

EVALUATING THE SUCCESS OF FACULTY-DRIVEN ASSESSMENT PLANS FOR CONTINUOUS IMPROVEMENT IN THE FINANCE MAJOR

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ABSTRACT

Criticism of business school graduates as to their effectiveness as managers, and feedback from employers of our graduates, indicate a need to include a focus on certain basic core competencies to complement disciplinary expertise. Educational research shows that such skills (communication, ethics, critical and analytical thinking and the use of technology) are most effectively taught in the disciplinary context. Measures of effectiveness of changes were developed and used to improve student quality.

This paper describes how the College of Business Administration first identified a set of core skills and competencies of Undergraduate graduates in the Finance Major, set about assessing the skills in the context of each discipline and finally developed an iterative process to close the performance gaps.

The measures of assessments that were developed are outlined and lessons learned to date in efforts to improve educational quality are discussed. The plan offers suggestions for improving the assessment results based on deficiencies identified from the exit exam results and faculty surveys of learning experiences.

BACKGROUND

The objective of AACSB accreditation is to help programs prepare business students for the challenges of the global economy, for differences in organizational and cultural values they will encounter, cultural diversity, and the ever-changing technology of the business world. Students are expected to graduate with a body of specialized knowledge and skills to accomplish their personal goals and the goals of the organization for which they work. The measurement of learning in an increasingly knowledge-based society has become increasingly important as employers and legislators require more ways to analyze the learning acquired by students. This

plan not only improves student learning, but also reassures stakeholders that students are retaining what they are taught functionally and in the context of core competencies.

According to a working paper by Hornby (2003), assessment has four main roles: to provide support for future learning; to provide information about learning; to certify by means of qualification; and to evaluative, that allows stakeholders to judge the effectiveness of the system as a whole.

In pedagogical theory, Bloom's Taxonomy developed in 1956, provides an excellent structure for planning, designing, assessing and evaluating training and learning effectiveness. The model served to categorize the learning experiences that the faculty use and provided a way to evaluate these experiences. A working template was designed to collect learning experiences for each Undergraduate class. The validity and coverage of each of these learning experiences were evaluated in the context of each learning objective. This very time consuming exercise provided the beginning of a dialogue amongst the faculty that led to the eventual plan for continuous improvement for the Finance Department.

MOTIVATION

AACSB states, “for 2007 and beyond, schools undergoing accreditation and maintenance of accreditation should be demonstrating a high degree of maturity in terms of delineation of clear learning goals, implementation of outcome assessment processes, and demonstrated use of assessment information to improve curricula. For schools with visit years in 2007-08 and beyond, the impact of assessment outcomes on continuing development of degree programs should be evident.”¹

AACSB accredited schools are required to systematically assess students’ progress on key learning goals, and to use that data to strengthen the curriculum. This step in the assessment process was coined by Kathryn Martell as “closing the loop”. While many schools have made progress in gathering assessment data, most are unsure with what to do with the assessment data. A recent survey reveals that “closing the loop” has emerged as the greatest concern that business school deans have about the assessment processes at their schools.²

¹ http://www.aacsb.edu/resource_centers/assessment

² Francis, P.L., Salins, P.D., Huot, A.E., *Assessment Update*, Volume 18, Issue 1, Pg 1-16
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An important collective stakeholder in Business school education is the employer. Assessment efforts need to ensure we assess what the employer expects of a business school graduate, identify the discrepancies, and attempt to “close the loop”. Employers want employees who have highly specialized knowledge and can communicate that knowledge both verbally and in written communication like e-mails, memos and letters, concentrating on skills such as tone, audience, persuasion, summarization, and synthesis.³ Bennis and O’Toole (2005) note that while business schools claim they prepare students for today’s technology based environment, employers claim students do not have these basic entry-level skills.

PROCESS OF DEFINING GOALS, OBJECTIVES AND LEARNING OUTCOMES

Goals (Broad Outcomes)

Curricular goals define in broad terms the knowledge, skills, values, and attitudes faculty members believe will enable graduates to succeed as practicing professionals. Educational program learning goals of the college are based on the mission, student population, employer population, and other circumstances.

Learning goals serve two purposes. First, learning goals convey to stakeholders, the educational outcomes toward which they are working. This helps in setting priorities and emphasis, designing learning experiences, and fulfilling educational expectations. While the learning goals cannot be exhaustively stated for any higher education program, it is possible to set educational targets and to assure that the learning is progressing in the specified direction. Second, educational goals assist potential students to choose programs that fit their personal career goals. Only with an accurate understanding of the learning goals will a potential student be able to make an informed choice about whether to join a program.

There are goals for the general knowledge and skills acquired by students. The general knowledge and skills goals, while not management specific, relate to knowledge and abilities that business school graduates will carry with them into their careers. Such learning areas as communications abilities, problem-solving abilities, ethical reasoning skills, and language

³ Muir, C. Using Consulting Projects to Teach Critical-Thinking Skills in Business Communication, *Business Communication Quarterly*.1996; 59: 77-87

abilities are the types of general knowledge and abilities that schools might define as a part of these goals.

Additionally, there are management-specific learning goals for students. These goals relate to expectations for learning accomplishment in areas that directly relate to management tasks and form the business portion of degree requirements.⁴

Objectives (Specific Outcomes)

Objectives, by contrast, describe the relevant skills students must master to demonstrate proficiency in a given area of concentration. Objectives translate curricular goals into descriptions of *performance*, operationally defined for use in curricular development, teaching, evaluation of individual students, and program-level assessment. Because objectives emphasize what students can actually *do*, they are frequently referred to as "performance outcomes" or "behavioral objectives." Objectives are short but clear statements about the specific outcomes we expect from students. Objectives should specify the behavior that will serve as evidence that the learning goal has been achieved.

Learning outcomes represent what is formally assessed and accredited to the student. It answers the question, what is the performance you desire to gauge for student learning? An objective describes a specific learning outcome in terms of a student's *behavior* rather than a state of mind, which is often the focus of goals. A goal may call for evidence of students' *understanding* of a principle, which can only be *inferred* from the behavior.

The Faculty of the CBA looked at the ETS Field Test Exam for Business and determined it was not a suitably detailed mechanism for testing of our graduates. In an AACSB joint publication with the Association for Institutional Research edited by Kathryn Martel, a very detailed comparison between the ETS Field Test of Business to a locally developed test, exhibits clearly the reasons why Faculty members felt it necessary to develop our own assessment. Some of the main reasons are assessments can be designed to directly correspond to the programs' curriculum; there are benefits of using the data to provide feedback and close the performance gaps; and finally, there are opportunities to inexpensively change the exit exam as the curriculum evolves. In reviewing the ETS data closely, a fact emerged that is not well known, for a student to score in the 95th percentile in finance, the student only needed to answer 49% of the finance

⁴ http://www.aacsb.edu/resource_centers/assessment/ov-process-define.asp

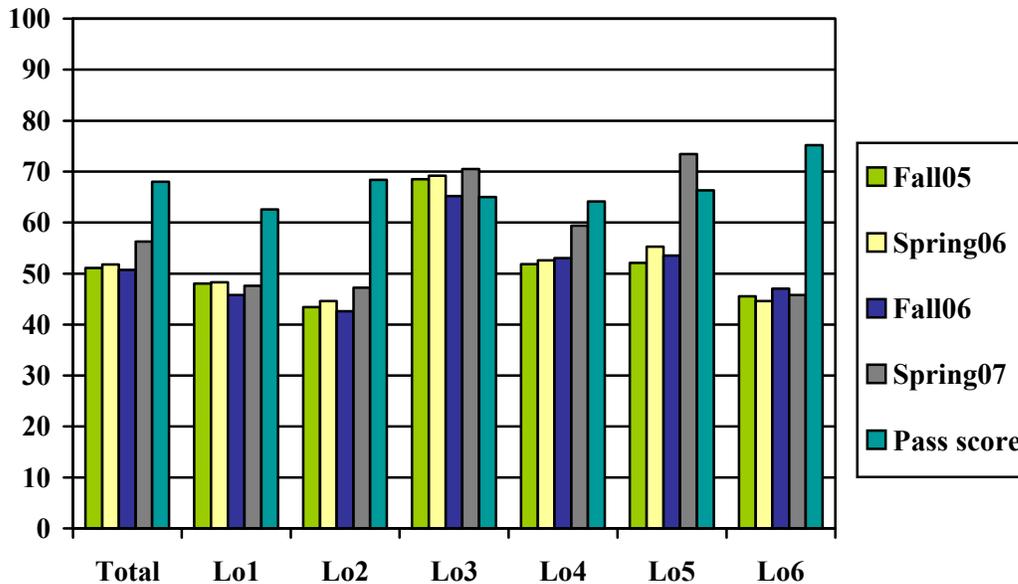
questions correctly! This conclusion was based on the 2003-04 data reported by ETS for the Major Field Test in Business.⁵ Therefore, the usefulness of ETS scores as a measure of learning outcomes was called into question.

We proceeded to develop our own learning outcome assessment tool. Using a template and website for the faculty members to submit test items for the courses they taught, we were asked to identify the specific major learning objective and the level of difficulty of each question submitted. The level of difficulty was submitted as the percent of students expected to get the right answer on the question. After questions were submitted, faculty members were then asked to review all the submitted questions for each major on a questionnaire filled out by hand. On this questionnaire, faculty teaching primarily within one of the eight majors was asked to “re-translate” all submitted test questions by categorizing each test item into one of the learning objectives for a particular major. This step was intended to insure that there would be high agreement that a particular question was tied to a particular learning objective. Analysis of these faculty responses was performed and items eliminated that did not have high agreement as to the learning objective that the item was intended to measure and a cutoff score on the test determined as a minimum that would meet faculty expectations.

The result was an exit exam with approximately 50 test questions that tested the learning accomplished throughout the Finance major. A total percentage correct on the test would reflect mastery as determined by the Faculty with a benchmark as determined by the Assurance of Learning Oversight Committee. These questions formed the basis of the prototype exit exam questions that were administered to students taking the capstone *Management 4722* policy course beginning in December, 2005. This Exit Exam was also given at the end of Spring 2005, Fall 2006 and Spring 2007. Additional assessments were designed to address the curricular goals.

⁵ Denise Rotondo, *Assessing Business Knowledge, Assessment in the Disciplines*, Vol. 1 No. 1, pg 102.

Figure 1
Results of the Assessment



Learning Objective 1 (Lo1) is primarily taught in the course Financial Markets & Institutions, Lo2 taught in Intermediate Corporate Finance, Lo3 in International Finance/International Banking, Lo4, in Commercial Banking, Lo5 in Financial Engineering, and Lo6 in the course on Securities Analysis.

ANALYSIS OF THE RESULTS AND THE PLAN FOR “CLOSING THE LOOP”

Much research has been done on institutionalizing mechanisms to foster deep learning. While technical and functional knowledge is required at a minimum, the higher-level skills of analysis, synthesis and evaluation were recognized as integral to producing superior quality of learning. Beginning with Benjamin Bloom in 1956 and based on De Winstanley & Bjork (2002), Halpern (2003) and the work of numerous others, it is possible to itemize important characteristics. Learning experiences were evaluated as ones that met the following characteristics:

- Engaged students actively
- Practiced retrieval of information and presentation in varied environments
- Linked new learning to previously mastered learning
- Applied learning to topical issues that students are knowledgeable and care about
- Received timely and meaningful reinforcement

Table 1, adapted from Bloom's technology helped the Faculty to categorize learning experiences and adjust them to accomplish individual tasks and strategies to achieve Assurance of Learning.

Table 1

COGNITIVE LEVEL OBJECTIVE	CHARACTERISTICS OF LEARNING EXPERIENCES	TASKS PERFORMED THROUGH THE LEARNING EXPERIENCE	STUDENT PERFORMANCE CRITERIA
APPLICATION	Student selects, transfers, and uses knowledge and principles to complete a problem or task with a minimum of direction.	Use Compute Solve Demonstrate Apply Construct	The student will apply the foundational knowledge.
ANALYSIS	Student distinguishes, classifies, and relates the assumptions, hypothesizes, finds evidence, or structures a statement or question to find a solution.	Analyze Categorize Compare Contrast Separate	The student will develop an understanding of the concepts and skills relevant to accomplishing each Learning Objective.
SYNTHESIS	Student originates, integrates, and combines ideas into a product, plan or proposal that is new to him or her.	Create Design Hypothesize Invent Develop	The student will develop an understanding of business practices and the complexity of organizations as well as how the theory can be used to address the needs of the organization.
EVALUATION	Student appraises, assesses, or critiques on a basis of specific standards and criteria.	Judge Recommend Critique Justify	The student will critically assess information and consider the consequences of different decisions including communicating the rationale behind decision-making.

CONTINUOUS IMPROVEMENT PROCESS

The process for reaccreditation and continuous improvement at the College of Business Administration involved defining a mechanism to establish a regular, systematic and sustained monitoring mechanism that facilitates learning and provides opportunities for advancement.

The committee in the CBA that continues to address the responsibilities for the Majors is the Undergraduate Learning Objectives Committee (ULOC), and those of the Curriculum and Core is the Undergraduate Curriculum Committee (UCC). A Continuous Improvement Report was written April 2006, and amended September 2006, by ULOC. The Continuous Improvement Reports– Analysis, Critique and Recommendations were submitted by the UCC and the Department Chairs in July 2007.

THE PROCESS FOR WRITING THE ULOC REPORT

- Design a plan for achieving continuous improvement in the performance of students who receive an Undergraduate Degree in Business Administration or Accounting at the R. Kirk Landon Undergraduate School of Business.
- Address at least two identified learning gaps in each major based on the results of the Exit Exams administered in Fall 2005 and Spring 2006.
- Address the students' performance deficits in the "ability to use technology" curricular learning goal and the "lack of good communication skills" as displayed by the assessment administered in Spring 2006.
- Offer suggestions for improving the assessment results from the majors based on deficiencies identified through the exit exam results and faculty surveys of learning experiences.
- Make suggestions for incorporating both 'best practices' pedagogical approaches and specific course content in various courses to ensure students achieve competence in their declared discipline, in the use of technology as well as improvement in communication skills.
- Propose changes to the curricula to address deficiencies of student performance identified in the core exit exam instrument relevant to overall business education.

MAJOR RECOMMENDATIONS FROM THE ULOC REPORT

A statement describing at least one learning objective from the major associated with the individual course should be added to each course. Faculty should include a statement in his/her syllabus describing learning experiences or activities that not only identified the Finance learning objective in each class but also the curricular goal addressed.

Exercises to improve oral and written communication skills should be introduced and reinforced at several points throughout the degree. Teaching of Excel, PowerPoint, MS Word and methods of research using web tools should be introduced early in the program and exercises in various courses of each major utilized, to continuously test and enhance those competencies. Suggestions for teaching proficiency in cost and profitability analyses relevant to all disciplines in business in an existing core course using a technology based format.

Specific improvements to course content and some synchronization among the syllabi with the common goal of addressing the deficiencies in the core courses and the courses of the majors as identified by the results of the assessment instruments. This should be achieved by ensuring that the syllabus of each instructor contains a section on his/her own personal teaching methodology or strategy to ensure assurance of learning, as well as a brief description of the common learning experiences used in all sections of the course. Attempts must be made to ensure that these common learning experiences in the courses of each major are congruent with the stated learning objectives.

Recommendations for improvement of writing skills specifically for the Human Resources major and amendments to the COM 3110 course focusing on Language Skills, an Assessment Instrument and remedial learning of these skills necessary for all graduates of the Landon Undergraduate School of Business and the School of Accounting.

LESSONS LEARNED FROM THE ULOC REPORT

The Methods of Assessments or testing the attaining of student outcomes should be enhanced through discussion by groups of faculty in meetings chaired by course coordinators. There were gaps in achieving course objectives identified through looking at course-embedded activities or learning experiences. A key requirement of effective learning is for learners to not just be "told" information, but to use it to actually perform tasks. Faculty realized that some methods were not working. The Continuous Improvement Plan detailed activities in specific

courses that were identified as ones that lent themselves to particular spreadsheet and other experiential learning exercises. It is important to include the faculty in designing assessments and ensure “the closing of the loop” through congruous syllabi and class activities.

THE UCC REPORT

This report synthesized all the data from the direct and indirect assessments and attempted to analyze the results along the lines of the Curriculum, Majors and Cores. The rationale for the structure along these lines was to facilitate a coherent and integrated report, which avoided duplication and ensured a continuous process for “closing the loop”.

THE PROCESS FOR WRITING THE UCC REPORT

I. Assessment Results for 2005 - 2007 and Analysis of Results

Finance & Real Estate

A Curriculum

B Major

C Core

For Parts A, B, C, present and analyze the Data – Direct Assessment Results & Matrices Describing Learning Experiences in Each Class.

Observations: The general business undergraduate student is not being sufficiently exposed to the analytical expertise that comes from effectively and consistently performing problems. It is relevant to recognize that the use of Power Points (which is gauged as meeting expectations) is a difficult one to assess, since it is important that the students not only know how to use Power Points effectively to highlight critical data but also to recognize that they must back up these bullet points with technical data during presentations. The communications results both verbal and written, are areas where the data show improvement is needed.

There has been very little change in the underlying trend for the Finance major with the exception of the most recent assessment results in Spring 2007 which were discernibly higher with the exception of the results for Learning Objective 6. The questions for LO6 came at the end of a two-hour exam and were the most at a disadvantage from the core problem to lack of motivation of the students. The results for Learning Objectives 3 & 5 were especially

encouraging. The results show there is significant room for improving retention of learning, possibly through reinforcement at various points of the curriculum.

II. Critique of Recent Curriculum Changes Implemented

- A Curriculum
- B Major
- C Core

For parts A, B and C present a description and analysis of curriculum and/or program delivery changes that were implemented as a result of the analysis of assessment results for the last 4 years.

Observations: The faculty has almost unanimously embraced the recommendations of the Department's Continuous Improvement plan; almost all have inserted statements describing the relevant learning objectives from the major associated with their individual course. The choice of textbooks among faculty members has been greatly reduced either with most Faculty members using a single common textbook, or for a few of the courses, two textbooks that are very close substitutes. This is necessary where the modality of instruction (online, hybrid or traditional methods) requires this dual textbook adoption policy. These changes have helped to cement the students' understanding of what they need to carry away from each individual course and help them to focus on specific outcomes in preparation for the exit exams. There have been concerted efforts by the faculty to achieve retention of knowledge through the inclusion of elementary Finance concepts in their required projects, and attempting to use technology throughout the curricula for problem solving. Excel projects have been implemented in two courses, ethics cases included in banking and students have been encouraged to attend communication and presentation labs for one-on-one assistance on assigned projects.

III. Recommendations for future Continuous Improvement

- A Curriculum
- B Major
- C Core

For parts A, B and C suggestions were made for improvement in the Assessment Process of the Curriculum, Majors and Core - Exam Deficiencies, Student Motivation, and Student Preparation.

Observations: There needs to be more course-embedded exercises that provide opportunities for enhancement of the student's critical and analytical thinking skills, communication, technology, as well as ethical behavior. Information about Finance major prerequisites must be provided to Finance majors at the time of their selection of Finance as their major. The importance of taking the Finance courses in the correct sequence should be emphasized. Learning is compromised when courses are taken out of required sequence. To help deal with student retention of Finance major course learning, the Finance and Real Estate Department proposes the development of online review modules for the Core and Major learning objectives that MAN 4722 students would be encouraged to use to prepare for their exit exam administered in MAN 4722.

CONCLUSIONS

Based on the chronological results of the assessment it appears that there are incremental benefits to a plan designed to use the results of the assessments to close the gap between students' performance and their preparation for a successful career in business and finance. The continuous improvement process helped to identify key factors that affect the success of the students in the finance major. The plan also provided a taxonomy of steps that provide for ongoing improvements in assessment design which facilitates and reinforces curriculum, core and major learning objectives.

Outcome assessment draws resistance from both the faculty and student standpoints. Many faculty members view it as intrusive and a departure from the values and traditions of the academy (Fogarty 2003). It is difficult to motivate students without substantive influence on their grades. While the benefits of Assurance of Learning are primarily long run, there are many short-run costs in effort and inconveniences. As a result, the entire process is viewed as a threat to scarce time, rather than an opportunity for continuous improvement.

Evaluation of the plans for continuous improvement is also a very long-run goal, especially given the fact that any curriculum changes take many semesters to flow through. Porter and McKibbin (1988: 64-65) noted that business school curricula were seen as too focused

on analytics, with insufficient emphasis on problem finding. In contrast, Leavitt, 1986 complains that too much focus on problem solving and implementation leads to insufficient integration across the various functional areas. More than a decade later, these criticisms remain relevant. By consistently revising the curricula as a whole and including common learning experiences that are “higher-order” in nature, we hope these criticisms can be addressed.

This paper contains a plan for making continuous process improvements based on outcome assessments. The results over the four semesters of data show incremental changes that have led to some minor improvements. It is the faculty’s hope that as time goes by, the faculty will develop more ownership in the process and cultural changes will lead to the acceptance of assessments and improvements that are more meaningful.

<p>APPENDIX Finance</p> <p>Purpose The Department of Finance seeks to provide students with solid theoretical and practical knowledge in the areas of banking, corporate finance, investments, portfolio management, financial risk management, financial engineering, financial institutions, markets, and international finance.</p>	<ol style="list-style-type: none"> 1. Identify the functions of financial markets and institutions and examine their impact on the level of interest rates and interest rate differentials. 2. Investigate advanced time value of money concepts and extend these concepts to mortgage mathematics, commercial mathematics, and capital budgeting. 3. Explore the international integration of financial markets and analyze implications for financial managers. 4. Examine the nature of the commercial banking business. Ascertain the measures of bank return and risk performance and how they are applied to bank valuation decisions and management performance assessment. 5. Identify and analyze derivative instruments and strategies used by investors and corporations to hedge financial risks. Emphasis will be placed on identification of financial risk and designing optimal risk management strategies. 6. Determine and analyze the appropriate measures of risk and return for various financial instruments. Understand the mechanics and regulation of financial securities 	<p>Criteria per learning objective</p> <p>Overall – 68% LO1 – 63% LO2 – 68% LO3 – 65% LO4 – 64% LO5 – 66% LO6 – 75%</p> <p>Method: An exit exam is administered to a sample of students in the capstone MAN 4722 based on progress within the major.</p>	<p>Results</p> <table border="1" data-bbox="1323 341 1753 747"> <thead> <tr> <th></th> <th>Fall '06 N=78</th> <th>Spring '07 N=36*</th> </tr> </thead> <tbody> <tr> <td>Overall</td> <td>50.7%</td> <td>56.3</td> </tr> <tr> <td>LO1</td> <td>45.8%</td> <td>47.6</td> </tr> <tr> <td>LO2</td> <td>42.6%</td> <td>47.2</td> </tr> <tr> <td>LO3</td> <td>65.2%</td> <td>70.5</td> </tr> <tr> <td>LO4</td> <td>53%</td> <td>59.4</td> </tr> <tr> <td>LO5</td> <td>53.5%</td> <td>73.4</td> </tr> <tr> <td>LO6</td> <td>47%</td> <td>45.8</td> </tr> </tbody> </table> <p>*Selection criteria tightened to include only those who have taken all six identified courses in the major. Result was smaller sample size.</p>		Fall '06 N=78	Spring '07 N=36*	Overall	50.7%	56.3	LO1	45.8%	47.6	LO2	42.6%	47.2	LO3	65.2%	70.5	LO4	53%	59.4	LO5	53.5%	73.4	LO6	47%	45.8	<p>Progress has been made in correcting the process to insure that the finance major exit exam is administered only to students who have passed all the Finance core courses that address the Finance core Learning Objectives.</p> <p>Faculty meetings to share results for each Learning Objective have been completed and course contents have been aligned to achieve congruence in addressing the Learning Objectives assigned to each finance course.</p>
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Bibliography

Bloom, B., Englehart, M. Furst, E., Hill, W., & Krathwohl, D. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. New York, Toronto: Longmans, Green.

Bennis W. G., O'Toole J, How business schools lost their way; *Harvard Business Review*, 2005, vol. 83, no5, pp. 96-104

De Winstanley, P.A., Bjork, R.A., Successful Lecturing: Presenting Information in Ways That Engage Effective Processing, *New Directions for Teaching and Learning*, Volume 2002, Number 89, Pg 19-31, 2002 Wiley Periodicals, Inc.

Fogarty, T., Reflections on the scholarship of teaching: A report on the Colloquium on Change in accounting education, *Accounting Education*, Taylor and Francis Journals, vol. 15(2), pages 211-215, June 2006.

Halpern, D., *Thought and Knowledge: An Introduction to Critical Thinking*, Published 2003, Lawrence Erlbaum Associates.

Hornby, W, Assessing Using Grade-related Criteria: a single currency for universities? *Assessment & Evaluation in Higher Education*, 2003 - Taylor & Francis

Leavitt, H. J., *Corporate pathfinders*, Homewood, IL: Dow-Jones-Irwin, 1986.

Porter, L. W., McKibbin, L.F., *Management Education and Development, Drift or Thrust Into the 21st Century*, New York, McGraw-Hill Book Company, 1988