CRITICAL THINKING FOR ACTION

Quality Enhancement Plan (QEP)

Submitted to the

Commission on Colleges
Southern Association of Colleges and Schools

by

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Executive Summary

The QEP Program that INCAE has undertaken is designed to make a measureable impact on the critical thinking abilities and implementation skills of our students by improving the design of courses and strengthening the rigor and quality of case method teaching and experiential learning that goes on in the classroom. This will be achieved through three major components: (1) curriculum review and redesign; (2) measurement of critical thinking; and (3) faculty development.

The curriculum review and redesign is being carried out by a special committee of faculty members, named by the dean of the master's programs, that is concentrating at multiple levels: the "academic areas" that include the functional areas of administration and supporting disciplines; the individual courses; the concentrations in such areas as sustainable development; and the overall curriculum design and balance. The review will also consider alternatives to the traditional classroom for building critical thinking and implementation skills, such as the use of the Entrepreneurship Center at the Montefresco campus as a laboratory for building skills in putting business ideas to work.

The specific learning outcome goal that this QEP aims to achieve--to increase the capacity of student ability to think through and resolve complex managerial problems—is being measured through performance in written analysis of cases administered at the beginning and toward the end of the master´s program, and through a comprehensive evaluation of performance in the capstone "Management Consulting Practice" experience. We are also considering other measures for critical thinking such as the Critical thinking Assessment Test, CAT, and a satisfaction questionnaire to be filled out by graduates and employers. These standardized critical thinking measurement tools will be considered taking into account the INCAE mission and institutional culture.

The third component of the program is to provide more coaching and support to faculty members in order to help them become more effective in building critical thinking skills among our students. The first faculty workshop for teaching excellence was held on November 20, 2008 on the Alajuela campus. Additional ways to further faculty development have been identified, including participation by faculty in formal programs such as the Colloquium for Participant-Centered Learning (CPCL) at the Harvard Business School; an organized program of classroom observation; and the use of business or academic advisors.

This QEP was developed with the widespread participation of the members of faculty, the board, national committees, graduates, and the recent incorporation of students. These consultations have all pointed clearly toward the need for superior abilities in managerial analysis, decision-making, and execution if INCAE graduates are to continue competing successfully for top executive positions in the region.

Development of the QEP

The development of the QEP began with the participation of the leadership team in the Orientation Meeting, held in Atlanta in June, 2007. At that meeting, members of the team became acquainted with the experience of the University of Central Florida in developing a QEP around the theme of informatics.

Acquaintance with the UCF experience led members of the leadership team to seek other benchmarks. The faculty liaison consulted our staff representative, Donna Wilkinson, who suggested that we look at the University of Texas at Arlington and the College of Charleston. While these institutions are much larger and more complex than INCAE, a study of their QEP's was useful in understanding both the process and content (student learning outcomes) of a successful Quality Enhancement Program.

Soon after our return from the Orientation Meeting, the leadership team established a steering committee for the reaffirmation of accreditation process, which originally included[1]:

Arturo Condo, Rector*
Niels Ketelhohn, Dean (Master's Programs)*
Roy Zúñiga, Dean (Executive Education)*
Guillermo Selva, Associate Dean (Master´s Programs)
Juan Carlos Rappaccioli, Director General, Administration and Finance
Carlos Aguirre, Head of Institutional Planning
John Ickis, Faculty Liaison for Accreditation*
*attended June Orientation Meeting

The development of a QEP was among the major topics of the first meeting, held on June 19, 2007. While most of the time in that first meeting was spent on the organization of teams to complete the Compliance Report, it was decided that the development of the QEP would be an inclusive process that would involve three major constituencies: (1) faculty, (2) graduates, and (3) the board of directors plus national committees, the latter composed of progressive business leaders from the seven INCAE member countries.

At the second steering committee meeting on July 16, 2007, it was decided to initiate the process of identifying significant issues with a formal communication to the constituents that emphasized (1) that the QEP is a focused course of action related to making INCAistas (our graduates) even more effective as managers, entrepreneurs, and leaders; and (2) that their involvement is absolutely critical. This initial communication was accomplished through meetings with the teaching faculty, national committees, and graduates in which the rector played a key role.

As a part of the communication strategy, faculty members were encouraged to present ideas and proposals by December 20th. This yielded four principal currents of ideas: (1) improve the "raw material" through improved admissions processes; (2) develop the field work project (*Management Consulting Practice,* or MCP) into a

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[1] Michal Pothuis, who was hired to assist in the reaccreditation process in January 2008, joined the Steering Committee soon afterwards. Bernard Kilian, named to succeed John Ickis as Faculty Liaison, also joined the Steering Committee in 2008.

capstone course involving the entire faculty and members of the INCAE community; (3) revitalize the rigorous use of the case method and other student-centered approaches in the classroom; and (4) strengthen the "academic areas" (such as marketing, organization, and finance) through more active coordination of teaching and research.

Also during the final months of 2007, members of the board of directors and national committees were consulted. One board member, Dr. Harry Strachan, a founding partner of Bain and Company and founder of Mesoamerica, developed a proposal to increase the managerial proficiency of our students. Bain is a global consulting firm that hires over 400 MBAs from the world's top schools, and Mesoamerica is the premier consulting firm in the Central American region that attracts the top INCAE graduates. These companies have found that students from some schools are much more effective than others in producing MBA's that can apply managerial tools and concepts in real world settings. The proposal includes a review of course objectives and means for achieving them, the use of proficiency measures, and faculty development activities.

By January 2008, numerous proposals in various stages of development had been received. The leadership team chose to use the annual faculty retreat, held in Montefresco, Nicaragua on February 1-2, as a forum for the discussion of these ideas. The discussion began on the afternoon of February 1st with an exercise in which faculty members broke into teams of three. One member of each of the twelve three-person teams was given a question to ask a second member, while the third member took notes on the answer. After five minutes of response, time was called and a second question was given to the second member of each group. This procedure was repeated for three questions, which were as follows:

Question #1. The MCP faculty group (this is the group of faculty members who act as supervisors and evaluators of the capstone field work course, *Management Consulting Practice*) has observed that our students are familiar with such conceptual frameworks as the five competitive forces and the value chain, but that they sometimes have difficulty applying these frameworks in formulating specific alternatives and recommendations to solve the real problems in their client companies. The projects generally turn out well, but this is due in part to the continuous supervision offered by their faculty advisor during the course of the project. We have concluded that what is lacking is more "critical thinking," which may be defined as "the active and discerning interpretation and evaluation of the observations, communications, information and argumentation as a guide to thinking and action." In your interaction with students both in and outside of class, you have arrived at your own judgments regarding their strengths and weaknesses. What are their major weaknesses and limitations? Should their capacity for critical thinking be improved? Or are there other weaknesses that should be addressed?

Question #2. Having thought about the weaknesses in learning outcomes of our students, what initiatives would you recommend in the master's programs that would contribute most to their effectiveness as managers and entrepreneurs, and to the satisfaction of their employers?

Question #3. We have received a specific proposal from a member of our community whose company hires the top MBA's from INCAE, Harvard, and other schools of international renown. His proposal, in part, reads as follows:

...there seems to be a correlation between the proficiency of MBA's in work valued by the company and the extent to which their MBA was genuinely student-centered and case-based, where they had to "get things done" as opposed to reading or learning theory. This proposal has three components, designed to increase the proficiency of INCAE graduates: (1) course design: for each course, identify a specific learning outcome that is valued by companies in the real world; (2) proficiency measures: working with companies that utilize sophisticated tools to filter and contract candidates, develop a series of tests to measure managerial proficiency at the beginning, during and at the end of each program; (3) business advisors: recruit outstanding managers to work with faculty in each of the academic areas to identify the most important proficiencies.

What is your opinion of this proposal? What additional suggestions do you have?

The order of the questions was not random. The first question was intended to provide a diagnosis of the situation, and at the same time obtain feedback on one perception that is shared by several members of the faculty. The second was an action question, eliciting specific recommendations. The third required respondents to evaluate a serious proposal, after having been given the opportunity to present their own ideas.

As a next step, the participants reorganized by note-takers for each of the three questions, who met to analyze the responses. The three groups worked for 20 minutes, then reported back to the plenary.

There was broad consensus among respondents to the first question that there is a lack of critical thinking, depth, and 'realism' in student analysis of cases in the classroom. Among the weaknesses mentioned were: too much description and not enough critical analysis; little capacity for synthesis; and difficulty in getting beyond the diagnosis to concrete recommendations. Rather than dwell upon these weaknesses, the respondents to question #1 immediately began to suggest solutions. Most frequently mentioned was the improved use of the case method in questioning and challenging student analysis, rather than simply using the cases as examples (5 of 12 respondents). The second most frequently mentioned was the need for more multi-funcional classes, where students must resolve complex problems from different functional perspectives (4 respondents). Related to this were comments on the importance of rigor in the teaching of the basic funcional areas in the first year, one person noting that some functional area courses were being taught over a period of less than four weeks. Third most frequently mentioned was the need for a change in grading criteria to place less emphasis on the rote application of techniques and more on critical problem-solving (3 respondents). Other interesting ideas included the need to strengthen study groups, more interaction with business executives, and more emphasis on the written analysis of cases.

Respondents to question #2 repeated these recommendations: First, improve the use of the case method, particularly in questioning students and not accepting general answers, demanding quantitative as well as qualitative analysis, and insisting upon sound argumentation; second, invite more business executives into the classroom; and third, strengthen study groups with the help of teaching assistants. Question #2 respondents also examined some of the factors that had produced the perceived lack of critical thinking in case discussions. Among those mentioned were: no incentives for developing case teaching skills; evaluations of professors tend to reward showmanship; introductory courses which make a critical difference in students' analytic approaches are often not taught by the more senior case method experts; and there are few written assignments.

All twelve respondents to Question #3 were in general support of the proposal that was read to them, but not all three components of that proposal received unanimous support. All but one of the twelve respondents agreed with the idea that each course in the masters' program be required to specify what is it that students will be able to do (as a result of the course) that is of practical value to business, and the dissenter would change her vote to yes "if the business advisors component really works." It was suggested by one person that this requirement be extended beyond individual courses, to academic areas. One respondent made the observation that while skills (being able "to do") are very important in a management program, course objectives that are related to knowledge and attitudes may also be very important. Another added that this is a very conservative model that excludes such things as critical thinking, advanced models that do not yet have an application in business, or unorthodox models.

Seven of the twelve respondents were opposed to the idea of proficiency tests, preferring either a final "graduation test" or maintaining the traditional tests at the end of each course. Of the three who provided a rationale, two doubted whether these tests were really "scientific" and a third respondent saw a problem in applying a single test at the end of the second year, given that students take very different courses during that year.

Seven of the twelve respondents favored the "business advisor" idea. One supporter suggested that this might be done not only for academic areas, but also for the concentrations (for example, economics & finance). Those who opposed the idea either thought it was impractical (To what extent can we recruit external actors with the capacity and interest to do this?), that the advisors might be biased, and that there is really no need, since it is now easier than ever to bring real-life experience into the classroom.

Following the presentation by the three groups, there was a general discussion of the entire faculty, in which there was consensus upon these points:

1. INCAE needs to embark upon an initiative to improve case method teaching-learning so that students are better able to solve problems in a real world context.

2. To achieve this improvement, the causes of the current situation must be addressed. Among these causes are: faculty incentives that discourage classroom rigor (students punish strictness in their evaluations); faulty

programming (a student can have 5 sessions in a single day); too much reading; rapid disintegration of study groups; and a culture of not questioning.

3. Greater emphasis must be placed upon the functional areas of administration in the first year, and this must be complemented with a multi-functional approach in the second year.

4. The "written analysis of cases" course must be lengthened and more attention must be given to written work in other courses.

5. We must do a better job of incorporating technology in the program in a way that builds critical thinking skills. This might include, for example, new technologies for seeking information. (In this regard it was suggested that we might benchmark some institutions, like Duke.)

The other major idea for the QEP that was suggested, both at the faculty retreat and in subsequent discussions, was the topic of "global vision," by which INCAE would prepare its graduates for executive positions beyond the Latin American region, in an increasingly mobile world marketplace (it was noted that one of our top graduates from the previous year was working in Singapore). This is a topic of particular interest to the Rector, whom for years led the Latin American Center for Competitiveness and Sustainable Development. It was proposed at the Fourth meeting of the Steering Committee, held on October 18, 2007, that this be incorporated as a second candidate topic to raise among stakeholders. These conclusions were subsequently presented by the Rector in meetings with national committees and graduates.

Topic Definition and Rationale:
Critical Thinking for Action

The preliminary consultations, the exercise in the faculty retreat, and the meetings with INCAE constituencies all pointed clearly one direction: to compete effectively for top executive positions, INCAE graduates will need to possess superior abilities in managerial analysis, decision-making, and execution. More than at any time in Central America's history, they will be face rivals from the top U.S. and European business schools.

These abilities include, but go beyond, critical thinking. INCAE graduates must possess the creativity to generate new alternatives and the intelligence to critically examine the assumptions behind each, but they must also be able come to effective resolution and to follow through. This requires the ability to work with and through people to overcome obstacles and accomplish goals. Thus the definition of the topic was expanded to include not just critical thinking, but critical thinking *for action*. (In keeping with the theme of "global vision," an alternate title was suggested: "critical thinking *for global leadership*," but this was discarded as it sounded pretentious.)

Though student representatives were consulted in the early development of the QEP and presentations were made to the masters' classes, it should be evident from the previous narrative that the topic did not surface from a popularity contest among students. When students arrive at INCAE to begin the first year, they are primarily

interested in the acquisition of modern management tools. It is not until well into the first year, and sometimes not until they are confronted with reality in their Management Consulting projects, that they fully grasp the importance of judgmental skills in understanding the managerial context in which these tools are applied. If the need for critical thinking were immediately obvious to students, it is doubtful that employers and faculty would have chosen this topic for the MCP.

The QEP Program that INCAE has undertaken is designed to make a measureable impact on the critical thinking abilities and implementation skills of our students by improving the design of courses and strengthening the rigor and quality of case method teaching and experiential learning that goes on in the classroom. This is being achieved through three major components: (1) curriculum review and redesign; (2) measurement of critical thinking; and (3) faculty development. These components are described below.

Component #1. Curriculum review and redesign

At the time that the QEP topic was defined, a special committee of faculty members had already been named by the dean of the master's programs to conduct an overall review of the masters' curriculum. The QEP will complement this initiative by focusing on three additional levels: first, the level of "academic areas" that include the functional areas of administration (finance, operations, marketing, organization & human resources, control); the supporting disciplines (quantitative analysis, economic and political analysis); and integrative courses (strategy, managerial processes). The coordinator of each area will develop a list of critical thinking skills and which courses teach which ones.

Second is at the level of the individual course. As a part of this component, each course in the MBA curriculum must answer the following: "When a student completes this course she will be able to do _____ which is valued in the real business world." Any course that cannot demonstrate how it makes our graduates better able to solve problems and get things done that are of value to business and society will be eliminated from the curriculum.

Third is the level of the *concentration*. There are currently four concentrations in the master's programs, three of which (economics & finance; technology; and sustainable development) are offered at the Alajuela campus and one of which (marketing) is offered at the Montefresco campus. Each concentration will be reviewed by a panel of faculty for its continuing relevance to the region and the INCAE mission, the quality of its content, and the coherence of its design.

The curriculum review will also consider alternatives to the traditional classroom for building critical thinking and implementation skills. One suggestion has been to use the Entrepreneurship Center at the Montefresco campus as a laboratory for building skills in putting business ideas to work. Another suggestion has been to strengthen the field work course, Management Consulting Practice, by involving the entire faculty in supervising student projects, as is done at IMD-Lausanne. Faculty members do in fact participate voluntarily in advising MCP groups: in 2008, eight professors outside the MCP area worked with student groups in Alajuela. This practice will be encouraged and extended.

Component #2. Measurement of critical thinking

The specific learning outcome goal that this QEP aims to achieve is to increase the capacity of student ability to think through and resolve complex managerial problems. The method to monitor the achievement of this goal, mandated by the faculty in the February 2008 retreat, will include some measure of improvement between the time that students enter the program and the date of their graduation. In addition, there was strong feeling among the faculty that there must be some comprehensive measure of the graduating students' ability to think and act as professional managers. This is reflected in the target profile for INCAE graduating students as stated in the objectives of the masters' program:

1. *Possess a mastery of the functional areas of business management. As a result, must possess a clear understanding of decisions faced by managers, the fundamental analytic tools of each area, and of the main concepts, that will allow for the effective assumption of their future responsibilities.*

2. *Master the support subjects that have been incorporated as a fundamental part of their respective masters programmes.*

3. *Have a basic understanding of the internal and external environments in which the companies and decision-makers act.*

4. *Have a strong commitment to justice, ethics, morals, integrity, and social responsibility, which must characterise managerial decision-making.*

5. *Possess an attitude toward action, composed by the ability to recognise problems and conflicts that characterise organisations, a critical sense, capability to make firm decisions, and talent to convert their decisions into action programmes consistent with the particular situation of their organisation.*

6. *Have a desire to search for, accept, and manage change in a socially and environmentally accepted manner.*

7. *Respect other members of their organisation, recognise the importance of group work, and possess the capacity to work under pressure and in situations of conflict.*

8. *Acquire an attitude of perseverance and self confidence in the face of adversity and in dealing with difficulties normally found in managerial life.*

The one single experience that tests student in all of these dimensions of thinking and action is the 8-week field project in Management Consulting Practice. This experience could serve as the basis for a comprehensive test of "critical thinking

for action." The major challenge to be overcome is that of determining individual abilities, as the MCP is carried out in teams of five.

Notwithstanding faculty skepticism regarding the use of standardized tests, this alternative will be examined. Among these is the Critical thinking Assessment Test (CAT), described later in this report. It has also been suggested that the MBA program, working with a small group of companies that use sophisticated testing to screen and hire candidates, could develop a set of tests that could be used to measure critical thinking skills. The idea would be to give a standardized test at the beginning of each MBA class that would provide a reliable benchmark of where the class and each student is already in his/her level of proficiency. At the end of the first and at the end of the second year of the program, students would also be given similar tests that in an integrated fashion cover all the functional areas and supporting disciplines, to measure the student's proficiency and how it has changed over the two years.

Component #3. Faculty development

The third component of the program is to provide more coaching and support to faculty to help them become more effective in building critical thinking skills among their students. Several areas of support have been identified for the faculty development component, and some are already being pursued.

In-house workshops. Several members of the INCAE faculty are recognized as international experts in case method teaching and have received invitations from universities throughout Latin America and other parts of the world (Spain, France, Croatia, China) to present workshops and seminars on teaching methodology. Their talents will be increasingly used within the institution.

Participation in formal programs. Professors will be supported to attend the CPCL (Colloquium for Participant-Centered Learning) at the Harvard Business School or the Case Method Workshop held every year at INCAE for partner schools. Though this is already being done, the effort will be further intensified and evaluated.

Classroom observation. A program of classroom observation will be carried out, by which faculty skilled in participant-centered learning methods will sit in on classes of other faculty and work with them on both design and teaching skills. Given that there may be resistance among some members of the faculty, it has been suggested that the initiative begin with a pilot observation.

Business advisors. In each of the academic areas, alumni and successful practitioners may be recruited to serve as advisors and work with the faculty on identifying the critical thinking skills that are most needed in their respective areas and how best to develop them. Given the concerns among some faculty members about the practicality of finding advisors with both the capacity and interest, this idea might be pursued on a pilot basis, in one or two of the academic areas.

Academic advisors. The support of the Harvard advisory committee will be sought in strengthening faculty teaching and design skills.

Research and Benchmarking

During 2008, research and benchmarking were carried out in three general areas: curriculum design for critical thinking, teaching methods and technologies that strengthen critical thinking skills, and measurement instruments that document improvements in these skills.

Curriculum design. The dean of the master's programs has asked the coordinators of the academic areas to conduct benchmarking on course offerings in their respective areas among three or more schools in the top 25. At the same time, the coordinators have been asked to review the existing course offerings in their respective areas at INCAE, for the purpose of conducting a gap analysis in which opportunities for improvement will be detected and evaluated.

Teaching methods and technologies. As part of our research and benchmarking, we have been reviewing the literature on the impact of teaching methods and technologies on the enhancement of critical thinking skills of students. Braun (2004) recognizes three approaches when analyzing current literature on ways critical thinking is being taught in the business curriculum: problem-base learning, course content-embedded learning, and as an element underlying other pedagogies. In the following paragraphs we will briefly look at the literature on the first two approaches: the problem-based approach, including the use of the case method; and course-embedded learning, which includes experiential techniques.

The use of the case method provides students with the opportunity to gain experience and develop key managerial skills. The structure of a classical case class is essentially a microcosm of the competitive business environment, symbolically representing real conditions,[2] and the processes managers use to make real strategic decisions.[3] Students gain insight into business situations and managerial decisions that they would otherwise not experience.[4] Furthermore, business faculty members find case studies to be the most effective teaching method for developing critical thinking skills.[5] The emphasis that the method gives to framing the decision maker's point of view develops skills in creating and communicating visions and strategies.[6]

Students' development in critical thinking skills can be further aided by complementing cases with experiential learning, defined as a sequence of events with identified objectives that require active involvement by participants and affects attitude change and growth as well as skill development.[7] Some suggested techniques include having participants play the roles described in the case, negotiation exercises and in-class debates, using different sized groups for solving the cases, small group discussion, audiovisual methods, business games, computer-based simulations, process observation and field experience[8]. These exercises allow the students to transfer their knowledge

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[2] Walter and Marks (1981)
[3] Harrison and St.John, (2008) as quoted by Razzouk, et al. (2007), page 76.
[4] McBride et al. (2005)
[5] Mc.Ewen (1994) and Pithers & Soden (2000), as cited by Braun (2007), on page 233.
[6] Kotter (1996) as quoted by Greenhalgh (2007), page 182.
[7] Walter & Marks (1981)
[8] Walter & Marks (1981); Tin (2004); Braun (2004); Saucier (2006)

and skills to reality,[9] adding to their tacit knowledge. This is important because successful managers will draw from accumulated tacit knowledge when responding to problems.

Other course-embedded approaches focus on the instructor's need to explicitly target the development of skills, including creativity. Classes should be planned so as to dedicate time exclusively to the development on critical thinking skills, given that "time constraints impeding critical thinking in the workplace are even stronger."[10] Braun (2004) encourages the use scaffolding techniques, which include modeling critical thinking by the instructor by using guided questioning and reflection.[11] This can help future managers better identify opportunities and detect problems[12].

These techniques and exercises should be accompanied by process observation and a feedback mechanism. Process observation allows students to critically reflect on the decision making process and identify the skills used.[13] Likewise, consistent feedback is encouraged,[14] either written or verbal, which can be valuable for both observers and students in order to appreciate and improve the exercises, the process, and consequently the learning outcomes. Further improvement can be made through the use of technology suited to the present generation of students.

Kolb (1984) emphasizes the importance of providing for different learning styles, which can improve learning achievements, and in the context of experiential learning, increase tacit knowledge.[15] A study of the "millennial generation" has revealed that people born after 1980 (which now includes most INCAE students) tend to "favor knowledge collected through personal experience and from other people."[16] As stated before, case based lessons offer the opportunity to gain experience that would otherwise not be available to students. Likewise, project work (such as Management Consulting Practice) and work placement (such as summer internships) allow students to gain insight and add to the relevance they adhere to the material learned in class.

Saucier (2006) and Braun (2006) suggest the use of multimedia in order to motive participation and integrate multiple skills among members of the millenial generation. Proserpio and Gioia (2007) consider the "virtual" characteristic of later generations, where wide access to Internet has increased the availability of free information and propelled virtual interactivity. Instructors should take advantage of this by integrating virtual group activity and intriguing problem-solving orientations into simulations and games. The level of complexity of recent games allows for more open-ended and multiple strategies, thus opening a pathway to critical learning. The sense of "personal involvement" will add to the relevance of the experience, matching their learning styles more closely, and hence improving learning outcomes.

INCAE has a strong commitment to the case method due to its heritage, practitioner focus, and conviction that it builds critical thinking skills. The literature

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[9] McBride et al. (2005)
[10] Braun (2004), page 235.
[11] *Ibid.,* and McBride et al. (2005)
[12] See Rodriguez (1995) for specific managerial creativity excercises.
[13] Walter & Marks (1981); Tin (2004); Braun (2004)
[14] *Ibid.,*; Krueger (2001); Saucier (2006)
[15] Armstrong & Mahmud (2008)
[16] Rick Saucier (2006), page 51.

cited above tends to confirm this. However, it is also clear from the literature that there are other participant-centered learning methods that can complement the use of cases, and that a deeper understanding of these methods—which some colleagues, for example in the area of Organization, are now using—could contribute to the critical thinking skills of our students.

Measurement instruments. Research will be conducted on instruments used to measure improvement in critical thinking skills. One important aspect will be to study how other schools have dealt with the measurement issue. In this regard, the experience of the Critical thinking Assessment Test (CAT) will be studied. The CAT was developed by a consortium of universities led by Tennessee Tech with the support of a National Science Foundation Grant. It is a simple, 15-question test that involves yes/no answers and short essays that require respondents to justify their answers. It can be completed in less than an hour. Our initial study of this test has revealed several advantages: first, it is scored in faculty workshops and thus helps to create faculty buy-in as faculty discuss student weaknesses in critical thinking. Second, it gets at the twelve skills that are most frequently identified with critical thinking. Third, it addresses our faculty concerns about validity, since the results of applying the CAT correlate significantly with the use of teaching methods that are believed to build critical thinking skills, such as real work projects and case method discussions.[17]

Administration and Organizational Structure

Ultimate responsibility for the QEP rests with the Steering Committee formed in 2007 (hereafter referred to as the QEP Steering Committee), chaired by the Rector. Reporting to this committee is a "champion" responsible for the design and execution of the QEP. Working with the champion are leaders for each of the three components. An organization chart, showing the links to the rest of the INCAE structure is presented in **Annex 1**.

With respect to staffing, the initial activities were carried out by members of the Steering Committee, but in early 2008 an effort was launched to recruit the "QEP champion." Advice was sought from our representative, Donna Wilkinson, during her visit to the Alajuela Campus in March. She suggested three very different profiles for the job: (1) a young faculty member (assistant professor) seeking to position him or herself in the Institution; (2) a mid-level faculty member (associate professor) who has been doing the same things for the past few years and may want a new challenge; or (3) a senior professor in transition toward retirement.

After a thorough review of all the candidates, the rector opted for the third profile and selected John Ickis (with four years to go toward retirement) to head the effort, for several reasons. He has been instrumental in developing the QEP. He is academic director and lead instructor of our highly-rated executive seminar on "Critical Thinking and Managerial Decision-Making. He is coordinator of the capstone *Management Consulting Practice* experience, which will certainly play an important

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[17] The CAP costs $5 per exam booklet, $200 per year subscription fee, and $345 for faculty training in scoring. Tennessee Tech provides complete reports and also rescores 20% of the tests to make sure the school's faculty is scoring correctly.

role in measuring the critical thinking of our students. He is being replaced by Bernard Kilian as Faculty Liaison for Accreditation. Furthermore, young and mid-level faculty members are not the most appropriate candidates, as they are needed to produce academic research, a top priority for INCAE over the next three years.

The leaders of the three components have been selected for their knowledge, experience, and skills in each of the respective areas. The curriculum development component is led by a veteran faculty member and master case teacher who has been Academic Director of the Masters' Program and has been invited to Harvard Business School as visiting professor. The measurement of critical thinking component is led by a professor of economics and quantitative analysis, and the faculty development component is led by a senior professor who is Academic Director of the annual Case Workshop and coordinator of the "Written Analysis of Cases" area.

Implementation Plan

The implementation plan includes a phased set of activities in each of the three components described above, all addressing the topic of "critical thinking for action." The specific nature and design of these activities is based upon the findings from our research and benchmarking.

Following the planning, definition, and initial activities of the QEP in 2007 and 2008 (please refer to the Timeline, **Annex 2**), the implementation of the QEP will be carried out in three "waves", a term used by Rector Arturo Condo, who has played an active role in this initiative. The first wave is "organization and learning," during which new tools and procedures (course-embedded assessments; classroom observation) will be tested and evaluated. The second wave is "scaling up, during which the tools and procedures will be "rolled out" on an Institution-wide level. During the third wave in 2011, consolidation will take place. In 2012, "fine-tuning" of the plan will take place, so that the tools and procedures introduced in 2009-11 will form a part of the institution's culture.

A. Curriculum review and redesign

The first component of the QEP will involve two activities: an overall curriculum review and redesign, undertaken in close coordination with the Masters' Committee (a special committee named by the Dean for this purpose) and the alignment of individual course content with the overall redesign. The second activity should be completed by the end of 2010, with the first continuing through 2011.

First Wave – 2008-2009

Activity A1: **Overall curriculum review**. This activity seeks to ensure that the curriculum review currently underway fully incorporates "critical thinking" as a criterion in all decisions related to curriculum design. This includes a review of the benchmarking studies that were performed in 2008 and the designs that have already been submitted by the academic areas. This review will be complete by December 2009.

Activity A2: **Individual course alignment**. The purpose of this activity is (as the name implies) to align the objectives, methodology, and content of every course offered at INCAE with the philosophy behind "critical thinking for action." Alignment means that if we offer a course, students completing that course will be able to do something that is valued in the real business world. The first step, which was to identify the objectives of every course offered, was completed in May 2008 (please refer to Timeline, Annex 4). The second step is the evaluation of course objectives and content by the area coordinators and by the QEP Steering Committee. This will be completed by September 2009. As a result of this activity, those courses that are most closely related to the development of critical thinking skills will be identified.

Second Wave – 2010

Activity A1: Overall curriculum review (cont'd). The purpose of this activity is to "roll out" the new curriculum design, with enhanced CT content. This is a logical follow-on to the work carried out by the Masters' Committee in 2009. The first-year course offerings proposed by the academic area coordinators will be introduced in the Alajuela campus starting in August.

Since we must consider the varied background of INCAE's incoming students, this Second Wave will include a review of the pre-masters' program in order to ensure an equal opportunity for all students to develop the essential tools that they will need for success in the program.

Activity A2: Individual course alignment (cont'd). As a part of this activity, a study will be undertaken on the distinction between courses that are core to critical thinking and those that are not, once their design and relevance have been analyzed. The purpose is to increase the CT focus and content of <u>all</u> courses in the program through a second wave of course modifications.

Third Wave – 2011-12

Activity A1: Overall curriculum review: A third wave of course modification will take place, including any changes deemed necessary to improve the Pre-Masters program. This year will also include the strengthening of the field work course, the Management Consulting Practice, by encouraging a broader participation of the faculty members as supervisors and judges.

B. Measurement of Critical Thinking (MCT)

First Wave – 2008-2009

Activity B1: WAC improvement. Two course-embedded learning assessment tools have been introduced in the master´s program in 2008. The first measures the degree to which students´ analytic ability improves during the course of the program. This is accomplished by the administration of a written case analysis at two points in time: (1) in the first semester of the first year, as part of a course of the same name (more commonly by its initials, WAC); and in the second semester of the second year, in the course on strategy implementation (Management Processes). Samples of the two

exams, taken by the same students, are blind-reviewed by a panel of three faculty and grades are assigned based upon criteria that have been established beforehand and using a rubric developed by the WAC faculty. The cases used are short and of similar difficulty. The results are discussed among faculty members and the results documented.

The first written analysis was applied in August 2008. The student papers were graded for the purpose of the course, but they will be blind-reviewed by the panel for the purpose of the learning assessment. One concern of the Steering Committee is the labor intensivity of this process. An alternative, suggested by one faculty member, is to apply concept maps to the analysis of cases, as this would test the students' ability to structure complex situations and make it easier for evaluators to assess learning.[18]

By December 2008, two additional cases had been selected and rubrics were developed by the Written Analysis of Cases (WAC) faculty, as shown in **Annex 3**. The first case, Dashman Company, has long been a best-seller at the Harvard Business School case clearing-house. The second, Robin Hood, is a classic taken from Quinn (1985).[19]

The second WAC to be used in assessing the level of critical thinking will be the one completed by the entering class of the MBA at the Montefresco campus in February 2009, followed by a third that will be administered to the entering class at the Alajuela campus in August 2009. Both classes will present written analyses of cases of similar difficulty in conjunction with the "Managerial Processes" course in the final month of classes, which for the entering classes in August 2008 and February 2009 would be in May 2010. Managerial Processes is an integrative course on the implementation of strategy, which makes it perfect for this type of examination. Unfortunately it is an elective, though most students do take it. One alternative is to make Managerial Processes a required course; a second alternative is to introduce a required mini-course in "critical thinking for action" and to conduct the exit exam as a part of the new course. Both alternatives will be evaluated.

Activity B2: MCP capstone measure. The second course-embedded assessment measures the degree to which second-year students have acquired the range of knowledge and skills to perform as managers. This assessment is based upon the evaluation of the triple-weighted course "Management Consulting Practice" (MCP), a capstone experience in which teams of students spend two months within a company, interacting with executives to solve a real-world business problem. During this period they receive periodic visits from a faculty advisor. At the end of that period, they submit a written report and make a group presentation, first to the company board of directors (or executive committee) and then to a panel of faculty members. This is followed by a question-and-answer session of one hour fifteen minutes. Individual grades are assigned, based upon the quality of contributions made by each member to the final report (students are asked to identify those sections for which they are responsible) and to the presentation and discussion of the project conclusions and findings. Students may elect the entrepreneurship option by which they develop a

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[18] Joseph D. Novak and Alberto J. Cañas, "The theory underlying concept maps and how to construct and use them" (Florida Institute for Human and Machine Cognition, 2008), 22.

[19] James Brian Quinn *et.al., The Strategy Process: Concepts, Contexts, and Cases* (Prentice-Hall, 1985), 145-146.

complete business plan for a new venture. There are ten elements of the written report that are evaluated:

1. The definition of the problem to be resolved, decision to be made or (as in the case of the entrepreneurship option) opportunity to be pursued.
2. The business model and strategy of the company or organization (or proposed business model and strategy, in the entrepreneurship option).
3. Analysis of the external environment, industry, and market (includes methodology)
4. Diagnosis of the organization (includes methodology)
5. Identification and evaluation of alternative courses of action
6. Conclusions and recommendations
7. Action Plan
8. Financial viability
9. Organization and coherence, style, and overall quality of the written report
10. Quality of the executive summary

A rubric has been developed by the MCP faculty for the evaluation of each of these ten elements (see **Annex 4** for the MCP rubric). To determine individual contributions, students have been surveyed for their participation in each of these categories. Not all these categories are necessarily relevant for every consulting report. For example, an MCP project for Costa Rica´s investment promotion agency, CINDE, on a strategy for the development of human capital in the Province of Guanacaste, did not require an internal diagnosis of the CINDE organization.

A panel of at least three (and usually four) MCP professors evaluates the students on their presentation, with particular importance to five elements (shown below), where it is possible to measure individual performance, even though all team members may not participate in the formal presentation. Those that do not are expected to participate actively in the questioning period.

1. Logical, sequential order of the presentation
2. Quality of the visual and other special effects
3. Clarity and effectiveness of the presentation
4. Understanding and response to questions
5. Effective use of time

Activity B3: New measurement instruments. The evaluation of new measurement instruments, begun during 2008 with information gathering on the Critical thinking Assessment Test (CAT), will continue throughout 2009. By December of 2009 it will be decided whether to adopt another measurement instrument.

Second Wave – 2010

Activity B1: WAC improvement (cont'd). Written analyses of cases will be administered to the entering classes in Montefresco in February 2010 and in Alajuela in

August 2010. The first exit exams will be administered in May 2010 for students soon to graduate on both campuses, as may be seen in the following table:

Table 1. Schedule of course-embedded assessments

Campus	Class	Entering WAC	Exit WAC
Alajuela	MAE/MBA 55	Aug. 2008	May 2010
Montefresco	MAE 56	Feb. 2009	May 2010
Alajuela	MAE/MBA 57	Aug. 2009	Apr. 2011
Montefresco	MAE 58	Feb. 2010	May 2011
Alajuela	MAE/MBA 59	Aug. 2010	May 2012

Members of the research staff will be trained in the use of the rubrics for the grading of WAC's to reduce the time devoted to this activity by faculty.

Activity B2: MCP capstone measure (cont'd.). In the second wave, students will be asked to provide self evaluations on their performance against criteria that relate specifically to the learning objectives of the residential masters program. (They will be informed that this feedback will be reviewed only after the course grades have been assigned, to ensure objectivity.) This information will be compared with the evaluations conducted by the MCP faculty to determine the validity of the self-evaluations.

Activity B3: New measurement instruments (cont'd). As a follow-on to the evaluation of measurement instruments during 2009, a new assessment measure may be introduced in the first quarter of 2010. A report will be prepared on the results of the evaluation and recommendations for further action.

Third Wave – 2011

Activity B1: WAC improvement (cont'd). The first course-embedded assessment will be continued (as shown above, in Table 1) with each succeeding class of entering and graduating students. An evaluation of the first results, comparing entering and exit WACS, will be conducted and presented to the full faculty for discussion between June and September.

Activity B2: MCP capstone measure (cont'd.): In the third wave, students will be asked to evaluate not only the quality of their own performance, but also that of other team members. Since this is done independently of the course grade but rather as a means of accurately measuring the extent to which the masters' program is achieving its student learning objectives, this evaluation process should not interfere with the cooperation and trust among team members. In the first year leadership course, students are exposed to exercises in giving and receiving feedback, but these may have to be reinforced in the beginning of the second year, just prior to MCP fieldwork.

Activity B3: New measurement instruments (cont'd). Experimentation with a new assessment measure will occur during 2011, unless the report prepared in the first quarter of 2010 presents convincing reasons that no further action should be taken in this regard.

C. Faculty Development

First Wave – 2008-2009

      Activity C1: Internal case teaching workshops. This activity was begun with a one-day workshop offered by Prof. Carlos G. Sequeira, a case method expert, on November 20, 2008, required for all associate and assistant professors and strongly recommended for full professors. The workshop program is included as **Annex 5**.

      During the first half of 2009, a faculty workshop for professors teaching in the areas of WAC (Written Analysis of Cases) and MCP (Management Contulting Practice) will be held to define CT, identify CT tools, interventions, and resources.

      In July 2009, a workshop will be conducted by senior INCAE faculty for professors less experienced with the case method. This workshop, of three days' duration, is offered each year for partner schools around the region. Beginning in 2009, it will become a vehicle for improving case method teaching at INCAE with the objective of strengthening the critical thinking skills of our students.

      Activity C2: Participation in international workshops. In the past, INCAE has invested in faculty teaching skill through participation in the Colloquium on Participant-Centered Learning (CPCL) at the Harvard Business School. Due to the impact of the international financial crisis on INCAE's programs, participation in the CPCL has been suspended in 2009, but will resume as soon as our financial condition has stabilized.

      Activity C3: Classroom observation program (COP). A pilot program of class observation and feedback will begin during August 2009. At first it will include a small number of professors, including those who have participated in the CPCL which devotes a session to classroom observation. All faculty will be encouraged to read Chapter 12 of Education for Judgment which deals with this topic.[20]

Second Wave – 2010

      Activity C1: Internal case teaching workshops (cont'd). This activity will continue, with two workshops held during 2010: the regular case method workshop in July, and a special workshop for INCAE faculty only in which special topics related to critical thinking will be addressed.

      Activity C2: Participation in international workshops (cont'd). A resumption of our participation in the CPCL, with the goal of two participants, is planned for August 2010.

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[20] James E. Austin with Ann Sweet and Catherine Overholt, "To See Ourselves as Others See Us: The Rewards of Classroom Observation, in C. Roland Christensen, James E. Austin and Abbie Hansen, eds., *Education for Judgment: The Artistry of Discussion Leadership* (Boston: Harvard Business School Press, 1991), pp. 215-229.

Activity C3: Classroom observation program (cont'd). A review of the pilot program will be conducted and improvements suggested in April. At this time the second wave groups of observers and observed, and the courses to be observed, will be defined for the second wave, and implementation will begin in August.

Third Wave – 2011-12

Activity C1: Internal case teaching workshops (cont'd). This activity will continue, with additional faculty training in specific topics. Refresher courses will also be offered.

Activity C2: Participation in international workshops (cont'd). A continuation of our participation in the CPCL, with two participants, is planned for August 2011 and August 2012.

Activity C3: Classroom observation program (cont'd). An evaluation of the expanded classroom observation program will be conducted and recommendations will be presented for the institutionalization of this program.   This will culminate in a workshop on teaching for critical thinking, based on classroom observations, to be held in late 2011.

Budget

Budget detail. The budget for each of the activities described in the implementation plan is included in **Annex 6**. The costs of the QEP are of two types: cash outlays and "non cash expenses" which consist almost exclusively of the the time dedicated by faculty and research staff. The cash costs are shown in dollars; the non-cash expenses are shown in estimated faculty days.

Sources of funds. The cash oulays required for the implementation of the QEP will come from INCAE´s operating budget. There has been a directive from the rector that all cash outlays be kept to a minimum during 2009 due to the impact of the international financial crisis on INCAE´s revenues, particularly from executive education programs. For this reason, an effort has been made to eliminate all cash outlays during 2009. On the other hand, the reduction in executive programs may provide an opportunity to use additional faculty resources.

Assessment

Leaders of each of the three components will develop between 3 and 5 key performance indicators, including at least one indicator for each of the activity areas for which they are responsible. Data on each of these KPI's will be collected by them and reviewed with the QEP champion and the Steering Committee at the end of each project year. These annual reports on each of the activity areas will be sent to the Commission on Colleges of SACS.

The final year, 2012, has been allocated for reviewing and fine-tuning all initiatives. A Third-Year Progress Report will be prepared by the QEP champion and component leaders, and will be reviewed by the Steering Committee prior to its submission to the Commission on Colleges.

The activities described in the implementation plan may be difficult to perceive on the part of students, particularly during the first two years, as the QEP focuses on curriculum design and faculty development. By the third year classes should be more demanding and hopefully stimulating, but not necessarily more enjoyable or entertaining. Therefore the extent to which we have achieved the goal of increased critical thinking for action among our graduating students will not necessarily be reflected in their evaluations of the courses, nor will they be reflected in course grades (which are assigned using a curve).

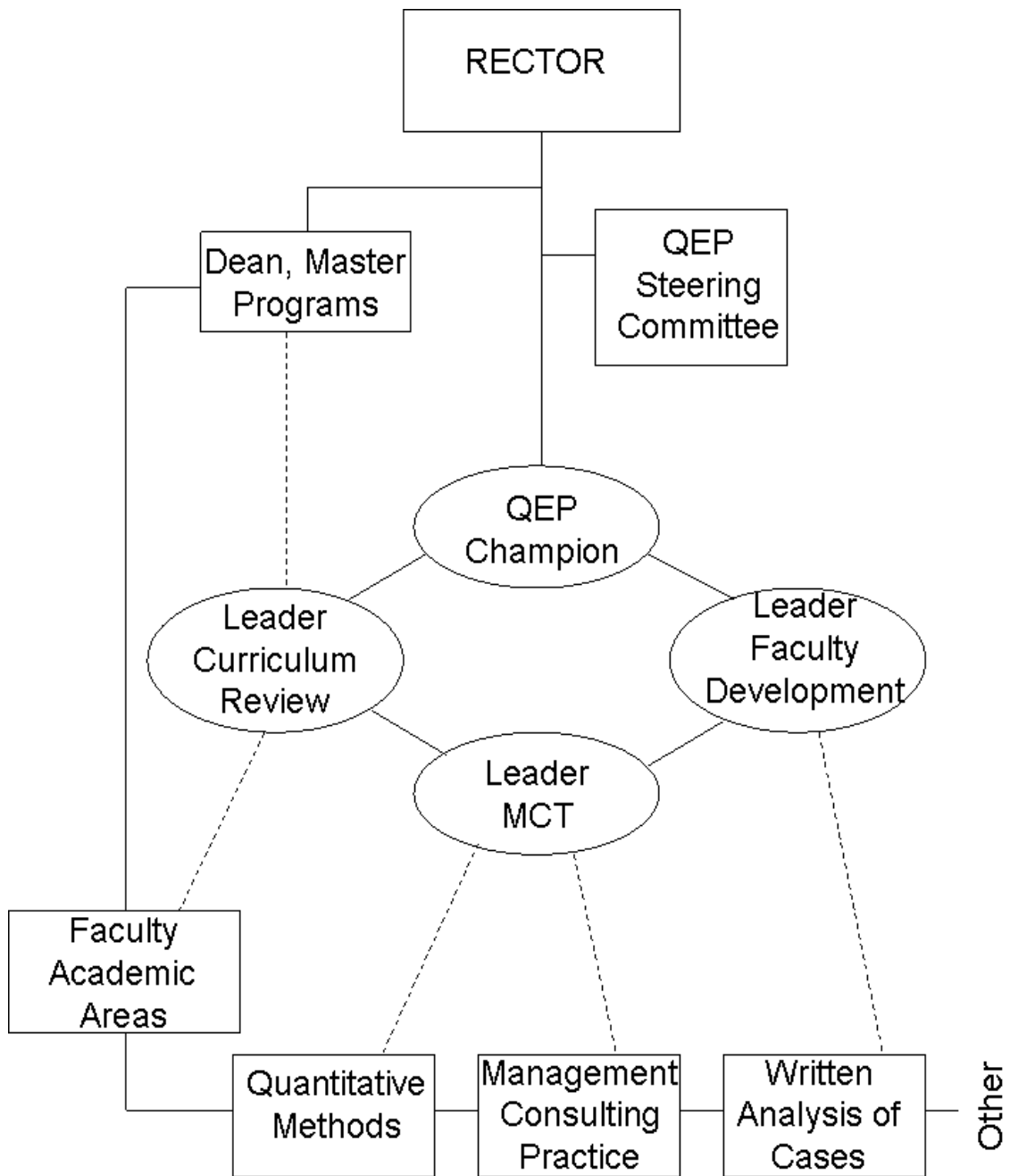Critical thinking will be measured directly in two ways: first, by the degree of improvement in performance on written case analyses; and second, increases in scoring the various dimensions of the capstone course experience. Other direct measures may also be developed during the implementation of the QEP. In addition, indirect measures will continue to be used, particularly the employer and graduate surveys.

Bibliography

Armstrong, Steven J. and Anis Mahmud. "Experiential Learning and the Acquisition of Managerial Tacit Knowledge", Academy of Management Learning & Education, Vol. 7, No. 2, June 2008.

Aylesworth, Andy. "Improving Case Discussion With an Improv Mind-Set", *Journal of Marketing Education*, Vol. 30, Iss. 2, Boulder: Aug 2008.

Braun, Nora M. " Critical Thinking in the Business Curriculum," *Journal of Education for Business*, March/April 2004.

"Critical Thinking: Lighting the Path to Lifelong Learning", Cape Fear Community College Quality Enhancement Plan, 2007.

Ennis, Robert H. "An Outline of Goals for a Critical Thinking Curriculum and Its Assessment 1", Critical Thinking Net, (Revised 6/20/02), Available at: http://faculty.ed.uiuc.edu/rhennis/outlinegoalsctcurassess3.html

Greenhalgh, Anne M. "Case Method Teaching as Science and Art: A Metaphoric Approach and Curricular Application", *Journal of Management Education*, Vol. 31, No. 2, April 2007.

King, Crystal. "Critical Thinking for Managers: A Manifesto", ChangeThis, available from http://changethis.com/17.CriticalThinking

Kolb, David A. Experiential Learning: Experience as The Source of Learning and Development, Prentice-Hall, New Jersey: 1984.

Krueger, Dale. "Writing and Levels of Critical Thinking", Allied Academies International Conference: Academy of Educational Leadership Proceedings, Cullowhee: 2001, Vol. 6, Iss. 2, pg. 75.

McBride, Hugh, Stephen Hannon and Barbara Burns. "Developing Critical Thinking Abilities in Business and Accounting Graduates", *The Irish Accounting Review,* Vol. 12, No. 2, 23-45, Galway-Mayo Institute of Technology, 2005.

Novelli, Luke and Sylvester Taylor. "Critical Thinking: An Essential Ingredient for Effective Leadership",in Stanley Gryskiewicz (Ed.), Discovering Creativity, Proceedings of the 1992 International Creativity & Innovation Networking Conference, Center for Creative Leadership: November, 1993.

Page, Diana and Arup Mukherjee. " Promoting Critical-Thinking Skills by Using Negotiation Exercises," *Journal of Education for Business*, May/June 2007.

Peach, Brian, Arup Mukherjee and Martin Hornyak. "Assessing Critical Thinking: A College's Journey and Lessons Learned", *Journal of Education for Business*, July/August 2007.

Proserpio, Luigi and Dennis A. Gioia. "Teching the Virtual Generation", *Academy of Management Learning & Education*, Vol. 6, No.1, 2007.

"Quality Enhancement Plan: Active Learning: Pathway to Higher Order Thinking at UTA", The University of Texas in Arlington, 2007.

"Quality Enhancement Plan: Eastern Kentucky University will develop informed, critical and creative thinkers who communicate effectively," Eastern Kentucky University, 2007.

Razzouk, Nabil Y., Jay N. Razzouk and Michael N. Razzouk. "Teaching with the case method: beyond knowledge and comprehension", MMA Fall Educators' Conference, 2007.

Rodriguez, Mauro. Mil ejercicios de creatividad clasificados, McGraw Hill Interamericana, Mexico: 1995 (A thousand clasified creativity excercises)

Sadler-Smith, Eugene and Erella Shefy. "Developing Intuitive Awareness in Management Education," *Academy of Management Learning & Education*, Vol. 6, No. 2, 2007.

Saucier, Rick. "An Examination of the Relationship Between Critical Thinking and Research Skills of the Millennial Students", MMA Fall Educators' Conference, 2006.

"Scaffolding", Teaching/Learning Toolkit; Hogan & Pressley, 1997, pp. 17-36, as quoted in "Scaffolding", North Central Regional Educational Laboratory, available at: http://www.ncrel.org/sdrs/areas/issues/students/learning/lr1scaf.htm (Jan 31, 2009)

Tin Oo Thin. "Promoting Critical Thinking Skills and Transformative Learning Opportunities For Future Hospitality Managers", Kappa Omicron Nu Honor Society, 2004, available online at: www.kon.org.

Walter, Gordon A and Stephen E. Marks. Experiential Learning and Change, Wiley-Interscience, 1981.

Wolcott, Susan K and Jerry K. Stonewater. "Two Rubrics for Critical Thinking Assessment: A Mini-Training Session", Assessment Institute at Indianapolis, Oct. 2005.

_____ and Charlene J. Gray. "Assessing and Developing Critical Thinking Skills", Assessment Institute at Indianapolis, Nov. 2003

Annex 1. Organization Chart, QEP

Annex 2. QEP Timeline

Activity	Date(s)	Responsible	Participants	Cost		Comments
				Cash	**Non-Cash**	
2007- 2008- Initial Planning						
Orientation Meeting	June 11, 2007	Faculty Liaison	Leadership Team	Travel & inscription for 4 SJO-ATL	5 officers x 2 days	Leadership Team includes Rector, 2 Deans, CFO and Faculty Liaison
Formation of Steering Committee	June 19	Rector	Leadership team			SC to include Leadership Team plus Director of Strategic Planning, Admin Assistant (to be selected)
Search for Topic	July 16	Faculty Liaison	Faculty & stakeholders			Initial communication with faculty announcing Dec. 20th deadline
Communication with constituents	August - December	Rector	National committees, graduates			Ideas for QEP solicited
Review of benchmarks	October 18	Faculty Liaison	Steering Committee			Review of QEPs at Central Florida, UTA, College of Charleston
Deadline for topics	December 20	Faculty Liaison				Several topics received including "Critical Thinking" and "Global Vision"
Presentation to Board of Directors	December	Rector	Board of Directors			QEP explained to Board members
QEP exercise with faculty	February 1-2, 2008	Faculty Liaison	Full Faculty		35 faculty x 0.5 days	Conducted during full afternoon at faculty retreat
Topic of QEP decided	February 7	Steering Committee	Members of SC			Topic decided: "Critical thinking for action"
Curriculum review initiated	February	Dean of Master's Program	Masters' Program Committee			Begun as independent initiative but with "critical thinking" as key criterion for curriculum & course design.

Observation visit with On Site Committee	February	Faculty Liaison Designate	Faculty Liaison Designate	Travel 1 SJO-Galveston	1 faculty x 3 days	Purpose is to observe QEP review by On Site Committee in Galveston, and training for Faculty Liaison Designate.
Visit of SACS Staff Representative	March 27-28	Faculty Liaison	Steering Committee & selected faculty		8 faculty x 0.5 days	QEP presented and discussed
Review of course objectives	March-May	Accreditation Assistant	Masters' Program Staff			To ascertain extent to which current course objectives are related to QEP topic
Student focus groups	April	Faculty Liaison	Accreditation Assistant; student reps		1 faculty x 0.5 days	Focus groups carried out at Montefresco and Alajuela campuses
Presentation to Board of Directors	May 23	Rector	Board of Directors			QEP topic and progress presented to the Board and discussed
Designation of QEP Champion	August	Rector				Decision to name current Faculty Liaison, who will be substituted by Designate in mid-2009
First application of course-embedded learning assessment	August	Professor of "Written Analysis of Cases" (WAC)				Cases are selected by course faculty and rubrics are developed; first WAC as initial reference of CT levels in Alajuela
Benchmarking and research	July-December	Accreditation Assistant				Look at other schools and possible initiatives
Update on QEP to Board of Directors	October 2	Rector	Board of Directors			
Case method workshop	November 20	Senior professor	Associate and assistant professors	2 sessions plus travel for 1, MGA-SJO	12 faculty x 1 day	Activity specifically planned for QEP

Faculty Meeting	November 21-22	Faculty Liaison	Full Faculty			Report on QEP progress and discussion of course-embedded learning assessment tools
Development of rubric for capstone course (MCP)	December	MCP coordinator	MCP faculty		1 faculty x 1 days	Rubric is developed to evaluate reports and presentations in "Management Consulting Practice"
2009- First Wave: Organization and Learning						
MCP evaluation	January 6-22	MCP faculty			1 faculty x 2 days	Non-cash expense = estra time required for measurement of CT learning
Designation of component leaders	February	Rector	3 members of faculty			Leaders of 3 QEP components officially designated by Rector following search
Projected						
Initial written case analysis	February 21	MCP professor	MAE 56			Montefresco campus
Overall curriculum review and redesign	February-December	Dean, Masters' Programs	Masters' Program Committee			Academic area coordinators have submitted preliminary selections of courses
Evaluation of course objectives and content	March-September	Academic area coordinators	Faculty			Focus on CT in course content
Evaluation of new assessment instruments	March-December	MCT leader	Selected faculty		1 faculty x 3 days	Should begin with CAT
Grading of entering case analyses	April	MCT leader	WAC faculty panel		(3 faculty x .33hrs x 180 exams)/8 hrs + 1 day discussion	Corresponds to analyses written by MAE 55 and MAE 56
1-day workshop on CT tools, interventions, etc	May or June	QEP champion	WAC and MCP faculties		8 faculty x 1 day	

INCAE Workshop on case method	July	Academic director of workshop	Selected faculty		3 faculty x 3 days	
Kickoff, Classroom Observation Program (COP)	August	Faculty developmt leader	Selected faculty		4 faculty x 0.5 days	Half-day to define objectives, initiative, measuring tools, schedules, participants
Initial written case analysis	August 29	WAC professor	MAE 57			Alajuela campus
COP pilot project kickoff	September/ December	COP champion	COP pilot team		3 faculty x 5 days	COP champion is faculty member who siezes this initiative
Benchmarking best practice in faculty development	September/ November	Faculty developmt leader			1 faculty x 5 days	
2010- Second Wave: Scaling Up						
MCP evaluation	January 6-22	MCP faculty	MCP evaluation		1 faculty x 2 days	Introduction and documentation of improvements based on last year's experience
Test of new measuring tool	January-March	MCT leader	Student sample	$6,600	4 faculty x 3 days	Assumes adoption of CAT: $5 x 80 students + $200 annual fee + training for faculty: ($400 + travel costs) x 4
Review of CT course content	February-August	Curriculum component leader	Academic area coordinators			Determine which courses are critical to CT development
Online Resources	February	Faculty developmt leader				Space where info. on CT, case method, best practices, teaching strategies, and workshops is available.
Initial written case analysis	Feb/March	WAC professor	MAE 58			Montefresco campus
Grading of entering case analyses	April	MCT leader	WAC faculty panel		(3 faculty x .33hrs x 180 exams)/8 hrs + 1 day discussion	Corresponds to analyses written by MAE 57 and MAE 58

Review of Pre-Masters Program	April	Curriculum component leader	Selected faculty members		3 faculty x 2 days	Consider CT preparation during Pre-Masters
Evaluation of pilot COP and planning for second wave	April/ May	QEP champion	Faculty devpt leader		6 faculty x 2 days	See what changes are required for roll-out of COP in second wave. Includes training of observers
Final WACs administered to graduating students	May	Managerial Processes Professor	MAE 55 / 56			Administered in both the Alajuela and Montefresco campuses
Grading of exiting case analyses	June / July	MCT leader	WAC faculty panel		(3 faculty x .33hrs x 180 exams)/8 hrs + 2 days discussion	Includes comparison and analysis of entering vs. exiting students
INCAE workshop on case method	July	Academic director of workshop	Selected faculty members		3 faculty x 3 days	
HBS: Colloquium on Participant-Centered Learning	July-August HBS Campus	Faculty developmt leader	2 Professors	$6500 plus travel for 2	2 faculty x 8 days	
2- day teaching excellence seminar	mid August	Rector	All faculty	Honorarium plus travel	30 faculty x 2 days	Objective is to involve senior faculty with well-known HBS professor
Initial written case analysis	August	WAC professor	MAE 59			Alajuela Campus
Roll-out, second wave COP	August thru April 2011	Faculty developmt leader			6 faculty x 5 days	
Roll-out, new curriculum design	August/ September	Dean of Masters' Program				First year only
MCP: expanded participation	October/ December	MCP coordinator	Selected faculty			Encourage voluntary participation as supervisor and judges.

2011- Third Wave: Consolidation						
Evaluation of new measuring tool	January	MCT leader	Steering Committee		1 faculty x 2 days	Evaluation of tool introduced in January 2010
Update Online Resources	January	Faculty developmt leader	Library, Information technology			
Initial written case analysis	Feb/March	WAC Professor	MAE 60			Montefresco Campus
Grading of entering case analyses	April	MCT leader	WAC faculty panel		(3 faculty x .33hrs x 180 exams)/8 hrs + 1 day discussion	Corresponds to analyses written by MAE 59 and MAE 60
Exit written case analysis	May	Managerial Processes Professor	MAE 57 / 58			
Grading of exit case analyses	June	MCT leader	WAC faculty panel		(3 faculty x .33hrs x 180 exams)/8 hrs + 1 day discussion	Corresponds to analyses written by MAE 57 and MAE 58
Report on WAC improvement	June-September	QEP champion with MCT leader			2 faculty x 2 days	To be discussed by full faculty and selected students
1-day workshop on case method	July	Faculty developmt leader				Special topics, to be determined
Evaluation and final recommendations on COP	July/ September	QEP champion	Steering Committee		1 faculty x 5 days	
HBS: Colloquium on Participant-Centered Learning	July-August HBS Campus	Faculty developmt leader	2 Professors-	$6500 plus travel for 2	2 faculty x 8 days	
Initial written case analysis	August / September	WAC professor	MAE 61			Alajuela campus

Workshop- teaching for CT	September	Faculty developmt leader	Faculty		20 faculty x 1 day	Based on COP Assessments
MCP Participation	Octoberr-December	MCT leader	Faculty			Obtain voluntary participation of wider faculty as supervisora and judges.
2012- Assessing and Fine-tuning						
Continual updating of online resources	January of each year	Library / information technology				
Continuation of COP	On-going	Associate Dean, Masters' Prog's	Faculty			
Entering / exiting case analyses	Feb/August and May of each year	Associate Dean, Masters' Prog's	WAC faculty			
Development of Final Report	Sept-July	QEP champion	Leaders of 3 components		1 faculty x 10, 3 faculty x 5	
Continuation of faculty developm't activities	July /August of each year	Deans	Faculty			
MCP assessment	October / December each year	MCP coordinator	MCP faculty			
Assessments	On-going	Rector	Leadership Team			

Source: developed by Michal Pothuis, John Ickis

Annex 3. Rubrics for Evaluation of Written Analysis of Cases

Case: The Dashman Company

Essay 1

Mr. Manson, president of the Dashman Company and one of the clients of your management consulting firm, has recently fired his purchasing vice-president, Mr. Post, because Post was unable to obtain satisfactory results in coordinating the purchases among the various plants of the company. "I just don´t understand it," Mr. Manson told you. "Post is an experienced purchasing executive and I gave him wide-ranging powers to do his job. Why was he unable to achieve satisfactory results?

Please prepare a memorandum to Mr. Manson explaining why Mr. Post was unable to achieve the desired results. He is asking you for a diagnosis of the problem situation that he faces, and not for alternative solutions.

Guidelines for evaluation

A grade of "5" may be assigned to an exam which recognizes that Post failed to obtain cooperation for many, wide-ranging reasons. These reasons and their causes are coherently and convincingly explained. Good use is made of case evidence and care is made to distinguish between facts, deductions, inferences, assumptions, and opinions.

The list should include the following reasons, in some form or another (this list is not exhaustive but covers most of the key points):

1. Post´s lack of communications skills, perhaps because he was hired as a technical specialist. He relies upon formal authority (the Board´s approval) without first consulting with those who must implement his directive (the purchasing executives) nor emphasizing the sense of urgency. Post´s unwillingness to go out and visit the plants, disregarding the advice of his assistant, Mr. Larsen, is further evidence of this.
2. Inappropriate communications channels: Post sent the notification of his decision to the purchasing agents without any communication with their immediate superiors, the plant managers.
3. Cultural insensitivity. Dashman is a highly decentralized company and Post´s first action is to issue a directive that goes directly against the company tradition of "encouraging each plant manager to operate with their staffs as separate independent units."
4. Recognition of Mr. Post´s lack of authority in this situation. Though he has been named "vice-president in charge of purchasing," this is a new central office staff position in a decentralized organization, and there is no evidence in the case that any reporting relationships have changed. It is clear from the purchasing executives´ response to his "suggestion" that they do not recognize his authority. The fact that he was given "wide latitude in organizing his job" does not give him formal authority over anyone except Larson, and he has done nothing to gain informal authority.

5. Not having been properly introduced in the organization (Manson´s failure). This is a newly-created position and merits more than an announcement through the formal channels.

6. His "first decision" was inappropriate for several reasons. Aside from not having been reached through consultation or with any evidence of serious study, he chose a directive that could be easily circumvented without being disobeyed: for example, purchasing agents could place multiple orders for under $10,000. Moreover, he chose a particularly inappropriate time to introduce this procedure, when the company was entering a period of intense activity.

A grade of "4" recognizes and argues effectively at least 3 or 4 of the above points. The use of evidence is good: for example, the analysis should recognize that Mr. Post has no real authority in this situation and that his communication to the plants was misdirected in that it did not include the plant managers..

A grade of "3" recognizes the basic communication problem but leaves out several important issues. For example, it may not question the appropriateness or the timeliness of his directive or it may not consider his position within the organization. Assumptions (for example, that the purchasing executives are disobeying him) may be confused with facts.

A grade of "2" sees only one of two dimensions of this situation and makes very poor use of evidence. Grades of "1" are reserved for those students who totally disregard the question.

Essay 2

You are an advisor to Mr. Post, the purchasing vice-president of the Dashman Company who has been unable to obtain satisfactory results in coordinating the purchases among the various plants of the company. You have explained to him many of the reasons for the lack of cooperation of the plant managers and purchasing agents, but now he asks you, "What should I do?"

Please prepare a memorandum to Mr. Post in which you evaluate the alternatives available to him, and recommend a course of action. (You may assume that he understands the problem situation.)

Guidelines for evaluation

A grade of "5" should be given to a paper that provides a "yes" answer to each of the following questions:

1. Is the problem clearly stated? Even though this is not explicitly in the question, no convincing recommendation can be given without clearly stating Mr. Post's problem, which is how to obtain the cooperation of the purchasing executives and plant managers in coordinating the purchase of essential raw materials to avoid stockouts.

2. Has the student formulated a list of specific and reasonable alternatives for solving the problem that are collectively exhaustive, without missing any

important ones? "Visiting the plants" by itself is not sufficiently specific unless it includes a description of what he may be expected to accomplish with the visit and how it will solve the problem.

3. Is it clear which of the alternatives is mutually exclusive and which might be carried out simultaneously or in sequence, as part of an action plan? Those which are mutually exclusive require decisions. For example, should he maintain the new centralized procedure at all costs, or consider other alternatives to gaining the cooperation of the purchasing executives and plant managers?

4. Has she evaluated the consequences, both positive and negative, of pursuing each mutually exclusive alternative, taking into account Mr. Post's objectives and the criteria that derive from these objectives? (Avoid stockouts; gain the cooperation of the purchasing executives to coordinate the flow of raw materials to achieve this….)

5. Is it clear who are the major actors that must be involved in any solution to the problem? (Mr. Manson, the plant managers, the purchasing executives, Mr. Larson, etc.)

6. Has the student selected that alternative which is most consistent with her evaluation of the consequences of each? Does it meet the objectives and criteria of the decision maker, Mr. Post?

7. Is there a feasible action plan for carrying out the alternative? It is not feasible, for example, to bring together all managers and purchasing executives of the more than twenty plants for a meeting at headquarters. The cost in terms of time woulde be too great.

8. Has the student made effective use of the evidence for justifying the alternative recommended, and has she presented convincing reasons why the other alternatives were rejected?

In summary, an exam deserving of a grade of "5" lays out a wide range of alternatives that are "collectively exhaustive." It recognizes which of these alternatives are mutually exclusive and which can be carried out simultaneously or sequentially. These alternatives may be initially listed in no particular order, but prior to their being evaluated, they should be grouped in some kind of logical order that should be explained in the analysis —by priority, by urgency, etc.

The student should identify Mr. Post´s objectives in this situation (obtain cooperation from plant personnel to ensure against stock-outs) and set out a few (3-5) criteria that flow logically from these objectives. It applies these criteria to each mutually exclusive alternative and uses the case evidence to support the evaluation. Based upon this analysis, it sets forth an action plan, which may include several proposed actions that are not mutually exclusive, and explains why this action plan is superior to the alternatives. Upon presenting an alternative, it must be clear why what the consequences of pursuing that alternative might be, what follow-up actions might be necessary, and how it will contribute to meeting the objective.

Frequently-mentioned "alternatives" include (a) going to visit the plants or (b) holding a meeting at headquarters. These should be considered. A "5" exam will:

- Be specific. If visiting plants, which and with what purpose? To convince people in the plant to follow his directive? (maybe they already are, by making smaller purchases) Who should accompany Post? Who should Post try to see? The same questions might be asked if he invites people from the plant to a meeting.

- Consider the consequences. Plant visits are time-consuming and he is likely to counter passive resistance, particularly if he insists upon his directive. A meeting at headquarters would be costly, and very likely disastrous for Mr. Post. He could invite Mr. Manson, but in doing so Post would be revealing that he has accomplished nothing during at least 8 or 9 weeks.

- Include follow-up actions. Visits and meetings only make sense if there is a clear agenda and follow-up strategy to achieve the goals of that agenda. What is needed is an action plan, not a single set of activities.

A grade of "4" is for an exam that recognizes the consequences of making visits or trying to call a meeting, but while a 5 offers a creative solution (such as, for example, negotiating with Manson to give bonuses to plant managers who help other plants obtain scarce materials), a 4 will simply recognize that Post must demonstrate to the plant managers and purchasing executives that he can provide services that are of value to them and to the company.

A grade of "3" is for those who recognize that Post cannot simply use "formal authority" to enforce his directive, but their plan for obtaining cooperation from the plant managers and purchasing executives is neither clear nor coherent.

A grade of "2" is for an exam that does not recognise the complexity of the situation and seeks a simplistic solution, such as enforcing the directive through formal authority (which Post does not have) or by naïve attempts to convince. Grades of "1" are reserved for those students who totally disregard the question.

Case: Robin Hood

Essay 1

You are an advisor to Robin Hood, who is beginning the second year of his campaign. He is concerned that he may have to abandon his campaign. "I just don´t understand it," he tells you. "We started out so well. Why have we been unable to achieve victory?

Please prepare a memorandum to Mr. Hood explaining why he has been unable to achieve the desired results.

Guidelines for evaluation

A grade of "5" recognizes that Robin Hood is failing to achieve his objectives of social justice due to a wide range of factors, both in the external environment and internally, in his own organisation; and does so in a coherent and convincing manner.

Among the factors in the external environment, we find:

1. Scarcity of wildlife in Sherwood Forest due to over-hunting and increased human population, causing a supply problem for Robin´s band.
2. Decrease in the number of wealthy merchants passing through the forest, resulting in a sharp loss of income.
3. Increase in the strength and resources of the Sheriff of Nottingham, and greater ease of detection.
4. The sheriff´s "friends in the court" provide him with a source of political power.

There are internal, organizational factors that magnify these external threats:

1. Robin has not been selective in accepting new recruits, so that band has become unwieldy and easy to detect.
2. The growing size of the band also aggravates his supply chain problem, as the band lacks access to both food and financial resources.
3. There is a growing problem of discipline within the band; it is no longer the cohesive organization that it once was. This is also due to Robin´s lack of selectivity in recruitment, where new recruits may not share his commitment to the cause of justice.
4. Lack of clarity in the objectives definitely plays a role. When the band was united against the sheriff, they needed no broader goals, but now there appears to be a real lack of direction.
5. Robin´s centralized form of organization also makes it difficult for the band to descentralize, since his lieutenants have no experience in general management, only in managing specific functions, such as supply, human resources, etc.
6. In this highly centralized leadership structure, there is not much creative thinking going on. Robin Hood is thinking about a flat tax for travelers, which goes against the values of his lieutenants, without considering the option of a progressive tax.

A grade of "4" recognizes most of these causes, and recognizes that the basic cause is of Robin´s own making: he has no human resource policies. However, a "4" analysis leaves out at least one or two important aspects.

A grade of "3" leaves out several important causes and fails to recognise that the basic cause is of Robin´s own making: he has no human resource policies.

A grade of "2" is for an exam that does not recognise the complexity of the situation, fails to distinguish between problems and their causes, and makes poor use of evidence. Grades of "1" are reserved for those students who totally disregard the question.

<u>Essay 2</u>

You are an advisor to Robin Hood, who has been unable to achieve his objective of defeating the sheriff and achieving social justice. You have explained to him many of the causes of his problems, but now he asks you, "What should I do?"

Please prepare a memorandum to Mr. Hood in which you evaluate the alternatives available to him, and recommend a course of action. (You may assume that he understands the problem situation.)

Guidelines for Evaluation

An exam deserving of a grade of "5" lays out a wide range of alternatives that are "collectively exhaustive." It recognizes which of these alternatives are mutually exclusive and which can be carried out simultaneously or sequentially. These alternatives may be initially listed in no particular order, but prior to their being evaluated, they should be grouped in some kind of logical order that should be explained in the analysis —by priority, by urgency, etc.

The student should identify Robin Hood´s objectives in this situation which now go beyond personal vengeance and have a broader social dimension as he has raised expectations among diverse stakeholders. The student should also set out a few (3-5) criteria that flow logically from these objectives and from his problem situation (survival; safety for his merry men). He or she should apply these criteria to each mutually exclusive alternative and use the case evidence to support the evaluation. Based upon this analysis, the student must set forth an action plan, which may include several proposed actions that are not mutually exclusive.

Finally, the student must explain why this action plan is superior to the alternatives. Upon presenting an alternative, it must be clear what the consequences of pursuing that alternative might be, what follow-up actions might be necessary, and how it will contribute to meeting the objective.

Frequently-mentioned "alternatives" include (a) forming an alliance with the barons and (b) charging a fixed transit tax. These should be considered. A "5" exam will:

- Recognize that these "alternatives" are not mutually exclusive. The real alternatives are: do (a) or don´t do (a); and do (b) or don´t do (b). In fact, if RH is to join the barons, he will likely need revenues from taxes or some other source, so the two courses of action are complementary.

- Use case data to infer what the barons may want from RH. If it is money to contribute to the ransom, they are mistaken, so if RH is to accept the alliance he needs a negotiating strategy. He can, for example, agree to protect King Richard until the troops loyal to KR, the legitimate ruler, can reaffirm control. (Students who assert that RH will free KR from his Austrian captors by force are not thinking clearly.)

- Not simply accept the alternatives mentioned by actors in the case, but look for ways to improve upon them. To impose a fixed transit tax would have negative consequences for RH, but he might impose a progressive tax that would affect only those able to pay.

An exam with a grade of "4" recognizes the major alternatives and uses case evidence to evaluate them. However, the quality of the analysis is not as strong. The test is whether the analysis raises unanswered questions: how did you arrive at this conclusion? Is this a fact or an assumption? If several such comments can be made, the exam is not sufficiently to merit a "5" and should be graded a "4".

A grade of "3" leaves out several alternatives and makes weaker use of evidence, but recognizes that Robin Hood must make a decision regarding the offer from the barons.

A grade of "2" is for an exam that does not recognise the complexity of the situation and seeks a simplistic solution, such as attempting to kill the sheriff. Grades of "1" are reserved for those students who totally disregard the question.

Annex 4. Rubric for capstone course

				Award	High Pass	Pass	Fail	N.R.
FINAL REPORT		1	Executive Summary	Can stand alone, correctly summarizing content of report clearly and concisely, in way that motivates reader	Can stand alone, is reasonably clear and concise, contains few errors, but does not motivate reader	Correctly describes major parts of Report but missing substantive parts so cannot stand alone; contains errors	Does not adequately or correctly summarize the content of the Report; contains many errors	
		2	Identification of the problem, opportunity or need	Demonstrates clear understanding of the situation in convincing and compelling way; shows causal relationships using evidence	Demonstrates clear understanding of the situation and its causes, with good use of evidence and mastery of decision	States what the problem, opportunity or need is but does not convincingly explain why it is a problem.	Does not adequately or correctly identify the problem, opportunity, or need	when so obvious as to be irrelevant
		3	Strategy of the organization	Demonstrates clear understanding of the strategy using evidence, questions its underlying assumptions and uses strategy concepts to evaluate it	Demonstrates clear understanding of the strategy, with good use of evidence and mastery of strategy concepts	States in generally correct terms what the strategy is and conveys satisfactory understanding of strategy concepts	Does not correctly identify the strategy and / or demonstrates lack of understanding of strategy concepts	
	Analysis	4 External	Pol/Ec/Soc/Tec/ Ecol/Legal environment, industry, market	Analyzes all relevant external aspects, correctly using appropriate frameworks and research methods, and presents clear and supportable conclusions	Analyzes all relevant external aspects of external environment, correctly using appropriate frameworks and research methods	Analyzes most relevant external aspects of external environment, demonstrating satisfactory knowledge and use of appropriate frameworks and research methods	Does not demonstrate satisfactory knowledge and / or use of appropriate frameworks and research methods for analysis of the external environment, industry or market	when project focus is on external issues
		5 Internal	Structure, systems, human resources, internal processes, financial health, other relevant funcional areas	Analyzes all relevant internal aspects of the organization, demonstrat-ing mastery of functional areas, using appropriate frameworks and presenting clear and supportable conclusions	Analyzes all relevant internal aspects of the organization, demonstrat-ing knowledge of functional areas and using appro-priate frameworks.	Analyzes most relevant internal aspects of the organization, demonstrat-ing satisfactory knowledge and use of appropriate frameworks	Does not demonstrate satisfactory knowledge of functional areas and / or use of appropriate frameworks for diagnosis of the internal organization	when project focus is on internal organiza-tion
		6	Identification and evaluation of alternatives	Presents all reasonable alternatives and applies appropriate and uniform criteria in evaluating each alternative using all available evidence.	Presents relevant alternatives and applies uniform criteria in evaluating each, with adequate supporting evidence.	Recognizes most obvious alternatives and performs satisfactory evaluation of each, but needs improve-ment in use of criteria and evidence	Does not demonstrate satisfactory ability to discriminate among alternatives or to analyze them using criteria and evidence	when alterna-tives obvious or not relevant
		7	Recommendations	Specific, supported with evidence, directed at the issue to be resolved, can be implemented, demon-strating creativity	Specific, supported with evidence, directed at the issue to be resolved, realistic (can be implemented)	Specific and directed at the issue to be resolved, but less adequately supported with evidence	Recommendations are not clear, unrealistic and / or not supported with evidence	
		8	Action Plan	Includes appropriate detail; shows who, when, and how; fully takes into account organizational resources and capacities	Clearly explains how recommendations are to be implemented, by whom, with time-line	Contains an acceptable action plan but unclear on some details (who, when or how)	Does not contain a clear action plan, or the plan is unrealistic or without satisfactory detail	when action plan not required to meet project objectives

			Award	High Pass	Pass	Fail	N.R.
	9	Financial viability	Correctly shows financial impact of recommendations and action plan in detail, using appropriate analytic tools and measures (NPV, Monte Carlo, etc.)	Correctly shows financial impact of recommendations and action plan in detail, making effective use of appropriate analytic tools and measures	Shows financial impact of recommendations with satisfactory use of analytic tools and measures, but in less detail or with some minor errors	Either does not shows financial impact of recommendations or does so with substantial errors in the use of analytic tools and measures	when demonstration of financial viability not required
	10	Overall quality of Report	Adherence to guidelines; logical organization, clarity in expression of ideas, absence of grammatical or typographical errors, pages numbered, indices included	Adherence to guidelines; logical organization, clarity in expression of ideas, few grammatical or typographical errors	Adherence to guidelines; reasonably coherent, admissible number of grammatical or typographical errors	Does not adhere to guidelines; incoherent, or inadmissible number of grammatical or typographical errors	
PRESENTATION	1	Logical order and sequencing	Presentation flows logically from one section to another and sequencing holds audience attention	Presentation flows logically from one section to another	Presentation flows in reasonably logical sequence but with little transition or flow from one section to another	Presentation is disjointed, does not flow in logical fashion, appears to jump around among time periods and / or topics	
	2	Audio-visual quality	The slides / videos not only facilitate understanding of the presentation but are creative, adding to the audience´s interest	The slides / videos are clear, simple, and facilitate understanding of the presentation	The slides contain few errors but are over-loaded with data or otherwise do not facilitate understanding of the presentation	The slides are unclear or contain an unacceptable number of errors and / or confuse the audience	
	3	Oral presentation	Clear and convincing, speakers engage audience, are completely familiar with the data and do not need to read the slides	Clear and convincing, speakers are completely familiar with the data and only rarely glance at the slides	Reasonably clear presentation, speakers have satisfactory knowledge of data but must frequently read from slides	There is lack of clarity, poor preparation and / or unfamiliarity with the data being presented	
	4	Responses to questions	Reponses to all Q´s are clear, well documented, not onver-extended and well distributed among group members	Reponses to almost all Q´s are clear and well documented, with most group members participating	Reponses to most Q´s are satisfactory but there is some lack of clarity and / or dominance by 1 or 2 groups members	Reponses to many Q´s are unclear and / or unsupported by data	
	5	Use of time	Time is optimally distributed among the various topics presented	Time is well distributed among the various topics presented	The group manages to cover all topics but time not well distributed	The group does not cover all topics adequately, needs overtime	
EX-ANTE	1	Effectiveness in planning					
	2	Ability to obtain information					
	3	Relation with the client					
	4	Quality of teamwork					

Annex 5. TEACHING BY THE CASE METHOD WORKSHOP
Prof. Carlos G. Sequeira
November 20, 2008

8:30-10:30 AM   Presentation: The fundamentals of teaching by the case method

10:30-10:45 AM   Coffee Break

10:45-11:45 AM   Preparation of materials by workshop participants

11:45-01:00 PM   Elenchus:
- Setting teaching objectives for a case
- Giving guiding questions to the students
- The session plan

01:00-02:20 PM   Lunch

02:20-03:00 PM   Individual Preparation by Workshop participants

03:00-04:20 PM   Elenchus:
- Teaching questions
- Session enactment
- Closing the session

04:20-04:40 PM   Coffee Break

04:40-06:00 PM   Elenchus:
- Special issues:
  - Participation grading
  - Examination grading
  - Course appraisal
    - By academic principals
    - By students
    - By the teacher
  - Q & A
  - Workshop closing *"Maieutics"*

Annex 6. QEP Budget, 2007-2011 (cash costs in US$)

Activity	Cash Costs	Faculty Days
2007-08 Initial planning		
Orientation meeting	7,250	10
QEP exercise with faculty		18
Observation visit to Galveston	1,400	3
Visit of SACS Staff Representative		4
Student focus groups		1
QEP case method workshop	1,560	12
Development of MCP rubric		1
Subtotal	**10,210**	**48**
2009 First Wave		
Evaluation of new assessment instr.		3
Blind review by faculty panel		26
Workshop on CT tools		8
INCAE case method workshop		9
Kickoff, classroom observation		2
COP pilot project		15
Benchmarking faculty development		5
Subtotal		**68**
2010 Second Wave		
Test of new measurement tool	6,600	12
Blind review by faculty panel		26
Review of pre-masters' program		6
MCP evaluation		3
Evaluation of COP pilot project		12
Blind review by faculty panel (exit)		26
INCAE case method workshop		9
HBS Colloquium	15,400	16
2-Day Teaching Excellence seminar	6,800	60
Subtotal	**28,800**	**170**
2011 Third Wave		
Evaluation of new measuring tool		2
Blind review by faculty panel		26
Blind review by faculty panel (exit)		26
Report on written case improvement		2
Evaluation / recommendations COP		5
HBS Colloquium	15,400	16
Workshop on teaching for CT		20
Subtotal	**15,400**	**97**
Total	**44,200**	**334**