St. Mary’s University (CODL- SMU)” could serve as benchmark for the way forward.

Objectives of the Study

This study in general bench marked the design and implementation of Criterion-Referenced Assessment in enhancing quality in CODL in general and Accounting Department of CODL - SMU in particular.

The study, more specifically, tried to materialize the design and implementation of Criterion-Referenced Assessment for the course “Principles of Accounting II of the Accounting Department of CODL - SMU

Significance of the Study

- Since a perplexing view is playing a role cornering NRA or CRA or the hybrid of the two,
- Since there is a need to lay a bench mark for CRA , in the under graduate program of CODL, similar to that of SMU under graduate Regular Program
- Considering nowadays scenario of a shift from Norm-Referenced to Criterion – Referenced- Assessment in both government and private higher institutions in Ethiopia, in pursuit of enhancing quality in the teaching, learning and assessment, implementing Criterion-Referenced Assessment is a crucial issue.
- Hence, the findings of this study helps distance learners , tutors , departments and other stakeholders in materializing the implementation of Criterion-Referenced Assessment in the pursuit of enhancing quality of teaching- learning and assessment in distance higher learning institutions.

Scope/Delimitation of the Study

This study is delimited to study the implementation of Criterion-Referenced Assessment for the course “Principles of Accounting II” of the Accounting Department of CODL.

Sources of Data

Subject experts of the course Principles of Accounting II from CODL, Testing Center and School of Business Accounting Departments served as sources of primary data.

Sampling

Purposefully 9 subject experts, 5 from CODL, 3 from School of Business Accounting Departments and 1 from the Testing Center are selected in this study.

Methodology

Two experts prepared Test Blueprint for Principles of Accounting II based on Module 1-3 as bases for developing the criterion-referenced assessment sheet of Principles of Accounting II course

Test Blueprint for Principles of Accounting was commented by measurement and evaluation experts from Testing Center and finalized.

Similarly, Performance Standards designed and finalized by collaboration of subject and experts from the Testing Center experts.

Data Collection Instrument

The Likert-type scale was employed to measure the extent to which subject experts ascertain the appropriateness of Criteria to the criterion-referenced assessment sheet of Principles of Accounting II Course.

Subject experts were asked to ascertain the level of appropriateness of the 5 Units of Module 1 & 2 criteria with the criterion-referenced assessment sheet of Principles of Accounting II course.

Subject experts were particularly requested to respond to each statement of four point scale: Very Appropriate (V.A), Appropriate(A), Less Appropriate (L.A) and Not Appropriate (N.A) in each category. All items were worded such that they expressed definite appropriateness. The alternatives were weighted 4,3,2,1 from very appropriate to not appropriate.

Group and peer discussions used for the triangulations of the truth of the information obtained from the Likert Scale and the open ended questions.

Results

Appropriateness of the 5 Units of the 16 criteria of Principles of Accounting II Course with the criterion-referenced assessment sheet of Principles of Accounting II course

Table 3. Experts rating of the criteria to the criterion-referenced assessment sheet of Principles of Accounting II

STATEMENTS	V.A	A	LA	NA
Appropriateness of the criteria to the criterion-referenced assessment sheet of Principles of Accounting II for :-				
Module-I: Accounting for Investing and Financing Activities				
Unit 1- Measuring and Reporting Inventories	3	5	1	0
Unit 2- Plant Assets-Acquisition, Depreciation and Disposal	3	4	1	1
Unit 3- Natural Resources and Intangible Assets	5	3	1	0
Module-II: GAAP and Current Liabilities				
Unit 1: The Foundation of Generally Accepted accounting Principles (GAAP)	3	5	1	0
Unit 2: Current Liabilities and Payroll Accounting	3	5	1	0
The over all appropriateness	17	22	5	1

- Concerning the appropriateness of the criteria to the criterion-referenced assessment sheet of Principles of Accounting II course, 8 or 88.89% of the experts ascertained the appropriateness of the criteria for Module 1 Units 1 & 2 and Module 2 Units 1 & 2.
- Similarly, 8 or 77.78 % of the experts leveled the criteria for Module 1 Unit 1 appropriate to the criterion-referenced assessment sheet of Principles of Accounting II course
- In general, 86.67 % of the experts witnessed the appropriateness of the criteria to the criterion-referenced assessment sheet of Principles of Accounting II Course.
- As learned from the open ended questions and focus group discussion, the majority of the experts participated in the study witnessed the appropriateness of the criteria and demanded

for the urgent implementation of the criterion-referenced assessment sheet of Principles of Accounting II Course.

Conclusion

Almost all experts accepted the appropriateness of the criteria to the criterion-referenced assessment sheet of Principles of Accounting II Course.

The Way Beyond 2016

- CODL Department of Accounting should use the criterion-referenced assessment sheet of Principles of Accounting II Course in 2017 1st term to increase the reliability and validity of assessment tasks.
- All tutors of Principles of Accounting II Course in 2017 1st term of the Department of Accounting has to be oriented on the Modules 1&2 units criteria and the corresponding 4 standards (very appropriate, appropriate, less appropriate and not appropriate and the values for each,4,3,2, & 1 respectively) in each category and how to apply the sheet to enhance quality in distance teaching, learning and assessment process.
- Module developers likewise should create a unit on the modules and explain:-
 - What criterion-referenced assessment is ,
 - What criteria is by giving example from criterion-referenced assessment sheet of principles of accounting ii course
 - What performance standard is
 - What criterion-referenced assessment sheet of Principles of Accounting II Course look like to their respective distance learners on the criterion and standards under discussion and tell that they are measured against identified standards of achievement of Principles of Accounting II Course sheet rather than being ranked against each other for the summative assessment.
- CODL is expected to refine the criterion-referenced assessment sheets so that they are more explicit, are clear and appropriate.
- The Department has to be engaged in processes that will enhance the shared understanding of the criteria and performance standards between the tutors and accounting distance learners.
- A further goal is to determine how second and later year Module units in the accounting build on the first year core Module accounting unit's criterion-referenced assessment sheets (for example Principles of Accounting II course on Financial Accounting II Course) to reflect the fact that accounting distance learners are incrementally developing their skills as they progress through the accounting degree.
- The experiences of the CODL Department of Accounting of the criteria application to the criterion-referenced assessment sheet need to be applied in other Departments at all courses and at all years.

- Further, study need to be carried out in area of “The Design and Implementation of Criterion-Referenced Assessment in Enhancing Quality in Higher Distance Learning Institutions”.

Sources:

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Table 3. The Criterion-Referenced Assessment Sheet for Principles of Accounting II
 Module-I- II Course
 Module-I .Accounting for Investing and Financing Activities
 UNIT 1 Measuring and Reporting Inventories - Criteria #

Criteria #4	Domain & No Items	Excellent 4	Very Good 3	Good 2	Unsatisfactory 1	Fail 0
Identification of the Inventory Items and Costs	Knowledge # 1	All relevant concepts of Inventory Items and Costs identified	Majority of relevant concepts of Inventory Items and Costs identified	Some of relevant concepts of Inventory Items and Costs identified	Limited identification of relevant concepts of Inventory Items and Costs	No identification of relevant concepts of Inventory Items and Costs
Assigning Costs to Inventory (Cost Flow Assumptions)	Knowledge # 1, Comprehension #1, Application #1& Analysis #1 Total #4	All relevant concepts of Assigning Costs to Inventory (Cost Flow Assumptions) identified	Most of relevant concepts of Assigning Costs to Inventory (Cost Flow Assumptions) identified	Some of relevant concepts of Assigning Costs to Inventory (Cost Flow Assumptions) identified	Limited identification of relevant concepts of Assigning Costs to Inventory (Cost Flow Assumptions)	No identification of relevant concepts of Assigning Costs to Inventory (Cost Flow Assumptions) Reporting
Analyzing the Effect of Inventory Errors	Knowledge # 1	All relevant concepts of Effect of Inventory Errors identified	Persuasive levels of relevant concepts of Effect of Inventory Errors) identified	Superficial levels of relevant concepts of Effect of Inventory Errors identified	Limited identification of the levels of relevant Effect of Inventory Errors	No identification of the levels of relevant Effect of Inventory Errors

Creation of Other Methods of Inventory Valuation	Synthesis #1	Comprehensive and very logical Other Methods of Inventory Valuation document Created	Reasonably comprehensive and logical Other Methods of Inventory Valuation document Created	Basic Other Methods of Inventory Valuation document Created	Limited development of Other Methods of Inventory Valuation document	No development of Other Methods of Inventory Valuation document
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UNIT 2: Plant Assets-Acquisition, Depreciation and Disposal - Criteria #5

Criteria	Domain & Items No	Excellent 4	Very Good 3	Good 2	Unsatisfactory 1	Fail 0
Recording of Acquisition of Plant Assets	Knowledge #1, Comprehension #1, Application #1 Total = 3	Comprehensive and very logical Acquisition of Plant Assets recorded.	Reasonably comprehensive and logical Acquisition of Plant Assets recorded	Basic Acquisition of Plant Assets recorded	Limited Acquisition of Plant Assets recorded	No Acquisition of Plant Assets recorded
Adjusting Depreciation of Plant Assets	Knowledge #1 & Synthesis #1 Total = 2	Comprehensive and very logical Depreciation of Plant Assets adjusted	Reasonably comprehensive and logical Depreciation of Plant Assets adjusted	Basic Depreciation of Plant Assets adjusted	Limited Entries adjusted	No Depreciation of Plant Assets adjusted
Handling of Special Considerations in Computing	Knowledge #1 & Comprehension #1. Total = 2	Comprehensive and very logical Special Considerations in	Reasonably comprehensive and logical Special Considerations in	Basic Special Considerations in Computing Depreciation	Limited Special Considerations in Computing Depreciation	No Special Considerations in Computing Depreciation handled

Depreciation		Computing Depreciation handled	ns in Computing Depreciation handled	n handled	handled	
Reversing Expenditures on Plant Assets	Comprehension #1	Comprehensive and very logical Expenditures on Plant Assets translated	Reasonably and very logical Expenditures on Plant Assets translated	Basic Expenditures on Plant Assets translated	Limited Expenditures on Plant Assets translated	No Expenditures on Plant Assets translated
Outlining the Disposal of Plant Assets	Knowledge #1	Outlines Comprehensive and very logical Disposal of Plant Assets developed.	Outlines Reasonably and very logical Disposal of Plant Assets developed.	Outlines Basic Disposal of Plant Assets developed.	Outlines Limited Disposal of Plant Assets developed.	No Outlines of Disposal of Plant Assets developed.

UNIT 3: Natural Resources and Intangible Assets - Criteria #3

Criteria	Domain & No Items	Excellent 4	Very Good 3	Good 2	Unsatisfactory 1	Fail 0
Comprehension of Natural Resources-Acquisition and Depletion	Knowledge # 1 & Comprehension #1. Total #2	High level of Comprehension of Natural Resources-Acquisition and Depletion recognized.	Persuasive level of Comprehension of the Natural Resources-Acquisition and Depletion recognized.	Basic level of Comprehension of Natural Resources-Acquisition and Depletion recognized.	Limited Comprehension of the Natural Resources-Acquisition and Depletion recognized.	No Comprehension of the Natural Resources-Acquisition and Depletion recognized.
Translation of the Intangible Assets	Knowledge # 1 & Comprehension #1 Total #2	High level of Comprehension of the Intangible Assets developed.	Persuasive level of Comprehension of the Intangible Assets developed.	Basic level of Comprehension of the Intangible Assets developed.	Limited Comprehension of the Intangible Assets developed.	No Comprehension of the Intangible Assets developed.

Module-II: GAAP and Current Liabilities

UNIT 1: The Foundation of Generally Accepted Accounting Principles (GAAP)Criteria #5

Criteria	Domain & No Items	Excellent 4	Very Good 3	Good 2	Unsatisfactory 1	Fail 0
Development of GAAP	Knowledge # 2, Comprehension #1, Application #1, Synthesis # 2. Total # 6	High level evaluation of Development of GAAP done.	Persuasive level of evaluation Development of GAAP done.	Basic Identification of Development of GAAP done.	Limited Development of GAAP done.	No evaluation of Internal control over cash done.
Evaluation of Conceptual Framework for GAAP	Knowledge # 1, Comprehension #1, Application #1, Synthesis # 1& Analysis#1 Total #5	High level evaluation of Conceptual Framework for GAAP done.	Persuasive level of evaluation of Conceptual Framework for GAAP done.	Basic Conceptual Framework for GAAP done.	Limited evaluation Conceptual Framework for GAAP done.	No evaluation Conceptual Framework for GAAP done.
Synthesis of Accounting Principles	Knowledge # 2, Comprehension #1, Application #1, Synthesis # 2. Total # 6	High level evaluation of Accounting Principles done.	Persuasive level of evaluation Accounting Principles done.	Basic Identification of Accounting Principles done.	Limited Accounting Principles done.	No evaluation of Accounting Principles done.
Comprehension of	Knowledge # 2,	High level evaluation	Persuasive level of	Basic Identification	Limited Constraints	No evaluation

Constraints on Accounting	Comprehension #1, Application #1, Synthesis # 2. Total # 6	of Constraints on Accounting done.	evaluation Constraints on Accounting done.	on of Constraints on Accounting done.	on Accounting done.	n of Constraints on Accounting done.
Synthesis of Financial Statements and Their Elements	Knowledge # 2, Comprehension #1, Application #1, Synthesis # 2. Total # 6	High level evaluation of Financial Statements and Their Elements done.	Persuasive level of evaluation Financial Statements and Their Elements done.	Basic Identification of Financial Statements and Their Elements done.	Limited Financial Statements and Their Elements done.	No evaluation of Financial Statements and Their Elements done.

UNIT 2: Current Liabilities and Payroll Accounting - Criteria #5

Criteria	Domain & No Items	Excellent 4	Very Good 3	Good 2	Unsatisfactory 1	Fail 0
Valuation of Meaning and Classification	Knowledge # 2, Comprehension #1, Application #1, Synthesis # 1 Total #5	High level evaluation of analysis of Valuation of receivables done.	Persuasive level of evaluation of analysis of Valuation of receivables done.	Basic Identification of Valuation of receivables done.	Limited evaluation of Valuation of receivables done.	No evaluation of Valuation of receivables done.
Use of Current	Knowledge # 1,	High level	Persuasive level of	Basic Identification	Limited evaluation of	No evaluation

Liabilities of Known Amount	Comprehension #1, Application #1, Synthesis #1 & Analysis #1 Total #5	evaluation of analysis of Use of receivables as a source of cash identified.	evaluation of analysis of Use of receivables as a source of cash done.	n of Use of receivables as a source of cash done.	Use of receivables as a source of cash done.	n of Use of receivables as a source of cash done.
Comprehension of Contingent Liabilities	Knowledge #1, Comprehension #1, Application #1, Synthesis #1 & Analysis #1 Total #5	High level evaluation of Contingent Liabilities identified.	Persuasive level of evaluation of Contingent Liabilities done.	Basic Identification of Contingent Liabilities done.	Limited evaluation of Contingent Liabilities done.	No evaluation of Contingent Liabilities done.
Application of The Payroll System in an Ethiopian Context	Knowledge #1, Comprehension #1, Application #1, Synthesis #1 & Analysis #1 Total #5	High level evaluation of analysis of Payroll System in an Ethiopian Context identified.	Persuasive level of evaluation of analysis of Payroll System in an Ethiopian Context done.	Basic Identification of Payroll System in an Ethiopian Context done.	Limited evaluation of Payroll System in an Ethiopian Context done.	No evaluation of Payroll System in an Ethiopian Context done.