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ABSTRACT

To facilitate an increase in student learning, the curriculum for the Principles of Management course at Collin County Community College was redesigned to reflect a business organization environment. This course differs from the traditional approach in the following ways: (1) the course is based on 47 competencies a team of corporate managers deemed critical to job success; (2) a 300-page study manual containing detailed lecture notes and class materials supplements the text; (3) students have access to over 500 files of research, articles, class notes and previous projects; (4) projects are created by student teams to demonstrate mastery of each competency; (5) when the course is completed, students have a documented portfolio of all skills mastered and the level of mastery; (6) exams are pass/fail and students must reach a score pre-determined by the class; (7) exams are taken in teams; (8) teams write a code of conduct outlining their expectations of team members; (9) teams rotate roles; (10) students develop a behavior-based peer evaluations; (11) twice during the semester, students are given questionnaires to determine if their needs are being met, and what they like and dislike about the class; and (12) any curriculum changes must be approved by all class members in a confidential vote. This exercise in group dynamics allow idea sharing and contains excellent transference of training techniques adaptable to the workplace. (KP)

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# Total Quality Education: A Concept in Reality

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## TOTAL QUALITY EDUCATION: A CONCEPT IN REALITY

Colleges and universities often teach courses on Total Quality Management but seldom use those same concepts in the administration of their courses. Rarely are students viewed as the customer and not the product.

A key component of Total Quality Management is continuous improvement. Continuous improvement states that everything can somehow be made better. Yet, it is not difficult to find instructors who have taught the same way for the past twenty years. There are several reasons for this:

- Course preparation is much easier when using old notes.
- Some people believe in the maxim that if something is not broken, there is no need to fix it.
- Some people fall into a rut and forget the motivation that originally inspired them to teach.
- In spite of perfunctory encouragement by administrators for risk-taking in the classroom, standard methods of instructor evaluation do not encourage it. Instructor evaluations generally are designed to reward traditional teaching methods, such as lecture. Fearing job security, instructors often teach to the requirements of the job and the evaluations.
- Many instructors are evaluated on their student "drop" rates, and many students just do not want to be enrolled in classes with enhanced or applied learning techniques. Lecture classes with tests that utilize short-term memory are simpler and require little thinking on the part of the students. There is less preparation and teaching required of the instructor and less involvement and commitment from the student. Students hear over and over that it is not what you learn that is important; it is your grade point average that determines your success in the job marketplace. Many colleges' reward systems (Phi Theta Kappa, Dean's List, etc.) reinforce this notion. Consequently, many students are willing to accept shortcuts in the learning process, and many instructors accommodate them to keep enrollments high throughout the semester.

Three years ago, I had several discussions with Art Lacy, Director of Training for the Defense Systems and Electronics Group Division of Texas Instruments. I had always experimented with a team concept in my classes, but after discussions with Mr. Lacy and several of his staff members, I decided to place a heavier emphasis on self-directed teams in my classes. Until that time, I had used teams in taking tests and in performing a semester-long capstone project. The project required students to investigate one company from a list of predetermined businesses using instructor-developed guidelines. At the end of the semester, students appraised their teammates' course progress and group participation using an instructor-developed peer evaluation.

To facilitate an increase in student learning, the curriculum for the Principles of Management course at Collin County Community College was redesigned to reflect a business organization environment. Many of the major businesses in the area, such as Texas Instruments, have converted to a team environment where the team makes all of the decisions. Yet, often a college education stresses individuality and leaves many students ill-prepared to cope with the problems associated with teams. Some of these businesses will no longer hire graduates who do not have experience or training in teams.

In contrast with the "real world", a student found copying the ideas of another student would be disciplined for cheating. If an instructor observed an idea that would improve his ability to teach, few would criticize that instructor for copying that idea. In breaking with tradition, my students are encouraged to talk to each other and share ideas. This sharing of ideas is one of the key benefits of operating in a team environment. When each team finishes their mission and values statements, they are immediately laminated and posted on wall for other teams to see and possibly use as guides for developing their own work.

Interlink, one of eight regional quality workforce planning consortiums established by governor of Texas, gathered a number of managers together from area organizations. These managers performed a task analysis on the job of "manager" and created a list of approximately 280 tasks that they believed a typical manager would do in the performance of his job. These tasks were then mailed to a random number of businesses who verified their importance by use of a rating scale. The remaining 240 tasks were divided into natural groupings and renamed competencies, and classes were formed around these natural groupings. The Principles of Management course contains 47 of these competencies.

A three hundred page study manual was written as a supplement to the main textbook. This study manual contains detailed lecture notes and class materials that would normally be given to the students during the course of the semester. By providing students with a copy of the lecture, an absence from class will not prevent a student from gaining the necessary material needed for subject comprehension. Having a written lecture also allows an instructor to focus on experiential and practical application exercises in class instead of repeating textbook material.

Students also have access to over 500 files of information, research, articles, documents, class notes, previous projects, and examples that are kept in a room attached to my office. All students are given an alphabetized list of file names attached to the course syllabus at the beginning of each semester. Requests for copies of specific files are completed for student use within 24 hours.

During the first five weeks of the course, two of the three hours of weekly meeting time are devoted to lecture to give the students a foundation on which to build. The remaining hour is spent with the students doing R.O.P.E.S. exercises to build group familiarity and cohesion and developing needed problem-solving and decision-making skills.

During the second five-week period, teams are chosen by the students, themselves, and they begin work on developing a mission with an accompanying set of individual and group values and a peer evaluation. Lecture/class activity and group work activities are equally split. By the end of the second five-week period, a majority of the book and course exams should be completed.

Class time during last five weeks of the semester is spent primarily on group projects. Students spend two-thirds of their time working on a group project or series of projects of their choice and one-third of their time in a lecture/class activity situation. The project(s) created by each team must demonstrate mastery of the course competencies and the components of each competency. Students are not given a letter or numerical grade for the quality of the presentation; rather, they receive a checkmark for each competency completed. If students demonstrate mastery of all 47 competencies, a score of 100 is awarded. If one or more competencies is judged to be insufficient, teams have until the end of the semester to resubmit that competency for credit.

Students are given a matrix patterned after Bloom's Taxonomy, listing in rows all of the competencies needed for attainment of class objectives. The three columns are entitled Operational Definition, Presentation Application, and Classroom Application. Operational Definition is the information/understanding/comprehension (basic knowledge) level of mastery and is accomplished by the use of exams. The Presentation Application is the application/analysis level of subject mastery and is achieved through the student/team design of appropriate projects. The Classroom Application competencies are completed in the classroom by students through the use of exercises, games, simulations, films, and case studies. When course is completed, the student will have a documented portfolio of all skills that were mastered and the level of mastery attained.

The role of examination has changed in my classes. Exams are designed to confirm that students have a basic knowledge upon which to build their skills. I believe it is more important that the students be able to understand the material and demonstrate their ability to use it than it is for them to memorize chapters out of a textbook.

While I would prefer to teach classes without written tests as a source of evaluation, I have found that in some cases these tests are still necessary for several reasons. First, it gives

the students incentive to read the book. Second, it ensures that students learn the basic components of the subject. Additionally, some students cannot accept change. To these students, an absence of exams creates uncertainty and discomfort. Some students know it is easier to attend class and memorize answers for exams than it is to depend on teammates to help you demonstrate knowledge on competencies in an abstract environment for a passing grade.

Recognizing these realities, I use exams in this class. But these exams are used only as building blocks to help the students learn the material and move on to the project(s). Exams are not used as the primary grade to determine whether students succeed or fail. Therefore, tests are taken pass/fail. Students must reach a pre-determined score approved by the class in order to pass. Students who do not achieve that score do not automatically fail; they are given two additional chances to pass the test. Believing in Total Quality Management, I do not feel my students will be as successful in management if they are allowed to pass courses with 30 to 40% errors. If they performed a job with a 60-70% success rate, they would be fired. As a result, the minimum score on the tests is set at 80 with the students having the ability to raise that minimum level if they desire. When the tests are scored, a check is given in the grade book in place of a numerical grade. If a student has six tests and passes all six of them, he/she receives a score of 100 at the end of the semester. If the student passes five of six, he receives a score of 83 and so on.

Exams are taken by teams, not by individuals. I have given exams to both team and team members acting as individuals, and rarely has an individual outscored the team. Team exams are an excellent method to build group dynamics. During the first exam, the student with the dominant personality is often listened to most. After the first test is graded, however, credibility sets in and there is often a definite shift in power. Each team has the opportunity to benefit from multiple instructors. Students learn to sell others on their ideas. Even when answers are wrong, the lesson is not lost on anyone.

Students are empowered to select the number of exams they want during the semester. The number of exams is not significant to the instructor, but empowering the students should be a priority. The students are the primary customers.

The essential core of the course is the writing of the mission and the method of peer evaluation. Upon completion of team selection during the sixth week, members of each team are asked to answer the questions:

What do you want from this class?  
How can you and your teammates best work together to assist each person in achieving their goal?

Upon completion of their mission, each team must write a Code of Conduct outlining their expectations of each member and a tentative timeline specifying significant dates of course completion. Teams must also create rotating roles for each member so that each person is able to understand how each team member contributes to the overall success of the group. As stated earlier, the first five weeks of the course are critical to creating a level of initial understanding of the inner workings of a team and what each person can expect from the team during the remainder of the semester.

Students also must develop a behavior-based peer evaluation that is founded on the principles of the team-developed mission and code of conduct. Evaluation is an essential component of management, and the students learn how to compose the instrument and how to administer it properly. Also, use of the instrument gives the students additional control over the class and elicits better participation from everyone. Who would know more about how each person contributes than the team members?

An important component of the continuous improvement process for courses is the use of a course evaluation. During the semester students are twice given a form that asks them to evaluate the class by answering several questions:

- Does the class meet the students' needs?
- What about the class do the students like most?
- What about the class do the students like the least?
- What about the class do the students not like but feel could be a significant plus if corrected?
- On the previous two questions, students are asked what improvements they would suggest to correct the situation.

All suggestions are noted and reported back to the class. If a suggestion is made that everyone feels would immediately improve the course, a proposal is drafted and given to the students for their approval. The vote is confidential, and the change must be approved by 100% of the class members since the syllabus is interpreted as a contract between the students and the instructor. Many of the changes in this year's Principles of Management syllabus are a direct result of suggestions made during last year's course evaluations. This syllabus was revised before the end of the spring semester so that many of the students would have the opportunity to review and critique the end product. Anytime a question is raised about how to improve a course teaching methodology, the first group consulted is always the students affected by the proposed changes. My students are important to me, and it is critical to me for them to know that I care what they think. It is also important for them to believe that they have an impact on how the course is taught. I depend on these same students for enrollment in my other courses, and if these higher level courses are to have enough students, my "customers" must feel their needs are being satisfied. The only part of the course not affected by the students is the writing of

the exams. All other areas are completely controlled by them. Due to the amount of control exercised by the students in determining their grade, one suggestion from last year involved tightening the numbers of the letter grades. There were several reasons used for the rationale:

- More impact to the peer evaluation and thus encourage better participation among students.
- Business expects quality work and would fire an employee who operated at a 60% success rate or even a 75% level.
- If this class is to operate as a business, the grade level should be set at higher point values to reflect those standards.

As a result of these suggestions, letter grades are determined by five point intervals: 95-100(A), 90-94.9(B), 85-89.9(C), 80-85.9(D), Below 80(F). I used this syllabus with some modifications due to time constraints during the summer, and deserving students were able to earn an "A".

This course is constantly evolving and will continue to do so in the years to come. Next fall will see the opening of our new high-tech campus, and with it a new class combining students from the principles courses of Accounting, Economics, and Management. Ideally, such a combination will allow students the advantage of seeing how the same problem can be approached from different perspectives to arrive at many unique possible solutions. The details have not been finalized, and students from other courses, such as sociology, may also be added.

Many other courses in the Management Development program lean more toward a "Deming" style of teaching where the students are given the subject competencies and a set of criteria that must be met before the end of the semester. These students then write their own course curriculum, learning objectives, evidence of accomplishment, and validation techniques. New possibilities for teaching methodology are consistently being created with the intent of continuously improving our way of meeting of the needs of our primary customer, the student.

It is hoped through the use of these teaching styles that students can realize increased learning from a situation that closely resembles a business environment. Seldom do employees work totally on their own; usually they are able to brainstorm ideas off of each other and use any available resource to assist them in doing a complete and competent job. A common complaint from students is that much of what they learn does not mirror what they do in their job. Students believe many concepts either do not reflect the real world, or they are just not applicable to their situation. This exercise in group dynamics allows for not only a sharing of ideas and viewpoints, but it also contains excellent transference of training techniques that can be readily adapted to the workplace.



Colleges ideally operate in a dynamic environment where the classroom is the vehicle for change. Using this hypothesis, group learning is an alternative to the lecture standard. It gives the students options and allows them to make choices that arrive at conclusions and consequences. Empowering the students to make choices allows them to maintain some internal control. Providing a team environment forces them to plan and operate in a fashion more consistent with reality. Meeting and adapting to changing student needs and providing students with more opportunities to succeed is the goal of total quality management in the classroom.

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