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ABSTRACT

This paper describes the use of student peer evaluation, a form of 360-degree performance assessment, to provide student input to the overall grades in college classes in which students participated as teams. The paper discusses the experiences of two faculty members using the approach with both graduate and undergraduate students. Lessons are outlined for instructors who are considering this approach. The peer evaluation method asks students to assess the contribution of other members to the group, so that grades reflect the efforts of individual students as well as the grade for the group project. Students complete a brief form to provide the 360-degree assessment of their peers. (Author/SLD)

USING 360-DEGREE PERFORMANCE ASSESSMENT TECHNIQUES IN STUDENT EVALUATION

By
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Gloria Schlisselberg, associate professor, Mercy College

Abstract: This article describes the use of student peer evaluation, a form of 360 degree performance assessment, to provide student input to the overall grades in college classes. The authors discuss their experiences using the approach with both graduate and undergraduate students and provide lessons learned to instructors considering this approach in their educational setting.

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The authors are both proponents of experiential learning and try to find ways to use it in their classrooms. Research provides evidence that human development arises from the process of learning from our experiences (Cell 1984; Kolb 1984). Experiential learning encompasses a broad array of techniques and is used in college courses as diverse as business and religion (deCourcy 1998). In addition, as the saying goes, "what you hear you may forget, what you write you may remember for a short while, but what you experience will stay with you for a lifetime."

In the early 1990s there was an increase in the use of teams in American organizations. In addition, performance assessment techniques that incorporated input from multiple sources, such as peers and subordinates, were also implemented by many organizations. These techniques are frequently referred to as 360-degree performance assessment. Team activities increased in the classroom as well, and some faculty applied 360-degree performance assessment techniques from business to help evaluate the contributions of class team members. However, there appears to be minimal research regarding the efficacy of 360-degree peer appraisal in the classroom. The purpose of this study was to

determine if 360-degree assessment is a useful tool to increase the fairness of grading, as viewed by both the instructors and students, in college team projects. An additional goal is to share the present findings and experiences with colleagues who may be considering the use of similar activities in their classes. The qualitative nature of this work means that broad, generalized conclusions are not possible. However, the major differences that exist between the courses that were the subject of this study indicate that these techniques could be profitably utilized in many other undergraduate and graduate courses. This article describes the background and teaching activities of each author, then discusses the team projects and use of the peer/team member evaluation method, and concludes by presenting the results, lessons learned, and recommendations.

Backgrounds and Teaching Activities

Although the authors teach at the same college, that is where the similarity ends. The first author is in the business and accounting area and works entirely with graduate students who attend school on a part-time basis. The second author teaches undergraduate students who are full-time communication disorders majors or non-matriculated students who are preparing for graduate study. The following table compares the attributes of the courses and students that were the subject of this study:

Category	First Author	Second Author
Level of Course	Graduate	Undergraduate
Student Status	Part-time	Full-time
Employed Full-Time	Yes	Some
Subject Area	Business/Accounting	Health Sciences
Average Age	Mid 30s	Mid 20s

There were at least two items that made the use of teams in these courses different from the content of some other courses. First, the main subject area of each of the courses does not specifically include learning about teams or groups. The courses where these techniques were used, Training and Development (T&D) and Language Disorders (LaD), have other learning objectives. Second, the students in both disciplines are preparing for careers in fields that require collaboration and group work. Therefore, course goals included providing students with the experience of working in a team to help prepare them for professional life.

Group work is not a new concept; many courses in Psychology and Organizational Behavior focus on group psychology and how it differs from the actions of an individual. Learning about groups becomes a key learning

objective of those courses. Although group and team are used interchangeably throughout this paper, it is important to realize that group and team are not synonymous. Whereas one could view all teams as groups, most groups are not teams. While there are numerous definitions of teams, the definition used for this paper is:

> A team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable (Katzenbach and Smith 1993, 45).

Thus, consistent with the learning objectives of the two courses although not explicitly stated, the professors wanted to provide the opportunity for students to participate as members of teams that have common purposes, performance goals, and approaches. For both course projects, students were informed that their product would receive only one grade, in the belief that providing a single grade for the team effort would help make team members mutually accountable for the results. The first author informed students that "each team is self-managed. Members of the team will all receive the same grade for the deliverables to be provided." The second author warned students to be sure to choose partners with whom they could work compatibly and collaborate effectively.

The Projects and Perceived Results

The graduate T&D course team project was to develop a training module with a complete instructor guide and then instruct the rest of the class on how to

conduct the training. In industry this event is known as a "Train the Trainer" session. Then, each team makes a presentation and also provides a written deliverable package. The instructor weights each component at 50 percent of the total project grade, which represents 30 percent of the course grade. A list of possible topics is provided, but teams may propose their own topics.

The undergraduate LaD course project was to design an assessment instrument for eliciting information about some aspect of language functioning. There were no specific topics given, or constraints as to the appearance of the final product. The project was worth 20 points, or 20 percent, of the total course grade (15 points for the finished product and 5 points for a group presentation of the product to the class).

The first author had a sense that the team project was working well and that the results and the learning were positive. End of course evaluations were normally highly favorable, but now and then they would include comments such as "This [the team project] was a huge task....bigger than we could accomplish in the amount of time given." and "Our group did not really work as a team....I looked forward to doing this project....I was quite dissatisfied with the result." However, these comments did not overly concern the first author, since the

students would have to encounter poorly performing teams in the workplace, and the classroom was a good place to introduce them to real world situations. In addition, there were an abundance of comments such as "I feel we learned a lot in the process, from content to group dynamics." Also, end of semester course numerical (closed-end) evaluations were among the highest in the graduate program. Thus, victory was declared!

Then, a few weeks after one of these courses had ended, a participant whose team had made a particularly good presentation and produced an excellent instructor guide saw the first author in the hall and reported that,

> The group project just didn't go well. Tom did absolutely nothing for us. He came late to our meetings, joked around, and never did what he had promised. Then, on the night of the presentation, he came in dressed in his three piece suit and took over the presentation. He really didn't know anything, but he took over, introduced everyone and made it look as if he had done it all. I was burning.

The first author doesn't remember his reply exactly, but it was inadequate. However, this did cause him to canvas a number of students from this course who were still in the graduate program. The feedback indicated that the perceived contributions of individual team members varied widely. Some teams reported relatively even contributions while others had "free riders" and some had one or two "stars" who appeared to have made a great impact on the overall result. A couple of students commented that they wished they had been able to

provide this feedback during the course, without seeming to be complaining. Suddenly, a brilliant victory had been turned into ignominious defeat.

The second author sought an alternative method of evaluating team projects in the LaD course out of frustration at the traditional method of grading. She encountered at least one student during the semester who met with her to complain about the imbalance of contribution made by members of the team. The only response that seemed equitable to all concerned was to hide behind the initial warning about choosing team members who were compatible. In essence, the second author told the student that she had made her team membership "bed" and now had to lie in it. In retrospect this was poor and insensitive feedback from a professor whose objective was to be fair and noninterfering to all.

360-Degree Performance Appraisal

Thus, the authors were faced with a learning technique that while valuable, also had a significant flaw. As long as the members of the team had all performed relatively equally in producing the result, the technique of having "one grade fits all" was reasonable. Once the performance of the team members varied substantially from one another, there was less confidence that the technique was reasonable. However, the problem was not unique to the classroom environment because "as companies develop work teams, they wonder how to assess

individual team members (Schellhardt 1996, A1)." It was clear that the instructors could not possibly assess the team performance of the individual members. Again, industry and government had encountered this problem and had found that without some form of peer review, it was nearly impossible to evaluate members of self-directed teams whose supervisors weren't involved in day-to-day activities (Laurent 1997, 22).

The way that organizations were addressing this issue was examined. There is a growing literature regarding 360-degree performance appraisal (Edwards and Ewens 1996; Schellhardt 1996; Laurent 1997; Waldman, Atwater and Antonioni 1998). This approach is also referred to as multi-source feedback, multirater-review feedback, peer review, and contribution assessment. By 1996 these 360-degree performance appraisals were used by almost all Fortune 500 companies (Ghorpade 2000). In a classroom environment, this approach could be used to obtain an assessment of an individual's contribution to the team from the other team members. This technique seemed to have an obvious advantage: instead of one person, the professor, being the only judge of a student's performance, multiple views—peer reviews—and perspectives would be obtained.

A literature review of multi-source feedback instruments uncovered many that delved deeply into the performance of individual members. However, these instruments seemed overly complex for the purposes of the current study since they were intended for evaluation and feedback of team members to assist them in becoming more productive long-term members of the team. The current situation was much simpler--these teams were not ongoing and the goal was evaluation rather than feedback. As in many college courses, the team project was only one part of the grade for these courses and the primary focus had to be on the learning objectives of the T&D and LaD courses.

The resulting format was a simple half-page evaluation tool. Note that the term "instrument" is not used. That term might imply something that had undergone a high degree of testing with measures of validity and reliability. The goal was to get a measure of individual performance within the team; while that might yield precise results, precision did not necessarily imply great accuracy. The projects were set up in the following manner for both courses:

- Teams consisted of 2-5 people, preferably 3-4.
- Teams self-select members.
- If students do not get on a team the instructor may have to cancel all teams and choose new teams randomly. Team cancellation has never been necessary--students seem to know that some compromise in team member selection is far better than subjecting themselves to chance.
- Teams choose projects using guidelines provided by the instructor.

- The organization of the team, meeting schedule, activities, and assignment of work is totally the team's responsibility.
- Team members will complete peer assessment forms, with optional comments, on completion of the project.
- The overall assignment will be graded by the instructor, who uses the completed peer assessment forms to differentiate among members of each team. All members of a team can, and in some cases do, earn the same grade.

Study Results

Success was defined by the researchers as "obtaining additional input for grading" while satisfying two other conditions. The first condition was that the number of complaints by students about peer assessment should not exceed the number of complaints about "freeloaders" and similar grade-related items that occurred before the peer assessment was instituted. The second condition was that the overall student assessment of the courses does not change appreciably. The 360-degree peer assessment has now been completed by 120 students, with a comparison base of 297 students who completed the courses before the peer assessment was implemented. The students are approximately 65 percent female, 35 percent male. Overall, the results have been positive. When they first learn about the contribution assessment, students seem to be nervous about the fact that they are, in effect, grading other students. The instructor's response is simply, "yes, your concern about grading peers is not unusual--it also occurs when organizations implement 360-degree performance appraisal systems."

With regard to the first condition, neither instructor has encountered any negative student feedback about the use of this format after the team projects. Most individuals assess the overall team contributions of other members as being similar, and each team member receives the same grade. However, when there are team members whose performance differs from the average of the group, individuals point this out clearly both with the grade/ranking and with comments. For example, one person stated that another team member,

> was consistently 45 minutes late at least--normally 90 minutes. She gave no apologies, no reasons. [Her] work was not complete by the team deadline. The rest of the group had to correct....[her work] and finish her work. A very bad experience.

Comments and grades from the other members on this team were similar. In this particular case, without the use of the 360-degree appraisal method, the instructor would have had no way to know that this team member was not viewed by her peers as being a contributor. Overall, the team project had been graded in the 90s; after adjustment Maxine received a grade of 80. Some might argue that she should have received an even lower grade than that. There is room for discussion here, but the authors feel that in the team project, as in a "real life" team, all team members share in the results for the most part. To offer a baseball analogy, had these students been members of the 1999 and 2000 New York Yankees, they would have shared in their success and earnings. Therefore, although the approach has been to adjust grades for individual

performance based on the peer evaluation, it is an adjustment, not a total change. With regard to the second condition, the authors examined the results of the *Student Instructional Report II-Assessing Courses and Instruction (SIR II)*. There is no specific question related to fairness of grading so the results of the overall evaluation (Question 40) served as an indicator. Only 83 of the students who took the course before introduction of the peer assessment had completed SIR II, and they rated the classes 4.36 on a scale of 1 to 5 (with 5 as the best). All 120 students who participated in peer assessment completed SIR II and they rated the classes 4.34 on the same scale. Thus, the conclusion is that both conditions have been met satisfactorily.

Lessons Learned and Recommendations

Students are permitted to select their own teams. Colleagues have expressed concern that the 'A' students will team up with other 'A' students and the 'C' students with 'C' students. That concern seems logical, but it hasn't happened. Perhaps it should be more of a concern if the 'C' student teams up with 'A' students for a free ride to a higher-than-usual grade? The authors feel that letting students pick their own teams gives them a sense of control and lets them choose the attributes that make for good team chemistry. In the case where most of the students work full time, the key attributes are sometimes geography, scheduling, or access to e-mail. These attributes may not be the ones the

instructors would have chosen on which to base team composition, but there is a compelling argument that students should be treated as adults who make decisions...and then live with the results. After all, life-like experience is part of the rationale for using peer evaluations in group projects.

Overall, while additional research is needed, these authors believe that this initial investigation into the use of peer-based 360-degree assessment is positive. In conclusion, the team project with peer assessment will continue to be used in a manner that provides an additional learning experience for students. While contribution assessment and team participation are not part of the course descriptions or learning objectives for the courses presented in this paper, the techniques provide valuable learning experiences. It is believed that these techniques add to the success of the courses in meeting the overall objective of educating students to be collaborative professionals. The authors encourage other faculty to use these techniques, independent of subject matter, but recognize that this is only the beginning of research in the use of 360-degree peer assessment for team projects in college classes. The next step should involve further qualitative research to determine the specific learnings that students attribute to use of the peer evaluation process.

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