ABSTRACT

This article details the management techniques required to supervise multiple technical projects simultaneously. A case study is provided for supervision of instructional projects conducted by university students in collaboration with industry partners. Each of the authors have served as an instructor and/or contractor overseeing multiple consulting projects during an academic semester; the case explores the importance of managing multiple projects which span various industries. Project managers are often required to manage multiple projects simultaneously. Lessons can be learned from a “demand-based,” approach used to identify the needs of the client and their customers to drive successful project deliverables.

KEYWORDS: Project Management; Business Consulting; Teaching Consulting; Demand Based Approach

INTRODUCTION

Employer surveys continue to express a dissatisfaction with the level of transferable skills of new management graduates when they enter the workforce (Schlee & Harich, 2010), placing the blame on overly theoretical and textbook-driven courses. ‘Live cases’ serve as a remedy for this problem by providing a stimulating and challenging experience for students, who act as consultants to solve a problem for a real organization (Franz & Klein, 1996). The ‘live cases’ model often takes the form of a team-based structure, allowing the students to work collaboratively, share ideas, and divide the workload (Godar, S, 2000). While the experience can enhance the transferable skills of the students, the instructor implementing the ‘live case’ model may quickly become overwhelmed by the new task of managing multiple projects.

Traditionally these live projects, also commonly referred to as live cases and capstone projects, have relied upon a set of project management techniques that are structured to address the needs of the academic environment (e.g., credit hours, contact hours, course content and materials, etc.). Many of the deliverables are determined based on the needs of the provider of the service rather than the client in a supplier driven model. For example, an organization might specialize in continuous improvement consulting and propose to do a specific type of project within the scope of their expertise without truly understanding the client needs.
This is because the live case examples need to be customized for each project. We refer to this as a demand-based approach as the client/customer are in the lead role. The first result is to simplify initial meetings between the provider and recipient of the project. This is because little can be done without knowledge of what a successful or optimized result would be in the minds of the ultimate recipient of the impact- the client/customer. A study conducted by Aberdeen Group (2004) evidences that all companies can benefit from a demand-based view and a more recently example addresses opportunities to invoice clients based on value rather than hours (Baysden & Vien, 2015), cautioning that this should not be done without addressing the needs of the client.

Unknowingly, instructors can find themselves in the position similar to that of a portfolio manager. If the instructor has minimal or no experience within this role, there is a risk of committing common errors that could result in project failure (Cooper, Edgett, & Kleinschmidt, 2000; Elonen & Arto, 2003; Morris, Pinto, Arto, & Dietrich, 2007). While there is no guarantee against project failure, the instructor should be armed with the skills to create an opportunity for student success and avoid being the source of the project failure. In a live setting, the price of failure is heightened given that the University is interacting with real organizations and the misstep of instructors that fail to manage the projects properly could tarnish the reputation of the University and/or instructor associated with the project and potentially damaging the student (Ames & Archer, 1988). It is sometimes said that students can gain important lessons learned from failed projects, and while there may be anecdotal evidence to support that claim there does not seem to be much scholarly research validate this claim. The negative impact of continued failures will result in less interest in new projects and less resources invested in those that are acted on.

This paper reviews the major problems associated with managing multiple independent project and provides recommendations for instructors who are considering the implementation of ‘live cases’ within a course. A demand-led strategy was applied to a live field six sigma course. The approach allowed the instructor to implement the program in a 16-week format, as well as a 10 to 11 week accelerated program by increasing the efficiency of the process while maintaining client satisfaction. Further, the instructor was able to streamline the process to allow for the manageable supervision of three to five projects within both time frames, a feat in itself.

LITERATURE REVIEW

Managing Multiple Projects: The Pitfalls of Portfolio Management

Future graduates are likely to be faced with an uncertain and complex business world (AACU, 2007). If these students are to succeed, business schools have a responsibility to provide these students with the opportunity to tackle authentic, multifaceted issues (Doyle, Buckley, & Carroll, 2013). Further, the Association to Advance Collegiate Schools of Business (AACSB) notes that business schools are to confirm that “For any teaching and learning model employed, the school provides a portfolio of experiential learning opportunities for business students, through either formal coursework or extracurricular activities, which allow them to engage with faculty and active business leaders. These experiential learning activities provide exposure to business and management in both local and global contexts.” (AACSB, 2015, p.39). Fieldwork and live case studies are seen as a method for achieving this objective, as it places students in a live business setting to solve a real organizational problem.
Instructors recognize that field-based student consulting projects provide students with the benefits of active learning, as well as the added experience gained from tackling the ambiguity and complexity associated a real business setting (Heriot, Cook, Jones, & Simpson, 2008). Further, results indicate that the experience incorporates the benefits from active and experiential learning, while increasing the transferability of the skills used in the situation (Smith & Van Doren, 2004). The recommendation for instructors to incorporate the fieldwork in their courses comes with a strong caution to carefully consider implementation and limit the number of projects to ensure a quality experience (Cook, 2006). In a research article reviewing the Babson College curriculum changes from 1993-2003, it was noted that the faculty expectations associated with supervision of student projects was reduced to only two projects over the course of an entire year (Cohen, 2003). This change was a reflection of the extensive demands required to monitor these types of projects. Unfortunately, budget cuts and other resource limitations do not easily allow instructors to limit their workload to include the supervision of only two student consulting projects per year. Unless this process can be streamlined, fieldwork is simply not an option for many instructors.

Beyond a simple case of limited resources, and resource allocation syndrome (Engwall & Jerbant, 2003), many instructors have not received training that would enhance their skills to manage multiple group projects simultaneously. Payne provides a literature review on the subject of simultaneous projects (Payne, 1995) and Deitrich and Lehtonen empirically studied articles related to strategic management of multiple projects (Deitrich & Lehtonen, 2005). Patanakul and Milosevic introduced the terminology and concept of “management of a group of multiple projects (MGMP),” to describe the process of one project manager managing concurrent projects simultaneously in industry (Patanakul & Milosevic, 2008). The authors place MGMP under the broader umbrella of portfolio management. When an instructor incorporates field-based consulting projects into a course, they take on the role of a ‘portfolio manager’.

Researchers have identified several major problems associated with errors in the area of portfolio management (Cooper, Edgett, & Kleinschmidt, 2000; Elonen & Artto, 2003). A review of these common errors draws attention to the missteps that an instructor might take when implementing student consulting projects.

1. Poor Project Definition and Planning
The first major issue in this area stems from inadequate definition, planning, and management of single projects (Elonen & Artto, 2003). More specifically, this failure results from a lack of pre-phase planning for the project, failure to thoroughly consider the real customer during the project, and deliverables that are not properly aligned with objectives when the client needs are not clearly understood. In industry and practice, the terminology used is scope of work development with tasks that creep in outside the defined scope of work referred to as Scope Creep. Cooper, Edgett and Keinschmidt (2000) note that if the early stages of project planning are not emphasized, the entire project will lack a solid foundation. They specifically state that “unstable product specs is one of the major causes of long cycle time, while sharp, early product definition that is fact-based is strongly connected to product profitability” (p, 23). Time invested during the initial stages of a project sets the stage for a clearer understanding of the client’s needs and a more accurate definition of the project objectives. In a course setting, an instructor could fall prey to this impending failure by not properly considering the true requirements from the client and avoiding a thorough analysis of the issue prior to the project planning phase. Students should not be left to collect this information on their own. Even
though upper-level students may have the necessary skills, researchers have noted that completion of communication or speech courses are not necessarily indicative of mastery in the area business communications (Verderber & Serey, 1996).

2. Inadequate resource management
The second major problem associated with managing multiple projects is a resource shortage or allocating resources improperly (Elonen & Artto, 2003). Portfolio managers quickly become overwhelmed if projects are accepted too quickly without careful consideration. Managers need to carefully evaluate and prioritize projects to ensure that resources are invested in meaningful, appropriate projects (Cooper, Edgett, & Kleinschmidt, 2000; Cattini & Zatti, 2014). Managers must be willing to make ‘Kill’ decisions if a project is not appropriate, rather than allowing the project to become a drain on resources (Cooper, Edgett, & Kleinschmidt, 2000). In addition, portfolio managers can easily become overwhelmed with too many projects. With each additional project, the manager’s attention in spread thinner across the portfolio of projects. The consequences associated with having too many projects in the pipeline are dire. As the bottleneck of project demands builds, a queue of people demanding attention grows. In an effort to catch up, managers will begin to cut corners and make hasty decisions, reducing the quality of the project and increasing project failure rates (Cooper, Edgett, & Kleinschmidt, 2000). In a course setting, an instructor may allow students to pursue a project without proper evaluation. Also, the instructor is in danger of becoming overwhelmed with too many groups and clients that need attention. Along with the risk of project failure, excessive demands can negatively impact the instructor’s well-being and increase the probability of burnout (Crawford, LePine, & Rich, 2010). This effect is heightened when low self-efficacy or doubt in one’s capability is present (Oakes, Lane, Jenkins, & Booker, 2013), such as in the case of an instructor that does not have proper knowledge in the area of portfolio management.

3. Unclear objectives and lack of commitment
The third major problem associated with managing multiple projects is a lack of commitment and unclear responsibilities (Elonen & Artto, 2003). “Role clarity has been explored in literally hundreds of occupational stress studies” (Bliese and Castro, 2000, p.66). In the area of portfolio management, Jonas (2010) notes that role clarity is enhanced when there are clear role descriptions to ensure that tasks are carried out by the appropriate individuals to avoid redundant project effort. This concept was extended to the importance of role clarity for the project portfolio manager as well, by ensuring that there are “clear definitions of the objectives and the authorities of the project portfolio manager” (p.819). Failure to attend to role clarity can result in conflict stemming from poor resource allocation and coordination (Unger, Gemünden, & Aubry, 2011). Instructors run the risk of project failure linked to this problem if the student group members struggle to understand their role in the process, as well as the authority and responsibilities of the instructor throughout the process.

4. Inability to monitor multiple projects
The fourth major problem associated with managing multiple projects involves inadequate portfolio level activities (Elonen & Artto, 2003). More specifically this failure results from juggling several roles and responsibilities across various projects, with the problem being compounded by a lack of commitment to monitor the projects. The individuals working directly with single projects may also be distracted by other roles and responsibilities outside of the organizational project. Instructors are already burdened by service commitments, research projects, classes, and professional responsibilities. The addition of multiple new projects requires a more advanced juggling act. Students working on the consulting projects are also attempting to juggle multiple roles in their lives, leading to a lack of focus on the live consulting project.
With an understanding of the potential failures associated with portfolio management, it is possible to create a plan to avoid these pitfalls. In this case, one of the authors applied expertise in the area of demand chain management to avoid or work around the issues that arose.

**METHODS AND RESULTS**

**The Application of a Demand Based Approach**

The importance and various methods for organizational structure and control are critical to project management (Van Der Merwe, 1997). One structure or concept that supports needs based project management is the demand-based approach. Demand-based concepts allow students to identify the important needs of a partner or client. Each engagement has its own nuances and success is typically based on the view of the user of the output- the demand-source. Traditionally, the supply chain approach attempts to anticipate the needs of the demand-source and offers solutions that may or may not fit the needs. With the demand-based approach, the instructor or project manager actively engage the client to assess their needs and expectations for success. The supervisor will already know the drivers of success and, hence, can more effectively and efficiently supervise the project. When a collection of projects is involved, this allows the supervisor to semi-customize the project because the output is based on demand-based needs. From a budgetary and time perspective, projects will be completed faster and more accurately. Also, since the demand-source will be comfortable with the approach (as they helped design it), students will feel less lost, even though they lack experience. In 2010, one of the authors was approached to help solidify a study-abroad program in Dublin, Ireland, which needed stronger industry consulting partnerships. This program consisted of a six sigma consulting project for industry in addition to other study abroad curriculum requirements. The six sigma consulting project program has been facilitated in two formats: (1) as an on-campus domestic course [campuses removed for blind peer-review] and (2) as a summer study abroad course overseas. The on-campus program consists of a 16 week schedule for classroom training and project execution. The summer study abroad program consists of on-site training for five weeks in six sigma consulting methodology followed by five to six weeks on-site with an international organization working on an accelerated project schedule.

Concurrent with the six sigma study abroad program outlined above, our co-authors were developing programs based on the needs of their consulting clients. One of these topics was to outline "Demand-Based Marketing," for building materials dealers. The demand-based reference was to programs offered at that time by top building materials manufacturers, such as Weyerhaeuser. Initially, the modified program was modestly successful when adapted for retailers/distributors of building materials. But the initial results were still very supply chain biased in that many of the strategies were developed with the supply channel in mind. However, with deeper demand-centric focus and by 2012, the number of demand-based topics had grown from one application, marketing, to include numerous applications including project management and change management due to their consumer and demand-side focus. Examples of some of these demand-based approach programs are shown in Figure 1.
While projects cannot be executed without a supply of resources, the deliverables have a higher impact and are more manageable if a demand-based approach is incorporated. As projects multiply, this allows for leveraging of the investment of time. The needs of the providers of the product or service are secondary to the demand-based objectives, which are to positively impact the client or customer. In many cases, activities are executed based on the perceived need of the recipient of the product or service. This perception is caused by the supply channel “push” vs. demand channel “pull” methodology. In a single project, this less than optimal approach can sometimes be compensated by the supervisors’ continual adjustment of the plan. But, with multiple projects, the required adjustments may exceed the abilities of the supervisory resources.

A Field Study of the Demand Based Approach

From a demand-based perspective student cases must be adapted based on the needs of the recipient of the work. The cases certainly yield a methodology, but the actual steps taken would need to be modified and customized for a particular situation. Since time in the field has restrictions (at least for our test cases), this makes the demand-channel evaluation planning process a critical element toward creating efficiency and optimizing results. To cultivate relationships and build partnerships with organizations, a demand-based approach was used to ensure the successful delivery of results to clients associated with the live student consulting projects, as well as to the supervision role of the multiple student consulting projects.

There were three phases to this study over time:

- Phase I includes all projects prior to 2010 (traditional project management approach),
- Phase II includes all projects from 2010 to 2012 (early stages of the demand based approach),
- Phase III includes all projects since 2012
Data from Phase I in not available due to a lack of interest in client assessment of performance; upon conclusion all entities moved on with indifference. A survey instrument was developed in Phase II of the study as shown in the Appendix 1. In reviewing a small sample of \( n = 8 \) projects from Phase II and Phase III, as shown in table 1, we observed a relative increase in the team’s demonstration of technical capabilities and professional conduct, but unexpectedly a slight decline in team performance. This can be partly explained by the relatively small sample size of those organizations report, thus limiting the statistical significance of these findings, as well as the by the lack of data available from the traditional approach for the purposes of comparison.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Phase I (Traditional)</th>
<th>Phase II (Demand Based Launch)</th>
<th>Phase III (Demand Based Continuance)</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team demonstrated technical competence (i.e. ability to use Six Sigma tools)</td>
<td>N/A</td>
<td>4.33</td>
<td>4.40</td>
<td>1.54%</td>
</tr>
<tr>
<td>Team conducted themselves professionally (i.e. communication, effort, etc.)</td>
<td>N/A</td>
<td>4.50</td>
<td>4.80</td>
<td>6.67%</td>
</tr>
<tr>
<td>Team performance (i.e. usefulness of project results / contribution to organization)</td>
<td>N/A</td>
<td>4.67</td>
<td>4.20</td>
<td>-10.00%</td>
</tr>
</tbody>
</table>

The demand-based approach was applied for these live field projects to increase the efficiency and effectiveness when managing multiple student consulting projects. The application of the approach avoided the common portfolio management problem of inadequate definition, planning, and management of single projects discussed previously, given that demand chain management places an emphasis on the client needs at the start (Heikkilä, 2002). The supervisor must obtain the drivers of success directly from the consumer. We define the consumer as the user of the information, irrespective of whether this is an individual or an organization. Once the drivers of success are identified it is fairly easy to work with the consumer to define the activities that are likely to lead to positive outcomes. Initially, readers might feel that this is a simple process of looking at the demand-side drivers for an organization such as the customers and end-users of the firm’s products and services. However, in practice, we find that applying the demand-based concept is challenging as it is difficult to get direct feedback from end-users in many instances.

**Effective Project Management and Supervision**

As related to the topic of supervising multiple projects, demand-based approaches improve the quality of the supervisors’ work by 1) narrowing the scope of the areas to supervise, 2) prioritizing areas that are important to the consumer and 3) providing this knowledge to the actual team members that are executing the work under the project manager’s supervision.
application of a demand-based approach was useful to bring a structure and efficiency that otherwise would not have existed. The lack of literature on the demand channel or chain is evidence that we tend to adjust the supply chain techniques to support a perspective on the needs of the demand channel. The demand side is the primary source for revenue and profit generation. When effective supply logistics and cost controls exist, the demand channel can be utilized to optimize of revenue and customer satisfaction.

The application of the demand-based approach also ensured that there would not be a resource shortages or improper allocation of resources. When forced to juggle project activities and monitoring, a demand-based approach allows the supervisor or project manager to prioritize based on the expected return on investment of each activity or task, as defined by the consumer or end-user. The instructor/supervisor carefully assigned student to teams based on student work experience, student familiarity with the industry, and future student employment interest in the organizations’ field using a student profile assessment as shown in appendix 2. The projects were evaluated regularly and the supervisor of the student consulting projects took the initiative to make the tough ‘kill’ decisions if needed. In one case, clarification of the client demands made it clear that the organizational objectives did not align with the academic objectives of the course. Thus, the supervisor made the appropriate decision to disband the team to avoid an unsatisfactory results for all parties involved.

The demand-based approach also avoided failure linked to the common problem of lack of commitment and unclear responsibilities. The demand-based approach helped refine the problem and created a sense of purpose that the consumer and stakeholders can relate to. We find that when a consumer can relate, they can accept the approach and, more importantly, will tend to be a better partner to the program. The full cooperation from the partner organization provides essential free flowing information during the project and all parties have a better sense of their role in the process.

The demand-based approach also can be applied to avoid inadequate portfolio level activities. While the start and stop or end dates for the programs are defined, the progress rates of the student consulting projects vary a great deal. This is one of the more noteworthy findings from supervising the projects, as cultivating teams requires keeping the team on-schedule and on-budget while acknowledging that the projects can be completed for some organizations very quickly while others require much more time and perseverance. It was essential to keep teams focused when project development was lagging, especially when they see the fast-pace of their colleague’s projects. Some of the student teams became demoralized due to this phenomenon. However, mentorship and support guided the team’s focus back to the end-user or consumer (i.e., what they are working towards and the impact that they can have). This approach shifted the mentality of the team from competing internally with their peers back to applying their energies to improve the customer experience with the organization. Table 2 provides a summary of the traditional vs. demand-led approaches.
Table 2. Summary of the Demand-Led Strategy vs. the Traditional Approach.

<table>
<thead>
<tr>
<th>Project Steps</th>
<th>Traditional Approach</th>
<th>Demand-Led Strategy</th>
<th>Error(s) Avoided Using the Demand-Led Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organizational Partner Selection</td>
<td>The instructor identifies several organizations that are willing to work with student teams.</td>
<td>The instructor identifies the needs of the organization with regards to potential live projects.</td>
<td>Poor Project Definition and Planning: Investing time early in the process allows the projects to have a clearer definition that is suitable for the time and resource constraints.</td>
</tr>
<tr>
<td>2. Project Team Creation</td>
<td>The instructor creates teams by dividing students into equal teams with a balance of skills across the groups.</td>
<td>Teams are selected based on the skills needed to complete the activities, taking into consideration the amount of work and team members needed.</td>
<td>Inadequate Resource Management: Instructors insure that the projects are equipped with the appropriate resources need to be successful.</td>
</tr>
<tr>
<td>3. Project Team Skill Portfolio</td>
<td>The teams meet to determine the skills/experience of the team members. (Not necessary, given the proper skill selection by the instructor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Project Topic Refinement or Confirmation</td>
<td>Teams meet with the organization and the parties attempt to find project that will fit with the team’s skill set.</td>
<td>Teams meet with the organization and confirm that they have the ability to address the organizational question.</td>
<td>Unclear Roles and Lack of Commitment: Team members will recognize their role and purpose in the project. Team members, as well as the organization, remain committed to the project as expectations are met.</td>
</tr>
<tr>
<td>5. Project Execution/ Termination</td>
<td>The teams work to determine what can be done within the limited time constraint. A mismatch of the skills/objectives between the parties results in a termination of the consulting relationship.</td>
<td>Teams proceed with the updated project plan, seeking guidance when needed.</td>
<td>Ability to monitor multiple projects: The instructor is able to guide students when complications arise, rather than working to force a fit between the team and organization. The probability of necessary 'kill' decisions decreases given the proper planning early in the project.</td>
</tr>
</tbody>
</table>
Case Success Stories

The application of the demand-based approach led to several successful interactions with live organizations and an enhanced reputation of the program. For example, one recommendation that came from a project was based solely on the shift over recent years with the organization’s consumers to source product from a specific type of location. The recommended location is now one of that organization’s most profitable outlets. Also, post-project interviews revealed that several of the partner companies implemented all of the team’s recommendations and saw great benefits. In general, partner companies have been very positive with respect to the end deliverables from each series of projects overseen by the instructors.

We also found that a piecemeal approach can result in partial success. What is meant by this is even if the application did not have full support or control of management, positive results could be achieved. This was particularly important for student projects, as often-times they lack the experience needed to deeply understand the impact of their work on the organization. With the focus on the end-user, customer, and/or key constituents, the student teams used of these demand-based solutions were ideal for their project execution.

The application of the demand-based approach also allowed for an accelerated project format (10-11) weeks, rather than the full semester format (16 weeks). The demand-based approach created the structure and efficiency necessary to achieve this more streamlined format. In addition, the format allowed the students to receive all classroom trainings to be conducted before arriving on-site. The knowledge allowed for a sharper definition and understanding of the client’s needs once the students were on-site. The role clarity and advanced knowledge, along with the increased focus on the project while overseas, combined for a more successful portfolio of projects. In addition, the experience closely aligns with consulting projects in industry (i.e., a consultant or team of consultants arrive with knowledge and skills and immediately engage on the project).

Challenges and Limitations

While the success of the six sigma program is impressive, this effort took an enormous amount of time. The portfolio management log indicates that in 2011-2012, during Phase II as defined above, the supervisor of the student consulting projects invested 71 hours of communication time (teleconferences, meetings, e-mail responses, etc.) and estimated an additional 65 hours in classroom and on-site team meetings. It was estimated that the classroom contact and project on-site time for our projects were approximately 80 hours per semester, which is approximately two and half times the contact hours of a traditional equivalent three credit-hour course. In 2014, this number grew to 91 contact hours for the base three credit-hour program and 130.5 contract hours for a larger four to six credit-hour version of the program. This was found to be the equivalent to an approximately 10.44 credit hour program. Instructors may be leery to dedicate this additional time resource to utilize an evolving demand-based approach.

In addition, the application of the demand-approach did not completely eliminate the negative team dynamics that often occur in student group projects, although it did provide a guide for conflict management by shifting the group away from interpersonal conflict to focus on the task at hand. A more unexpected challenge was the management of the dynamics between the students and the representatives of the partner companies. The communications between the parties needed to be heavily monitored and corrective actions taken when necessary.
DISCUSSION AND CONCLUSIONS

Prior to the hasty implementation of live student consulting project in a course, an instructor must become knowledgeable of the pitfalls associated with managing multiple project. Overall, the demand-based approach is highly relevant to ensuring a successful experience for both the students and the instructor. Communication and allocating time to project teams in need are keys to successful supervision of multiple projects. An MGMP must not only provide a fair distribution of time to each project, but they must identify projects that need more time and optimize their utilization and utility by spending more time on high return of investment projects.

One of the co-authors manages three to five projects per semester, plus provided additional oversight to projects supervised by a colleague. These would be primarily the 10 to 11 week format, with a handful in the 16 week format as well. This co-author will be running these projects again starting in the spring/summer of 2015, so additional data collection is possible for future analysis and study (e.g., Phase III, continued or Phase VI). A statistically significant comparison between a larger sample of the traditional approach, i.e., pre-2011 projects, and the demand based approach, post-2011, to project management in underway to extend this research line. Additional databases are being reviewed and considered for larger capstone and end of program live case projects at various institutions.

APPENDIX 1

Project Evaluation Feedback Form
[Company Name Here]
(Team Members Names Here)

<table>
<thead>
<tr>
<th></th>
<th>Rating (1-5 scale)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team demonstrated technical</td>
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<td></td>
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<tr>
<td>competence (i.e. ability to use</td>
<td></td>
<td></td>
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<tr>
<td>Six Sigma tools)</td>
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<tr>
<td>Team conducted themselves</td>
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<tr>
<td>professionally (i.e. communication, effort, etc.)</td>
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</tbody>
</table>
Team performance
(i.e. usefulness of project results / contribution to organization)

Suggested program improvements

Interest in future program participation

Yes / No

Ratings: 1 = poor, 3 = average, 5 = excellent
Program Contacts:
[removed for blind peer review]

APPENDIX 2

Student Profile Form

Please e-mail this form and your resume / CV to [removed for blind peer review]

Note: There are no correct answers for this application. We just want to learn more about you and your interests so that we can provide you with the best possible company experience.

Last Name: _____________________   First Name: _______________________    Middle Initial: ___

Major: ____________________________ Minor: ________________________

Foreign Language Proficiency:  ________________________________________
Highest level of language study completed:

Describe briefly what you are hoping to accomplish during your six sigma project.

Provide an honest self-evaluation of your foreign language skills (speaking, comprehension, reading and writing). Include formal study and grades, perception of real skills outside of the classroom, life experiences, and any additional information that will help us with your placement.

Company Placement Interest
List three your top three companies in the priority that you would be interested in. Efforts will be made to provide a project in one of your areas of interest, but exact placements cannot be guaranteed. The current list includes [removed for blind peer review]

1. ______________________________________________________
2. ______________________________________________________
3. ______________________________________________________

Business Courses
List the most relevant business courses that you have taken at the university that you believe would be important to the company you would like to work with.

Finance

____________________________________
___________________________________
____________________________________
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Marketing

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Management

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Accounting

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Courses related to computer technology

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Previous experience working with computer technology

Organization Membership on Campus and Responsibility Role

<table>
<thead>
<tr>
<th>Organization Name</th>
<th>Responsibility Role (President, VP, etc.)</th>
</tr>
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<tbody>
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</tbody>
</table>

Other Campus Experience that you believe would be helpful to place you with a specific company.

__________________________________________________________________________

What are your three best competencies (skills) and a brief example.
Competency:

Example:

__________________________________________________________________________
__________________________________________________________________________
Competency:
Example:

Competency:
Example:

Please explain your skills and/or abilities to do the following:

Internet Research and Analysis:

Quantitative Analysis (financial, using Excel, etc.):

Analysis Experience in General:

Writing and/or Editing Documents:
**Previous Work Experience**

List two work experiences that you have held during your college years and briefly explain your responsibilities and results. This will help us to provide you a more meaningful project assignment.

<table>
<thead>
<tr>
<th>Job Experience #1:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Responsibilities:</strong></td>
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<tr>
<td><strong>Job Results:</strong></td>
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Tell us what you are really passionate about? What really get you excited in life?

Tell us your two most enjoyable spare time interest and WHY?

What else would you like to say about yourself?

By submitting this form electronically, I do hereby certify that all of the information included on this application is true and complete and agree to comply with the terms and conditions of the study abroad program offered through the University of Northern Iowa.

Name: ___________________________ Date: _________________

REFERENCES


