

# **Enhancing Project Management Skills in Business Curriculum ©**

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## **ABSTRACT**

*Project management is a required competency for business professionals, yet it is often not a required course in business curriculum. Therefore, it is essential that the business professor infuse this skill development into course assignments. This paper discusses the deliberate inclusion of project management into two undergraduate business courses. In order to develop enhanced project management skills in undergraduate, traditionally-aged students, a focus was placed on this skill in an undergraduate Human Resource Management course and a Marketing Management course. Students were given instruction on project management skills. Outside organizations were solicited for classroom projects. This paper delineates a structured approach to enhance students' skill implementation and their self-efficacy for future project completion in academic and professional settings. The successful results of this pedagogical approach are reported.*

## **INTRODUCTION**

In order to develop enhanced project management skills in undergraduate, traditionally-aged students, a focus was placed on this skill in an undergraduate Human Resource Management course and a Marketing Management course. Students were given instruction on project management skills. “Project management is, ‘the application of knowledge, skills, tools, and techniques to a broad range of activities in order to meet the requirements of a particular project’” (Project Management Institute, 2000, as cited in McAlister, 2006, p. 98). Each class received different materials to guide their team work on projects for companies/organizations outside of the classroom. This approach to use outside companies to build competencies is supported by Brown (2000) who notes that this approach “delivers an educational experience that is content-rich, develops higher-level cognitive skills, and appears to provide lasting value to students” (p.54). Additionally, Schlick (1988) notes that “the real learning often takes place through experience on the job” (p. 25-26). The professor devoted class time to instruction in these project management techniques and encouraged students to utilize those skills throughout assignments in the courses. Assignments included community service projects, completion of

projects for regional businesses, completion of a plan for a non-profit entity, and fulfillment of a team-based marketing simulation.

## **PEDAGOGICAL FOUNDATION**

Many students see the value of taking responsibility for their learning through practical, real-life experiential projects (Razzouk, Seitz, and Rizkallah, 2003). Additionally, as McAlister (2006) states, “Workplace initiatives increasingly involve multiple stakeholders, time and resource constraints, risk and reward tradeoffs, cross-functional communication, and other complexities. Employers often find it difficult to hire individuals who are competent in managing the areas required to meet and exceed project objectives” (p. 98). According to the Project Management Institute, “a project is temporary in that it has a defined beginning and end in time, and therefore defined scope and resources. And a project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal” (What is project management, Project Management Institute, 2010, para. 2 and 3). This definition matches the nature of the assignments given students in this research.

One of the in-class tools which was provided to students, and they remarked was very instrumental to their ultimate projects’ success, was a planning/tracking sheet. Lebcir, Wells, and Bond (2008) found that the amount of details provided in lectures is one of the drivers of project education’s success. Students responded well to focusing on this skills development because they realized, as Duncan (1993) highlights, formal project management education is in high demand because of the potential value that it can add. The Society for Human Resource Management’s PHR and SPHR certifications, and the American Marketing Association’s PCM certification expect professionals to be competent in project management and delivery skills.

The use of successful project management continues to grow in businesses. This necessitates the development of project management skills in undergraduate business students. Brown (2000) states that using service learning to teach project management can be effectively extended to corporate environments. Research has found that “having an appreciation of what project management can do strategically for an organization is a powerful business tool to have” (na. *Project management for all*, 2004). The Baldrige Performance Excellence Program’s (formerly the Malcolm Baldrige National Quality Award program) Criteria for Performance Excellence (2010) includes criteria for performance excellence that was factored into this pedagogical research. Specifically, leadership, workforce focus, process management, and results criteria were relevant in this work.

Working with actual clients enhances the students’ ability to manage the inherent uncertainties that evolve through project work. As Brown (2000) states, teaching students in a complex service activity [such as that delineated in this paper] “can enhance students’ high-level cognitive skills, and it seems to play a role in their retention of key lessons” (p. 58). McAlister (2006) notes that employers often find it difficult to hire individuals with project attainment competencies and that project management is generally not a requirement of general business curriculum. Therefore, it is essential that business professors infuse the development of these skills into curriculum.

Motivation of the students in the skill development process needs to be enhanced. McConnell and Sasse (1999) found that class long exercises are useful in lessening student and faculty potential frustrations with project work. The professor played a role as “an instructional leader” who focused on motivating the students, encouraged student involvement, and supported student improvement throughout the project completion (Theall, Franklin, 1999, p. 107).

## **CONTEXT AND SETTING**

A significant, team-based project was assigned to each of the classes. Each sub-group consisted of eight to nine students including one or two team leaders for the entire 16-week semester in an entry-level HR Management class and in the foundation, Marketing Management course. In the Marketing curriculum, the structure included one major project with six separate teams for the project’s sub-components. Most of the class members were Business majors. Some Accounting and other majors were also enrolled in the courses.

Early in the course planning process, the professor contacted business organizations to establish real-life projects for the students. In the HR course, these projects varied from the revision of an employee handbook to supervisory training programs on legislative issues. The average group size was five students in that course. According to the Project Management Institute, project management knowledge draws from nine areas, including human resources (What is project management, Project Management Institute, 2010, para. 9). Therefore, the study of projects in this coursework was appropriate and relevant to the students’ education.

During the first few weeks, teams were formed. The team configuration was determined based upon prior academic performance in other business courses, the student’s major, and results of an electronic, team-skills assessment survey. “Students should be informed that teams, and more important, the ability to work in teams and to lead teams, has become an important skill to master and one that employers seek of newly graduated business students” (Hansen, 2006, p. 13). Team liaisons/leaders were chosen. As McAllister (2006) and the Project Management Institute (2010) mention, in the workplace, team members may or may not know each other before the project assignment. Correspondingly, during the selection process, the instructor paired students with others who they knew and others whom they didn’t know well.

Students completed online questionnaires assessing their team style and expectations for the project. The results of the team assessment survey were reviewed by the professor. Liaisons were chosen based upon high rankings on these assessment parameters, the student major, and any prior knowledge by the professor of the students’ academic and leadership achievement. In the marketing course, students who scored high on leadership, team organization, self-initiation, results-orientation, and commitment to project variables were candidates for the liaison positions within the groups. As noted above, this corresponds with the Baldrige Performance Excellence Program’s 2010 criteria for performance excellence metrics which include leadership, workforce focus [including team organization], results, and process management [including commitment to project/organization]. Liaisons were course leaders of the groups who facilitated successful completion of their element of the marketing mix and who acted as communication links between the team members and the course’s professor.

The team assessment survey results showed that, overall, the class members strongly agreed on the efficacy of the team-based projects. Additionally, they realized that each person’s

contribution would influence the final outcome. They recognized the importance of each team working cohesively.

In the HR Management course, seven projects were developed and assigned to teams. All assignments involved work outside of the classroom. Most included work with regional business professionals who had offered to be a site for students' learning. The professor's contacts with the regional SHRM professional chapter facilitated this process. In the marketing curriculum, teams were divided according to the marketing mix, with one team responsible for each major "P" of the mix. Additionally, one team was assigned primary research activities. All students signed confidentiality agreements in the Marketing course to maintain the secrecy of information gathered throughout the development of the marketing plan. The Marketing Plan modeled in the students' textbook (Kerin, Hartley, Berkowitz, and Rudelius, 2009) was the framework for the plan's organization and content requirements. Students in this latter course also worked in teams during a marketing simulation project.

Throughout the semester, in-class and out-of-class meetings were scheduled by the teams. The professor was a resource for project direction, conflict resolution, and reviews of periodic project drafts and update reports. Timelines for completion were posted on the courses' electronic course sites. Requirements for each draft were delineated. In addition to the final project grading, each project draft was assessed. Teams met with the off-campus site supervisors to review project progress, to share experiences, and to gain motivational support. This flow of activities contributed to the projects moving forward in an organized and positive manner.

## **FINDINGS**

Lebcir, Wells, and Bond (2008) suggest that group or individual assessment and the qualitative/quantitative content of assessment are among the important drivers of academic success in these types of project management instructional endeavors. The following chart delineates the Human Resource Management students' final assessment of the progress and learning that occurred through the completion of their projects. (All teams successfully completed the assignment projects.)

<b>Exhibit 1: Human Resource Management Course</b>	
Student reactions	Mean  (5 is strongly agree, 4= agree, 3=neither agree nor disagree, 2= disagree, 1=strongly disagree)
My professional confidence in the subject was enhanced	4.6
This was a useful way to apply subject matter outside of the classroom.	4.6
This was a challenging assignment.	4.2
This was similar to assignments I have completed in other courses.	2.6
This was a way to build my team work skills.	4.4

Although this project-based assignment was different from what most students had encountered in previous classes, they overwhelmingly realized that the assignments were effective for teaching application of course content to a real-life implementation. Correspondingly, the students' self-efficacy was enhanced, as were their team work skills. These outcomes are essential for the academic and professional development of the students.

In the marketing curriculum, students completed periodic assessment of their group's progress and interactions. The results' mean and median were statistically significant, as seen in Exhibit 2, below.

<b>Exhibit 2: Marketing Assessments Statistical Review</b>	
Descriptive Statistical Test	Investigative Questions
Mean (F)	37.03844***
Median (Kruskal-Wallis)	248.4612***
Variance (Levene)	1.23778

Significance: \*p≤0.05; \*\*p≤0.001, \*\*\*p≤0.0001

In relation to variance, the results demonstrated that student responses were very consistent in their reactions across the sample. Additionally, in answering the investigative question, “It was useful to have someone to keep the group focused on the task at hand,” the perceived value of the liaison was rated = 4.5 out of 5 (strongly agree; 4= agree). Therefore, if this project is repeated in the future, liaisons/leaders will be appointed to guide the project groups.

Unfortunately, conflict is inevitable in these settings, but it was managed well. When conflict or disagreements arose, the liaisons navigated the situation and usually found a resolution. In rare occasions liaisons or other students met with the professor to discuss conflict. The teams were guided first in how to solve themselves. Rarely did the professor have to follow-up. In the marketing course, the professor met with any groups behind in due dates or quality of work. In one project team, the professor had to add an additional liaison to ensure success. In this latter example, the professor assured the original liaison that this was a learning experience and he could continue as a co-liaison for the group.

Students completed investigative questions focusing on conflict within the groups. As shown in Exhibit 3 below, all responses were statistically significant. Despite the occurrence of conflict, though, the students realized the professional growth they experienced and enhancement of critical skill development for handling future conflict situations. The majority of students stated that positive conflict resolution facilitated work being completed more efficiently, at a higher quality, and at a faster rate. Students also perceived that their conflict resolution skills were enhanced for future group work. They would more actively work to face and resolve conflicts. Additionally, they would find ways to resolve disagreements in future groups. (See Exhibits 4 and 5.)

<b>Exhibit 3: General Conflict Statistical Review</b>		
Descriptive Test	Statistical Test	Investigative Questions’ Results
Mean (F)		7.553514***
Median (Kruskal-Wallis)		75.40218***
Variance (Levene)		1.808103*

Significance: \* $p \leq 0.05$ ; \*\* $p \leq 0.001$ , \*\*\* $p \leq 0.0001$

<b>Exhibit 4: Current Benefits of Resolving Conflicts Statistical Review (no statistical significance)</b>	
Investigative Questions	Rankings (5 is strongly agree, 4= agree, 3=neither agree no disagree, 2= disagree, 1=strongly disagree)
Worked more efficiently on team activities	4.1
Produced higher quality work on team activities	4.1
Completed team activities faster	4.0
Better qualified for jobs when I graduate	3.9
Able to advance my future career; More attractive to future employers; Performed better on team activities	All rated as 3.9

<b>Exhibit 5: Future Benefits of Resolving Conflicts Statistical Review (no statistical significance)</b>	
Investigative Questions	Rankings (5 is strongly agree, 4= agree, 3=neither agree no disagree, 2= disagree, 1=strongly disagree)
Be more proactive in resolving disagreements or conflicts on future teams	4.3
Improve my skills to resolve team disagreements or conflicts	4.2
More actively work to resolve disagreements or conflicts on future teams	4.2
Find ways to resolve disagreements or conflicts in all groups or teams if which I am a member	4.1

In the marketing course, the final assessment survey completed by the students revealed strong agreement with the benefits of the project. (Please see Exhibit 6 below.) Specifically, most of the students recognized that team cohesiveness increased throughout the endeavor. Additionally, their pride in the group, respect for the value of the project, and realization that their individual contribution was important to the overall project's success was very positive.

<b>Exhibit 6: Summative Assessment of Project</b>	
Investigative Questions	Rankings (5 is strongly agree, 4=agree, 3=neither Agree nor disagree, 2= disagree, 1=strongly disagree)
As our work progressed; the group became more cohesive.	3.82 (Mode response of 5)
I was proud to be a member of the group and I highly respected most of the people I am working with.	3.92 (Mode response of stating 4)
What the group achieved (or tried to achieve) was considered important and valuable to other members of the group.	3.84 (Mode response of 4)
What the group achieved (or tried to achieve) was considered important and valuable to me.	4.08 (Mode response was 4)
The effort I exerted was instrumental in helping me obtain outcomes I wanted to achieve as an individual.	4.00 (Mode response was 4)
I exerted a lot of effort to help the group achieve its goals.	3.97 (Mode response of 4)

During the next offering of the Human Resource Management course, the Google “doc” of MindMeister was added to the curriculum. This Internet and iPad-based software facilitates team’s project planning via flow charting. Students within a team share their drafts with each other and individual team members can make changes regardless of physical location. Additionally, the professor can view and make notations on the student maps to enhance their project management. The value-add of this technology tool in conjunction with the project management processes (Project Management Institute, 2010) will be further assessed.

## **CONCLUSIONS**

Project management is a required competency for business professionals and needs to be infused into undergraduate business curriculum. The business professional associations which students will join during their careers expect practitioners to be competent in project management and

delivery skills. This supports the growth of project management in business. The pedagogical process requires instruction in project management skills within existing business courses. The focus on project management that was implemented for this study was well-received by students who saw the value of taking responsibility for their learning. Providing a planning/tracking sheet for students provided some of the necessary detail to drive project education's success.

In order for project management education to succeed team development is essential. This should include designation or election of a team leader. This professor has found that selection of the leader by the professor is usually more effective since it encourages students to work with individuals they may not know, and to simulate a business setting in which individuals are assigned to jobs based upon skills, knowledge, and abilities. All involved accept the risk inherent in empowering students to proceed in projects that are external to the classroom setting. Additionally, students need to recognize that the assigned projects teach them to apply realistic, requisite business skills, knowledge and abilities.

During the process of educating undergraduate students in project management skills, the professor and the students need to be prepared for conflict that may arise. The establishment of an effective team leader can offset the potential negative ramifications of conflict. In this study students recognized the professional development they gained for handling future conflict situations. Positive resolution of the issues facilitated work being completed more efficiently, at a higher quality, and at a faster rate.

Overall, a structured approach to project management skill development leads to enhanced student self-efficacy in project management. As Brown (2000) forecasted, careful planning really does pay off. As the projects evolved, students gained a greater sense of control over the final results. They appreciated the professional and academic significance of the project outcomes. Additionally, the outside supervisors noted the benefits of the final projects to their organizations. By the end of the project management educational endeavor, students in this study recognized the benefits of the projects completed, the individual accountability and responsibility inherent in such actions and the need for team cohesiveness. The impact of electronic project management tools that can be utilized in a college classroom will be analyzed further. The future marketability of the students was increased through the completion of the projects in their business curriculum.

## Appendix A

### Meetings (Marketing Course Handout and Instruction Tool)

- Agenda
  - Items for discussion
- Establish attainable, challenging goals
  - SMART:
    - Specific
    - Measurable
    - Attainable
    - Realistic
    - Timely
- Defined roles
  - Encourage team members to appreciate one another's skills and capabilities and to learn and grow from each other
  - Praise
  - State procedures for under-performance
- Brainstorm a list of criteria to ensure progress and decisions
  - Ask a team member to record the agreed upon ideas
- Open and clear communication
- Team members prepare progress reports and posts to GriffinGate Forum
  - Liaison summaries
- Evenly distributed tasks for each group member
- Establish timelines
- Roundtable

- Recap

## Model for Building Teamwork and Effective Project Management

### CONCEPT: YOUR TEAM'S APPROACH (handout)

#### Team Process:

1. Forming
2. Storming  
Team members assert their positions
3. Norming  
Agreed upon work practices
4. Performing  
Productive achievement of goals

#### Team and Project Management

- Participative leadership
- Positive atmosphere
- Cooperative relationships
- Balanced participation
- Valued diversity
- Managed conflict
- Time management
- Clear goals
  - Meeting agenda lists items for discussion
- Defined roles
- Brainstorm a list of criteria to ensure progress and decisions
  - Ask a team member to record the agreed upon ideas
- Open and clear communication

- Team members prepare progress reports and posts to GriffinGate Forum
  - Liaison summarizes for professor and site supervisor
- Meet regularly
- Effective decision making
- Monitor progress

## Appendix B

### PROJECT (Human Resource Management)

**For draft submissions, attached drafts of PowerPoints, presentation notes, etc. to this document.**

GOALS	RELATED TASK #1	DUE DATE	RELATED TASK #2	DUE DATE	RELATED TASK #3	GENERAL COMMENTS

## REFERENCES

- Biech, E. (Ed). *The Pfeffer Book of Successful Team-Building Tools*, 2<sup>nd</sup> ed. (San Francisco, 2008), John Wiley & Sons, Inc.
- Brown, K. 2000. "Developing Project Management Skills: A Service Learning Approach," *Project Management Journal*, 31(4).
- Bruce, A., Langdon, K. *Project Management* (London, 2000), Dorling Kindersley.
- Hansen, R. 2006, September/October. "Benefits and problems with student teams: Suggestions for improving team projects," *Journal of Education for Business*, 11-19.
- Kerin, R., Hartley, S., Berkowitz, E., & Rudelius, W. *Marketing*, 9th ed. (Boston, 2009). McGraw-Hill, Irwin.
- Baldrige Performance Excellence Program. 2010. "Criteria for Performance Excellence." Retrieved from Baldrige Performance Excellence Program <http://www.nist.gov/baldrige/publications/criteria.cfm>.
- McAlister, D. 2006, Spring. "The project management plan: Improving team process and performance," *Marketing Education Review*, 16 (1), 97-103.
- McConnell, C.A. and Sasse, C.M.. 1999, February. "An Anticipatory Case for Managing teams and team projects," *Issues in Accounting Education*, 14 (1).
- Lebcir, R., Wells, H., and Bond, A. 2008. "Factors affecting academic performance of international students in project management courses: A case study from a British Post 92 University," *International Journal of Project Management*, 26(3), 268-274.
- Project management for all. 2004. *Industrial & Commercial Training*, 36 (6/7).
- Project Management Institute. 2010. Retrieved from Project Management Institute at <http://www.pmi.org>.
- Schlick, James, D. 1988, May. "Developing Project-Management Skills," *Training & Development Journal*, 42 (5).
- Razzouk, N., Seitz, V.; Rizkallah, E. 2003. "Learning by doing: Using experiential projects in the undergraduate marketing strategy course," *Marketing Education Review*, 13 (2), 35-41.
- Theall, M., Franklin. 1999, Summer. "What have we learned? A synthesis and some guidelines for effective motivation in higher education," *New Directions for Teaching and Learning*, 78, 99-109.