EXEMPLUM DOCENT: MAXIMIZING STUDENT LEARNING BY INVOLVING STUDENTS AND TECHNOLOGY IN THE ASSESSMENT AND FEEDBACK PROCESS

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ABSTRACT

Exemplum Docent is a peer-to-peer assessment and feedback technique which magnifies the traditional feedback techniques in a class. It focuses on allowing students to observe, evaluate, comment on, share, and learn from the good and bad efforts of their peers and to benefit from peer feedback as well as feedback from the faculty member. Through the use of on-line discussion forums to disseminate feedback, opportunities for honest responses are maximized and the possibilities for embarrassment are minimized. Use of the Exemplum Docent technique can result in many positive outcomes including improved student work, increased student confidence, and increased student involvement. This paper presents details for implementing the Exemplum Docent technique and also presents evidence of positive outcomes for students drawn from the application of the technique in a graduate marketing strategy class.

INTRODUCTION

In Latin, exemplum docent means, "to teach by example." In medicine, students learn diagnostic and technical skills by observing techniques and procedures, questioning, being questioned, and then by doing. In the trades, an apprentice learns by watching skilled tradesmen and then by performing the task alone with feedback from a more experienced practitioner. As a parent, we model the behaviors and values we wish our children to practice and we encourage friendships with other children who exhibit behaviors and values we hope our children will practice as well. Teaching by example is an approach which has value in the marketing classroom as well. The Exemplum Docent exercise presented in this paper is a student peer-to-peer assessment technique which amplifies the feedback process in the marketing classroom and focuses on allowing students to observe, evaluate, comment on, share, and learn from the good and bad examples of their peers. Empirical research on student-centered methods supports the contention that working together on learning has clear advantages. McKeachnie, Pintrich, Lin, and Smith (1986) conclude that students teaching other students is a highly effective method of teaching. They further suggest that when it comes to motivation, concept development, and application, peer learning has most of the advantages (McKeachnie, Pintrich, Lin, and Smith 1986).

This paper has two purposes. The first is to present a student peer-to-peer assessment and feedback technique which can improve student learning and develop life-long learning skills. The second purpose of the paper is to demonstrate the application of this approach with data drawn from an actual graduate marketing class.

The paper is organized into four sections. The first section presents a summary of the relevant assessment and student learning litera-

ture. The second section lays out a student peer-to-peer assessment and feedback technique (Exemplum Docent) for improving student learning and the third section illustrates the Exemplum Docent technique with data from an actual graduate marketing class. The final section discusses the data and the technique in light of what was learned by students.

LITERATURE REVIEW

Literature in the areas of assessment, classroom assessment, and student learning are relevant as background for the Exemplum Docent technique. The assessment literature will be discussed first, followed by a brief discussion of the relevant literature on student learning.

Assessment and Classroom Assessment

There has been a strong national movement toward assessment and quality in the classroom. Angelo and Cross (1993) frame the issue succinctly when they note that "all institutions share one fundamental goal: to produce the highest possible quality of student learning." Much of the emphasis in the assessment area has been on summative approaches which measure student learning outcomes for reporting purposes. While institutional assessment efforts have focused on end-of-term evaluations which only allow for improvements benefitting future students, other research has presented a series of techniques to be used during the course (Angelo and Cross 1993) as well as documented examples of the application of these techniques (McIntyre and McIntyre 2001) which can benefit current students. The emphasis in this stream of thought is that "assessment is applied to learning and precedes the awarding of a grade, and its intent is to maximize the difference between what was known coming into the class and what is known at the end of the class (i.e., value added)" (Miller 1999).

The movement now known as "Classroom assessment" (Angelo and Cross 1993) focuses on helping "individual college teachers obtain *useful* (emphasis ours) feedback on what, how much, and how well their students are learning." Angelo and Cross (1993) suggest that faculty can use the information collected to "refocus their teaching to help students make their learning more efficient and more effective." Classroom assessment is defined as a set of small-scale assessments conducted on a continuous basis in college classrooms by discipline-based teachers to determine student learning in that class (Harwood 1999). The fundamental purpose of it is to make immediate changes to improve educational methods and learning for the benefit of current students (Louie, Byrne, and Wasylenki 1996). That is, we try to figure out what students have learned and then determine what it is that can be done to help our current students learn more – providing more or different feedback, changing instructional techniques, changing testing methods, etc. However, most classroom assessment tends to be future oriented rather than focusing on current students; meaning that students are asked to offer their opinions on both content and method of information delivery and possible options for improving the exchange of information. Students frequently fail to see the value of participating in assessment efforts that do not increase responsiveness to their immediate and personal needs. They often perceive assessment as an activity that benefits unknown students, if anyone, sometime in the future (Angelo 1994). However, ultimately assessment empowers students. Harwood (1999) suggests that assessment may even serve as a vehicle to motivate students who are not active classroom participants.

Classroom assessment is consistent with the principles of continuous quality improvement embodied in the TQM literature. In that regard, classes have become more student centered and are more focused on learning than on teaching. Instructors are finding ways to involve students so that they take more ownership for their learning. Additionally, they are finding ways of engaging in the systematic collection of feedback from students so as to make continuous quality im-

provements for current students rather than waiting until the course is over to make changes (Freed 1999). In the words of Unwin and Caraher (2000), the most powerful assessment "is that which empowers, encourages, and strengthens learners."

Ideally, the outcome associated with the use of classroom assessment processes and techniques is the transformation of the professor-student role (Louie, Byrne, and Wasylenki 1996; Darling-Hammond 1996). Among other things, this means that students have a greater and more participatory role in defining the educational mix. They participate as an equal partner with faculty and provide constructive feedback about the course. It also means that instructors must be prepared to consider and accept students' viewpoints relative to changes in the course, however varied those changes may be. Engagement in classroom assessment carries with it an obligation to take students' comments seriously. Faculty must be prepared to listen to and accept views that they may not wish to hear and to act on those views. They need to develop a capacity to analyze and respond to what is occurring in their classes and in the lives of their students. To do this, instructors must develop productive relationships with their students. In the words of Darling-Hammond (1996) instructors must "understand learners and their learning as deeply as they comprehend their subjects."

Rosenzweig and Segovis (1996) point out that classroom assessment enhances the learning climate enabling students to perform at a higher level and enjoy the learning process. They characterize this transformation by asserting that students "become learning partners with [their] instructor." Because assessment allows students to have more input into their courses, stronger bonds develop between them and their professors. This enhances their learning experience and better prepares them for life after college (Patrick 1999). Classroom assessment is also noted to improve rapport between students and their instructors even during review sessions and exams (Walker 1991). In fact, Angelo and Cross (1993)

document that the positive response of students is one of the most frequently reported benefits of classroom assessment.

One shortcoming from which assessment often suffers is that students providing the assessment data do not receive the feedback. Critical to the assessment process is the need to "close the loop." Assessment for assessment's sake alone is meaningless. Assessment for knowledge and change and improvement is meaningful. If assessment is to substantively improve the quality of student learning, and not simply provide greater accountability, both faculty and students must become personally, continuously, and actively involved. After all, the primary purpose of classroom assessment "is to improve learning in progress by providing teachers with the kind of feedback they need to inform their day-to-day instructional decisions, and by providing students with information that can help them learn more effectively" (Angelo 1994).

Student Learning

There has been much written about how to best increase the quality of student learning. This discussion will focus on only three of the many streams of research in this area. One stream of research on student-centered methods supports the contention that working together on learning has clear advantages. This is often operationalized by having students work in teams on large projects. It can also be operationalized by having students teach each other more explicitly. McKeachnie, Pintrich, Lin, and Smith (1986) have concluded that students teaching other students is a highly effective method of teaching. They further suggest that when it comes to "motivation, concept development, and application, peer learning has most of the advantages," (McKeachnie et al. 1986, p. 68)

Other research suggests that the more students invest in their own education, the greater the benefits that will be realized. The Study Group on the Conditions of Excellence in American Higher Education contends that "there is

now a good deal of research evidence to suggest that the more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth and achievement, their satisfaction with their educational experiences . . . and the more likely they are to continue their learning" (1984, p. 17). While it is difficult to enforce greater effort on the part of students outside of the classroom, instructors can emphasize this value by taking time in class to engage in exercises which promote active learning.

The role of the faculty member is also important in helping student achieve their highest levels of performance. One way that faculty can assist students is by providing substantive and constructive feedback. This feedback must be timely or the advice offered will go unheeded. Cross and Steadman (1996) have identified prompt feedback as being as critical as active involvement for learning. Another critical role for faculty is the setting of expectations. Conventional wisdom, supported by research, documents (Cross and Steadman) that teachers get from students about what they expect. Research on cognition and motivation, however, suggests that there is an optimal level of expectation; if expectations are set too low, students will do less that they are capable of; if expectations are too high, students will engage in any number of counterproductive ego-protective devices (Corno and Mandinach 1983; Covington and Berry 1976). That is to say, when students encounter a faculty member who has expectations above which the student thinks s/he is capable of, the student will sometimes not put in the effort to reach those expectations, but will rather attribute his/her lack of performance to the professor's excessive expectations. Allowing students to participate in the setting of expectations by allowing students to view the excellent work of others is an effective method for helping students maximize their achievement.

THE EXEMPLUM DOCENT EXERCISE

The Exemplum Docent technique builds on the assessment and student learning literatures discussed above. It allows students the opportunity to view a range of their peers' papers and benefit from peer feedback as well as feedback from the faculty member.

Traditionally, we assume that over time, a student will learn from the feedback provided by the professor on their papers. Ideally, early errors can be corrected and then learning and improvement will occur incrementally over the course of a term. However, it is very difficult to "deprogram" students who are used to thinking of any thinking they have been tested and graded on as being "over and done with" (Angelo and Cross 1993). The assumptions underlying the learning from past mistake process do not hold as strongly in a class where there may be only one or two papers. Such a class structure provides less opportunity for students to learn from feedback. Furthermore, specific and detailed feedback is critical in a class that focuses on higher order learning such as analysis, synthesis, and integration rather than lower order learning such as memorization and comprehension (Bloom 1956). These types of learning objectives are typical in a graduate business class which might be taken later in an MBA program – one that focused on strategy as opposed to learning core concepts and theories.

Feedback in this type of class can be achieved in a variety of ways. One common method of providing feedback is through the oral discussion that takes place during the class. In fact, such participation often counts for a significant portion of a student's grade. This participation is often piecemeal – where the student comments on a particular part of a case or article or situation. While it may allow a faculty member to assess the student in some ways, it clearly does not allow for assessment of integration, logic, and presentation in the way that evaluation of a written paper does. Further, participation by an individual student is not consistent and makes it difficult for the student to integrate the feedback into a cohesive set of recommendations.

Feedback on individual papers can be help-

ful, however each student sees only his/her errors and highlights. This gives them a relatively narrow framework and therefore a relatively narrow range for improvement. It is difficult for students to put these comments in context. Students frequently feel that they have put in considerable time and effort and therefore this should be rewarded by the professor. This situation is not unlike the experience of faculty submitting a paper to a conference or journal. Unless that professor has had experience in reviewing papers, s/he has no framework for understanding the quality of his/her paper and likewise for understanding the quality of the reviewers' comments. It is likely that students in this case will be anchored on their original work. Subsequent work may improve from that point, but may not take a quantum leap in improvement from the starting point.

Feedback on written work sometimes takes an additional form. Sometimes students receive feedback that they are unhappy with or do not understand. In these cases they may come to the professor to discuss the paper and comments and sometimes to argue about their grade. An additional method of feedback at this point can occur by allowing the student to view other (better) students' papers – with the names taken off. This allows students to put their paper, the comments, and their grade into perspective and frequently ends the discussion with the professor. The drawback to this method is that it only benefits the rare student who will come to the office to get additional feedback. Students who do not come to the office lack this opportunity to learn from their peers.

The Exemplum Docent technique presented in this paper is an extension of the "learning from others" feedback processes just described. It extends the benefit of this technique to the entire class with the goal of maximizing learning by the entire class. The Exemplum Docent exercise is context specific, focusing on one particular assignment, with specific areas of evaluation, for the specific purpose of improving student learning and performance. This exercise is not meant to take the place of comprehensive feedback from the instructor. Rather, this exercise, and the feedback that it generates, serves to complement and reinforcement instructor feedback.

The Exemplum Docent exercise focuses on allowing students to observe, evaluate, comment on, share, and learn from the good and bad efforts of their peers. In brief, at an in-class session after student papers are turned in and before they are returned, students are given unmarked and unnamed copies of good and bad student papers. Students are asked to read the papers as if they were grading them. The papers are evaluated according to a set of criteria established by the professor. After the in-class evaluation, students then provide feedback about the papers in on-line forums. At the next class, the faculty member provides feedback on the discussion forums and further feedback on improving student assignments.

Theoretical Background

This exercise is consistent with the basic principles underlying good classroom assessment. Angelo and Cross (1993) lay out seven characteristics of classroom assessment: learner-centered, teacher-directed, mutually beneficial, formative, context specific, going, and rooted in good teaching practice (pp. 4–7). We shall discuss each of these in turn. First, the Exemplum Docent exercise is learner focused. It "focuses the primary attention of teachers and students on observing and improving learning, rather than on observing and improving teaching" (Angelo and Cross 1993). In the end, if our goal is to help students become independent lifelong learners they must learn to take full responsibility for their own learning. Further, Angelo and Cross (1993) note "to improve learning it may be more effective to help students . . . develop their metacognitive skills (skills in thinking about their own thinking and learning) than to change the instructor's teaching behavior." Second, the Exemplum Docent exercise is teacher-directed. The faculty member focuses the student attention on specific areas for evaluation. Students are not turned

loose without direction, rather they are given specific items to evaluate in the papers that they review. Third, the Exemplum Docent exercise is mutually beneficial. Both students and professor benefit from the exercise. Students have additional feedback and opportunity to improve and faculty are provided with a clear sense of how much students have learned about what is to be expected. Angelo and Cross (1993) note "by cooperating in assessment, students reinforce their grasp of the course content and strengthen their own skills at self-assessment. Their motivation is increased when they realize that faculty are interested and invested in their success as learners."

Fourth, the Exemplum Docent exercise is formative in nature rather than summative, that is, it is designed for improvement rather than for reporting of outcomes. Results of this exercise are not reported outside of the class. The purpose of the exercise is to allow students to learn from their mistakes and to make improvement on their next assignment. Fifth, the Exemplum Docent exercise is context specific. The exercise does not cover everything that has been done in the classroom to date. It focuses on one particular assignment with specific areas of evaluation with the specific purpose of improving student learning and performance. Finally, the Exemplum Docent exercise is on going and rooted in good teaching practice. It is widely accepted that frequent feedback is essential to improving student learning.

This exercise is also consistent with the approaches of "total quality management" and "continuous improvement" in that the intention is to evaluate and improve at every opportunity. In the best case scenario, the student takes the lessons learned about reflection on one's own work and applies those lessons to his/her future school work and also to future professional work. This exercise has the added benefit of expanding the feedback available to participants and also helping the participants to put their own work in context. Seeing what other students can do may

help to elevate the students' own expectations of their capabilities.

This exercise is not meant to take the place of comprehensive feedback from the instructor. Rather, this exercise and the feedback that it generates serves as a complement to instructor feedback. Faculty can provide feedback at a different level such as the appropriateness of the application of tools and models, the integration of analysis into the overall recommendations, and the overall quality of the level of work presented. The students' contribution can take different forms as well as complementing the instructor feedback. Students may be willing to accept criticism and suggestions from their peers that they would be less likely to accept from a faculty member.

Implementation Details

Specifically, prior to putting marks on student papers, the instructor should choose two of the worst papers and two of the better papers and have copies of each made. All names and identification marks should be removed from the papers prior to copying. The goal in choosing papers is to give students an idea of the range of performance on the assignment and to allow them to better evaluate their own work. During the class period when the assignment will be returned regular activities are suspended to allow students to participate in this exercise. The amount of time needed will depend on the assignment. Student evaluation of a short homework assignment might only require 30 minutes. Evaluation of a comprehensive written case assignment might require three times that to allow students to evaluate both good and bad work. The students are asked to sit in groups. A packet of papers (good and bad) is distributed to each group. Students are given no information about the quality of the papers other than they have been given papers of varying quality. The objective is to mimic the grading process where a faculty member does not know the quality of a paper before viewing it. Students are instructed

to read at least two of the papers and evaluate them but not discuss them. Students should be encouraged to take notes about what is good and bad in the papers they read. The particular areas for evaluation will vary according to the assignment and learning objectives. For a comprehensive written case assignment the areas for analysis might include: (1) writing – both structure and grammar/spelling, (2) depth of analysis, (3) correct use of the tools discussed in class, (4) logical flow, (5) drawing of conclusions from the data and from the analysis, (6) linkages between the analysis and the recommendations, (7) whether the paper was written to the owner of the business, as requested, (8) whether the problems could be solved by the alternatives presented, and (9) whether the problems identified were linked to the analysis presented.

After the students evaluate at least one good and one weak assignment, they are instructed that their <u>required</u> homework for the following class is to go on-line (ideally to a secure site such as BlackBoard) and participate in the posted discussion boards. An email should be sent to all the students to remind them of this assignment and reiterate the points for analysis. It is important that this peer-to-peer feedback be transacted on-line. Students may feel uncomfortable making critical comments about their peers' work in a "live" class. However, the combination of not knowing whose paper they had read and the distance provided by the internet (not having to see their peers' faces when they make comments) allow for a more honest and helpful exchange. Before the class is dismissed, the graded papers should be returned to the students with the suggestion that they exchange papers with others to enable them to maximize feedback from the professor.

Three discussion boards are posted for the students to respond to before the next class. The first discussion board asks students to discuss the good points in the papers they read – based on the areas for evaluation discussed above. The second discussion board asks the students to discuss

points for improvement from the papers they read. The third discussion board allows the students to discuss any other comments they have about the assignment that they read. Anonymous comments should not be allowed. Although anonymity might encourage students to be "brutally honest," the requirement to make postings under one's own name has the benefit of ensuring a level of civility in the discussion. It increases the likelihood of constructively critical comments rather than simply critical comments. The student comments should not be "graded," but they may be used as participation points. The professor should monitor the forums, but not participate at this point.

At the next class meeting, the professor engages the class in a discussion of what was brought out in the forums and in a discussion of what was learned – what went well in the assignments and what can be improved for future assignments. Further guidance and specific assistance for improvement can also be provided. At this point, students can take the feedback provided by their peers and the professor to evaluate their own first paper. They should also be encouraged to apply these lessons learned to the next assignment for the purpose of improving their own work. As opposed to just teaching students, the Exemplum Docent technique helps students help themselves, and their peers. Students learn to evaluate their own work critically, and realistically. It provides an opportunity to reinforce the idea of students being "life-long learners" versus simply turning in an assignment for a grade.

While this exercise could be repeated several times over the course of a semester, the impact will be the greatest the first time it is used. It is particularly useful in classes where there may only be only one or two papers worth a large proportion of the student's grade. The exercise works best when students have the opportunity to apply what they have learned from evaluating the assignment and reading others' evaluations to a similar project in the future.

AN ILLUSTRATED EXAMPLE

This paper also presents an example of the Exemplum Docent exercise as it was applied in a graduate-level marketing class. We present documented evidence (data and results) of the success of this technique in improving student learning. We do not suggest that these data are generalizable to other students, other classes, or other schools. Rather, the data is presented to demonstrate the approach, to illustrate the areas for evaluation, and to portray the analytical approach. We do believe, however, that the success illustrated here is easily replicated.

The Sample

The application of this exercise described in this paper took place in a graduate level Marketing Strategy class. The class was required as part of the MBA program at a regional campus of a Big Ten school. This class met in the evening. There were thirty-one (31) students in the class; 16 were men and 15 were women. The students had an average of 9.27 years of work experience prior to their participation in the class. Student status in the program varied – for some, this was their first class, and for others this was one of their last classes.

This was a case-based class. Student performance was evaluated on the basis of the following: two group cases (where a component was peer evaluation), class participation, and an individual case-based final examination. Eight work groups (four student members to a group) for the cases were formed by the professor on the basis of student expertise (undergraduate degree and work experience) with the goal being to create cross functional groups to enhance the learning experience. For each of the two written cases, different groups were formed. The second set of groups were based on the criteria discussed above and also on the performance of the students in their first group experience. The emphasis in the class was on learning tools and models relevant to strategic marketing decision-making and also on the application and integration of these tools into a comprehensive marketing analysis and marketing plan.

The Process

The first comprehensive group case analysis was turned in at the seventh class meeting. The class had asked for and received a one-week extension on this paper due to the "amount of work needed to complete the project." The papers were returned on the ninth class meeting. During the grading process, the professor was distressed to find a disproportionate number of sub-par (C- and D-level) papers. Of the eight group papers submitted, only one represented "A" quality work. The papers were copied, distributed, and evaluated as described above under implementation details. As described above, students were given the assignment to post their evaluations to BlackBoard and an email was sent as a reminder. Before the class was dismissed, the graded papers were returned to the students. Three BlackBoard forums were posted for the students to respond to during the week. The first forum asked students to discuss the good points in the papers they read – based on the areas for evaluation discussed above. The second forum asked the students to discuss points for improvement from the papers they read. The third forum was posted to allow the students to discuss any other comments they had about the case analyses that they read.

RESULTS – BLACKBOARD STATISTICS

During the week that the three BlackBoard forums were posted, there were 2,497 hits to the Discussion Board section of BlackBoard; of these 215 were from the professor and 2,282 hits were from the students. A hit is defined as any time a user enters the forum, views a posting, or posts a response. On average this means that there were 76.07 hits per student. Only one student failed to participate in any of the three forums – that is, this student did not enter the forums, view any postings, nor post any responses. Other than this outlier, the minimum number

of hits by a student on the discussion board was 13 and the maximum number of hits by a student during this time was 197.

The responses were normally distributed over the week with the peak accesses occurring on the Monday following the Thursday class. This would make sense since students would want to respond to and view others' comments about the papers. Almost all students accessed the forums multiple times during the week. There were only two students who did all their viewing and posting on a single day. By time, a large percentage of the responses (43.48%) occurred between the hours of 11:00 a.m. and 4:00 p.m. – prime on-the-job working hours. There was only one hit between the hours of 1:00 a.m. and 5:00 a.m. Presumably most of the students were sleeping at this time.

RESULTS – ANALYSIS OF DISCUSSION FORUMS

Based upon the quality of the student comments (and the number of hits) in the discussion forums and the documented performance on the subsequent papers, it can be noted that the students were involved, competent, and thoughtful reviewers of their peers' work. This occurred even without anonymity in their comments. That they were willing to post honest and critical assessments of the papers is an indication of their ability to assess their peers' work and their openness to this type of feedback approach. This section will discuss the outcomes from the Exemplum Docent exercise.

Student Comments on What Went Well

The student comments were a complement to the instructor feedback. In their assessment of the good points of their peers' papers, students were able to identify complex factors which made certain papers stand out. These comments were observant, non-superficial, and relevant for improvement in the classroom and the business world. They were able to identify flow and struc-ture as being critical to readability and credibility. One student noted "Paper A was the best structure and style wise. The writing flowed easily, although it had its fair share of typos and grammatical errors. This report was more in line with [the professor's] guidance compared to others, and another student noted, "what I found good about paper B was the approach – very direct and to the point."

Presentation was also assessed to be important in several ways. Students noted that the use of charts and tables helped to make the information easier to understand. One student noted that "being able to quickly understand the information presented in the business world is very important." Students recognized financial analysis as being necessary but not sufficient for a thorough analysis, and that financial and marketing analysis were equally important in presenting a complete view of the situation. Proper use of marketing theory and tools was also thought to be a valuable addition to a client presentation with one student commenting that "the focus on the client and the specific problems was [sic] supported with alternatives. The overall use of marketing tools and applications helped the client understand the problems and correct marketing theory, gave direction that the client might use to begin correcting the present situation." Finally, the importance of consistency in the writing and style of the paper along with the continued focus on the client's needs was acknowledged as a critical point. This was explained by another student who valued "consistency through out – mainly staying focused on the goals of [the company], and what needed to be accomplished in order for [the owners] to get to the level they aspire to." Finally, students were able to understand the value of analysis and justification when they wrote "One of the nice things I saw was a detailed write up for each competitor. Another was pro forma income statements for each alternative instead of just for the recommended option," and "all the alternatives were clearly explained and the reason for the alternative chosen was reasonably explained . . .

they did a really good job with the financials, which I think are important to understand before making a decision."

Student Comments on What Could Be Improved

Equally useful to the student who wished to improve his/her next paper (and work performance) were the comments in the section entitled "points for improvement." Again, these comments were observant, non-superficial, and relevant for improvement in the classroom and the business world. Students noted the importance of tone and respect when writing to a client and the importance of actually providing a solution to the client's problem. One student noted that in reading one paper "it felt as if the writers were insulting the owners." Another student noted that is was not clear "if the problems would be solved by the solution." Students also were aware, and critical, of packaging issues. This, particularly, is an area where it can be useful to have peers commenting on students' work. One student noted that many papers contained mistakes regarding "subject/verb agreement, punctuation, spelling (easy mistakes not caught by spell-check; i.e., "the" instead of "they"), structure (font size, one sentence paragraphs, no page numbers, etc . . ." and said

"I may be too critical with regards to "looks" or "format" of reports (and perhaps should focus more on the content). Yet I have learned in the real world, if a formal report reveals any type of grammatical or structural (i.e., graphs, charts, etc.) errors, the client/customer will not only question the accuracy of the information contained within the report, but may also have reservations about the company providing the report."

This reaction is substantiated by Shelby McIntyre (2002) who quotes Daniel Webster in stating that the world of business also is governed "more by appearances (of knowing about the market) than by realities. So the team with the ability to articulate their plan best (and back it all up with lots of information and conviction [read "appearances"]) are the ones who seem smart and get promoted, maybe regardless of how good the plans really are." Packaging does matter. It doesn't count for everything, but it can make a strong first impression – positive or negative.

Students also were able to evaluate more sophisticated and subtle flaws in their peers' work. For example students noted that "To use the phrases "I would assume" or "I assume" without supporting the assumptions with examples or constructive arguments does not provide the client with useful information," and "The tools in the appendix looked good but they were not well integrated into the paper." These thoughts echo those of Joseph Cote (2002) who notes that while student papers usually produce great description and analysis, "there is rarely any link between the market description and the recommended action (professionally produced marketing plans are often no better)." Students also recognized the importance of not shooting from the hip when they noted "I think some groups did not fully explain the results from using a tool. For instance, you can construct a GE Matrix but what is more important is what the results tell you and how it impacts the company." In discussing the use of analytical tools such as SWOT, Cote (2002) also notes that it is easy to use such frameworks (like the GE matrix) to generate information, but that generating information "is of less importance than logically using information."

Other Student Comments

Student comments in the third, open, forum tended to focus on teamwork issues and organization of work with such a large project. They reached the conclusion that "it is not a good strategy to start out with a division of labor strategy. You know, I'll do this part, you do that part. . ." An insightful solution to these types of problems was suggested by a student who said

"one possible solution would be to delay writing of the paper until all the data has been

collected and analyzed. For lack of a better term, create a 'conceptual map' of the case. Only after the data has been collected, problems identified, and solutions have been generated would formal writing take place. This would take more interaction between group members early on but would make the case easier to write. This would keep everyone going in the same direction and minimize tangents in the paper."

OUTCOMES OF THE EXEMPLUM DOCENT EXERCISE

This section will present the results of the Exemplum Docent exercise. In evaluating this exercise, it is important to look at both concrete, performance-based measures (grades) and also to look at students' reactions and their subsequent (self-reported) behavioral changes. While improved performance in the form of higher grades are the ultimate goal of the exercise, the learning and self-improvement demonstrated by the students is really at the heart of this assessment exercise.

Evaluation of Grades

The grades on the written cases improved significantly from the first to the second assignment, indicating that they had learned from the experience. The original distribution of grades was one "D," three "C's," three "B's," and one "A" with the numerical scores ranging from 65 to 93. The average grade on the first paper was 78.68. The distribution of grades on the second paper was significantly different. There was one "D," no "C's," three "B's," and four "A's" with the numerical scores ranging from 62 to 99. The average grade on the second paper was 86.35.

Evaluation of Student Learning and Behavioral Changes

Two additional forums were posted two weeks later, after the second written case was turned in. The first of these forums asked students to discuss what they had learned from the

Exemplum Docent exercise. The second forum specifically asked students to discuss how the Exemplum Docent exercise had an impact on their work for the second written case. These forums were available to the students for two weeks.

During the two weeks that the two evaluation forums were posted, there were 1,890 hits to the Discussion Board section of BlackBoard; of these 28 were from the professor and 1,862 hits were from the students. A hit is defined as any time a user enters the forum, views a posting, or posts a response. For the purposes of this exercise, we want to understand all interactions of participants in the forum. Viewing postings is as important in the learning process as the fact that a student actually posted a response. On average this means that there were 60.06 hits per student. The minimum number of hits by a student on the discussion boards was one and the maximum number of hits by a student during this time was 180.

The comments in this second set of forums indicated that the students learned from this exercise and that they had applied what they had learned to the next written case analysis. As the noted as well in the previous section, the student comments in these forums were observant, non-superficial, and relevant. Overall, students felt that the exercise was helpful. Only one comment among all the postings indicated that the student "didn't love the exercise." They noted that "the exemplum docent exercise we had in class taught us to learn from our mistakes," and that the exercise was "a good experience and a quality use of time." The students appreciated the ability and opportunity to view others' work. One student commented that "reading the work of others is difficult because it either amplifies or diminishes the quality of my work. As painful or boring as it may be, I really do learn from viewing the work of others." The value of the exercise in addition to traditional case discussions was also noted as typified by one student who said that "discussions during the case presentations brought new angles and helped to comprehend a broader

perspective of the case. However the effect is more **sustained and clarified** during the exemplum docent exercise."

Students learned the importance of presenting a logical argument which is strongly supported by facts and analysis. One student wrote that "I think the thing I learned the most was to base 'alternatives and recommendations' on the results from the tools. It is easy from reading a case to get ideas in your head before doing any tools, and it can be difficult to change those thoughts when you see the results of the tools." Additionally, that students learned to separate analysis and recommendations is reflected in the comment that "many of us had tendencies make recommendations under SWOT, PEST, or other analyses. This time we tried to stay away from that. We also learned that we need to support our statements with data or analyses." This idea is nicely summarized by the student who noted that "another great asset we acquired in the class exercise that we were able to apply to the second case was the ability to ensure that our recommendations, marketing analyses, and strategic ideas were all linear."

Similarly, another student noted that "our group was much more careful to ensure that the recommendations that we posed solved the problems that we listed. If this doesn't happen, the company walks away without gaining anything." Another student concurred and said "I was able to see what the professor meant by the fact that the papers do not always show a relationship between the analysis of the case and the alternatives and the final recommendations. Reading others' work can make this very apparent." The tie-in between this exercise and what students do in the work world was clearly elucidated by one student who said

> "After this recent project and at the same time reviewing a consultant report at work, it made me realize how 'red-flags' are raised by vague assumptions and recommendations that are not backed up with data or other evi-

dence. Implementation and impact are the two components that should be very well thought out and carefully com municated."

Students also reported an improvement in their analytical ability in the case analysis process. One student reported that "the exemplum docent exercise helped me improve my understanding of the correct application of various models. I was definitely more critical of the information we included in our second case." Similarly, another student reported that he needed "to be more concise about describing the details of the analysis. I needed to do a better job of defining a single solvable problem from the mess of symptoms surrounding these cases." Another student recognized the importance of providing reasonable and actionable solutions when he noted, "I was able to ask questions in my mind of . . . How the hell are the two owners going to accomplish this task in this final recommendation?"

Students also identified an increased focus on the "packaging" details of the final product as a beneficial outcome of the exemplum docent exercise. One student noted that "the exemplum docent exercise helped our group improve the general layout and structure of our second case based on what other people did with their first reports." Another student echoed the thoughts of many others when she stated "we had a great deal of problems with spelling, grammar, and structure with the first report. We were much more aware of structure . . . in the second report." Similarly other students learned "the importance of having an outside person proofread." Third, students recognized that "organization is very important. In lengthy papers, the headings and sub-headings were critical to keeping things straight." Finally, students also recognized that "quantity was not a true measure of proper analysis of the case." This understanding is repeated by another student who noted "Some papers I read that night had lengthy and intricate sections, but I found out later on my own that they scored badly or intermediately. Other pa-

pers were relatively short and concise, but appeared to dig deep in the areas that the professor felt were of importance."

Students also reported improved effectiveness in their group work and levels of confidence. One student reported that the exercise "helped our group discussions become more time-effective than in the first case" and another noted that "by spending a class period going over other groups' cases, I definitely saw a shorter learning curve in preparation, and also in the actual writing of the second case." Yet a third student reflected that in the second case "our group spent a great deal of time . . . analyzing the ideas before we began writing it to ensure we were all in consensus" as compared to the writing of the first case in which "the old fashioned idea of everyone dividing it up, writing their part, then throwing it all together" was used.

The attitudinal and behavioral changes noted above had a positive impact on students' confidence in their own abilities. In evaluating the exercise, one student reflected that "all the feedback we had received form the professor and fellow classmates was very helpful and I am much more confident in the depth and analysis of the second case due to this." Another student reported that "we strongly feel that we have improved from the last time."

One final comment is presented in its entirety. It illustrates clearly the value of this exercise as a mechanism for assessment and feedback in conjunction with the assessment and feedback normally provided to students by the professor.

"The greatest value provided by the exercise came from the graded case analyses with comment. I found value in reading the un-graded case analyses before seeing the professor's comments. The un-graded case analyses allowed me to form my own opinion and question between someone else's interpretation of how to structure and process the report versus my own. I believe this process of reading the un-graded and then graded case analyses helped me extract broader and deeper benefit from the graded comments."

BENEFITS OF THIS APPROACH

The Exemplum Docent approach to assessment feedback provides benefits for both teacher and student. Students benefit from this exercise in a variety of ways. In the process of the exercise, the class as a whole is able to view a wide range of approaches to the same assignment. This is particularly important on a relatively unstructured assignment such as a comprehensive case assignment. By viewing excellent work of their peers, students' own expectations about their capabilities are elevated. When their subsequent work improves, students' self-confidence and assessment of their own competence are raised. Second, students can see that others make the same type of errors that they may have made and therefore know that others are learning and struggling just as they are. This also allows them to recognize that these are errors which must be fixed in order to present a better picture to the reader. Third, by participating in this process, students are more involved in their own learning and development, as students and as professionals. After all, the primary purpose of classroom assessment "is to improve learning in progress . . . by providing students with information that can help them learn more effectively" (Angelo 1994, p. 5). The learning is this particular class involved not only concepts, and theories, and tool, but also the ability to apply these tools and present the analysis that comes from these tools in the context of a marketing plan. This exercise allowed students to see the differing levels of analysis as well as the different quality in the presentation of the analysis. Fourth, they are empowered by their participation in the evaluation of other students' work products. Students are acknowledged as having the knowledge and ability to evaluate the work of others. Many of these students are not, or will not be, marketing managers or marketing consultants. But more than likely, they will be working with marketing professionals and will need to know how to evaluate the quality of the work that is presented to them.

For faculty, the benefits are many. First, assessment of student work is shared between faculty and students. This means the faculty member can be seen as less of a "bad guy" and more as a partner in improvement. It is not just that the "big bad professor" thinks that the student's work could be improved, but the student's peers also support the recommendations. Second, the exercise creates more involvement in the classroom. Students in this class were active participants on-line. The on-line forums are a natural extension of the classroom environment. As discussed above, increased involvement frequently leads to increased learning and retention. Third, this approach takes the idea of iterative improvement to a large scale. It maximizes the feedback to students without embarrassing individual students. Fourth, as demonstrated above it improves the quality of work submitted. It can also have the side benefit of improving group processes where the class requires group projects. This was also reported a number of times by students. Students are more focused on shared goals and within group bickering can be reduced. Fifth, the students can provide critical comments, with credibility, that their peers may not want to hear from the instructor. Students in this class were able to make better use of the instructor comments as a result of having read both other papers and other student comments. Finally, as a result of all of the items mentioned above, students are likely to feel better about the classroom and the professor. This could potentially lead to higher teaching ratings and is likely to result in a more enjoyable experience for the faculty member.

WEAKNESS OF THIS APPROACH

The major weakness of this exercise, and one noted by the students themselves, is the perceived inability of students to evaluate the work of their peers. Students may feel that they are not in a position to judge and that they lack the knowledge necessary to evaluate. With graduate students, these fears can be mitigated by the fact that they probably do similar types of evaluation at work. They are certainly able to take the position of a client and evaluate the work from that perspective. Second, they may feel uncomfortable making constructively critical comments about other students' work in a public forum. As the comments above illustrate, students were able to be constructively critical. Although critiquing the work of others may be difficult in front of a "live" class, it may be somewhat easier to provide such feedback on-line. Further, by conducting the feedback process on-line, students have the opportunity to carefully think about and reflect on what they wish to communicate. This exercise may be less effective with undergraduate students who do not have as much experience in evaluating the work of others. Undergraduate students would certainly benefit, however, from the exposure to the work of others and this would likely help them place their own work (and their grade) in perspective.

Another potential weakness in this exercise is the amount of time it takes to complete the exercise – both in class and out of class. The in-class time for reviewing might be reduced by allowing students to read copies of papers at home. Alternatively, the professor might request that students review fewer sample papers. However, as noted above, the benefits gained by the students – both in terms of grades and also in their self-reported behavioral and attitudinal changes – are likely to compensate for the time taken.

A third potential weakness is the applicability of this technique to very large classes. The sheer number of postings and interactions on-line would be very cumbersome for the student to read and very cumbersome for the professor to manage. A possible solution to this problem would be to divide the class into smaller sections and provide separate forums for each section.

Finally, the possibility exists for student comments to anchor one point – say spelling and grammar or formatting issues. When students feel uncomfortable with being given this responsibility, there may be a tendency to anchor on

something concrete with which they do feel comfortable and avoid commenting on more substantive issues. Although some students did comment on these issues (and they were real issues identified by the professor as well), many students were able to get beyond these superficial critiques and present their views about more substantive issues in the papers.

LIMITATIONS OF THIS PAPER

While this paper presents a peer-to-peer assessment and feedback technique with demonstrated positive outcomes, it does have some key limitations. First, the data presented only represent the outcomes from one graduate strategy class. Data is not presented from other sections of the same class, other types of classes, or from undergraduate classes. Second, the evidence presented focused only on one type of assignment – a comprehensive case. Third, the paper does not present evidence of long-term impacts on students.

FUTURE RESEARCH

Future research on the Exemplum Docent exercise should seek to replicate the results presented here in other classes. Future research should also evaluate its effectiveness as an assessment and feedback technique for other types of classes and assignments. It would be valuable to compare the results presented here with outcomes from undergraduate classes as well as from classes other than a case-based strategy class.

Additionally, it would be interesting to assess the long-term effects of this technique on the students involved. As was discussed above, students reported behavioral and attitudinal changes relative to this class and this assignment. What

impact did the exercise have on them in other classes or in their work environment?

CONCLUSION

This paper has presented an approach for improving the quality of student learning and student work products by involving students and technology in the assessment and feedback process. The Exemplum Docent exercise takes the feedback mechanisms that may be present in a class and magnifies the effect of such opportunities for improvement. This paper presents evidence that the Exemplum Docent exercise can create an awareness of and an improvement in such areas as the quality of their logical arguments in a case, the ability to use various marketing tools and concepts, the effectiveness of group work, "packaging" issues such as organization and grammar, and in the use of feedback provided by the professor. As opposed to simply providing feedback to students with the hope that they will learn from the feedback and improve their work, the Exemplum Docent technique helps students help themselves by giving them a context in which to place their work and additional feedback from their peers. The value of this exercise lies in the involvement of the students into the assessment and feedback process. Prior research by the Study Group on the Conditions of Excellence in American Higher Education (1984) has noted the importance of involvement for improved student learning saying that "the more time and effort students invest in the learning process and the more intensely they engage in their own education, the greater will be their growth and achievement, their satisfaction with their educational experiences. . . and the more likely they are to continue their learning." It provides an opportunity to reinforce the idea of students being "life-long learners" versus simply turning in an assignment for a grade.

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