University of Pennsylvania
ScholarlyCommons

Master of Science in Organizational Dynamics Theses

Organizational Dynamics Programs

4-20-2010

The Perceived Value And Impact Of Social Characteristics When Managing Projects

Deborah H. Herting
University of Pennsylvania, herting@voicenet.com

Submitted to the Program of Organizational Dynamics in the Graduate Division of the School of Arts and Sciences in Partial Fulfillment of the Requirements for the Degree of Master of Science in Organizational Dynamics at the University of Pennsylvania
Advisor: Richard M. Bayney

This paper is posted at ScholarlyCommons. http://repository.upenn.edu/od_theses_msod/31
For more information, please contact repository@pobox.upenn.edu.

The Perceived Value And Impact Of Social Characteristics When Managing Projects

Abstract
A qualitative analysis of the perceived value and impact of social characteristics in managing projects is presented. The analysis is a result of conducting a survey of Organizational Dynamics Graduate Students at the University of Pennsylvania with a Projects, Programs, and Portfolios Concentration.

In today's global world projects are an integral component of doing business in a dynamically changing, uncertain, and complex marketplace. An organization's ability to adapt may depend on its ability to communicate and integrate cross-functionally.

Much of what has been written about project management addresses knowledge areas and processes. Many organizations use tools, methodologies, and processes that add rigor to the project life cycle. As the discipline grows, the human side of project management must be considered. There is increasing global awareness that social characteristics are an important component to managing projects. Art and science will converge to create a new socially aware manager. Project managers are positioned to be change agents as their organizations experience a metamorphic paradigm shift.

Comments
Submitted to the Program of Organizational Dynamics in the Graduate Division of the School of Arts and Sciences in Partial Fulfillment of the Requirements for the Degree of Master of Science in Organizational Dynamics at the University of Pennsylvania
Advisor: Richard M. Bayney

This thesis or dissertation is available at ScholarlyCommons: http://repository.upenn.edu/od_theses_msod/31

THE PERCEIVED VALUE AND IMPACT OF SOCIAL CHARACTERISTICS WHEN MANAGING PROJECTS

by

Deborah H. Herting

Submitted to the Program of Organizational Dynamics
in the Graduate Division of the School of Arts and Sciences
in Partial Fulfillment of the Requirements for the Degree of
Master of Science in Organizational Dynamics at the
University of Pennsylvania

Philadelphia, Pennsylvania

2010

THE PERCEIVED VALUE AND IMPACT OF SOCIAL CHARACTERISTICS WHEN MANAGING PROJECTS

Approved by:

_____

Richard M. Bayney, Ph.D., Advisor

_____

Keith D. Hornbacher, MBA, Reader

_____

Joel Adler, Ph.D., Reader

ABSTRACT

A qualitative analysis of the perceived value and impact of social characteristics in managing projects is presented. The analysis is a result of conducting a survey of Organizational Dynamics Graduate Students at the University of Pennsylvania with a Projects, Programs, and Portfolios Concentration.

In today's global world projects are an integral component of doing business in a dynamically changing, uncertain, and complex marketplace. An organization's ability to adapt may depend on its ability to communicate and integrate cross-functionally.

Much of what has been written about project management addresses knowledge areas and processes. Many organizations use tools, methodologies, and processes that add rigor to the project life cycle. As the discipline grows, the human side of project management must be considered. There is increasing global awareness that social characteristics are an important component to managing projects.

Art and science will converge to create a new socially aware manager. Project managers are positioned to be change agents as their organizations experience a metamorphic paradigm shift.

ACKNOWLEDGEMENTS

Appreciation is extended to Dr. Richard M. Bayney, my capstone course advisor, and to Keith D. Hornbacher, MBA and Dr. Joel Adler, my capstone readers, for their interest and guidance during the preparation of this document. I would also like to thank Dr. Larry M. Starr for his support, advice and encouragement throughout my tenure in the Organizational Dynamics program.

The Organizational Dynamics program provided renewed energy and a fresh prospective for me within the concentrations of Projects, Programs, and Portfolio Management, Organizational Leadership and Management Studies, and Practitioner of Change and Development Studies. The International Studies Abroad courses provided cross cultural experience in today's global marketplace.

To all of my professors and colleagues, my experience within Organizational Dynamics has been phenomenal. Thanks to all of you for many interesting discussions, collaborative partnerships, and the beginning of lifelong friendships.

LIST OF TABLES

TABLE		Page
1	Project Management Institute's Credentials	10
2	Common Interpersonal Skills	18
3	Project Management Institute's Interpersonal Skills	25
4	Soft Skills Activation	27
5	Questionnaire for Phone Interviews	32
6	Number of Students by Age Range	38
7	Project Management Careers	39
8	Concentrations within the MSOD Degree Program	41
9	Concentrations Selected When Applied to Organizational Dynamics	43
10	Concentration Order of Interest	45
11	Social Characteristics Important for a Project Manager's Professional	47
12	The Importance of Soft Skill Training	52
13	Perceived Competencies to Use Soft Skills in Professional Work	53
14	Soft Skills Training Effectively Used by Colleagues or Leadership	53
15	MSOD Candidates and Their Reasons for Choosing Courses	55
16	Non-P3 Courses Met Expectations	55
17	Non-P3 Courses Enhance Social Characteristic Competencies	57
18	Soft Skill Education Adds Value to Your Current Organizational Role	60

LIST OF FIGURES

FIGURE		Page
1	Management Style	13
2	Tuckman's 4-Stage Model	22
3	Structural Dynamic Interaction (SDI) Matrix	29
4	Relationship between Project Management Competence and Organizational Performance	67
4	Integration of Program Concentrations	69

TABLE OF CONTENTS

		Page
ABSTRACT		iii
ACKNOWLEDGEMENTS		iv
LIST OF TABLES		v
LIST OF FIGURES		vi
TABLE OF CONTENTS		vii
CHAPTER		
1	Introduction Background	1
2	Project Management and the Practitioner, An Emerging Awareness of Social Characteristics Project Management Institute (United States) Project Management Project Management History 1960-1985: Era of traditional Project Management 1985-1993: Renaissance of Project Management 1993 to the Present: Modern Project Management Project Project Manager	8
3	Social Characteristics Communication Leadership Team Building Conflict Management Political Awareness	17
4	Research Methodology Subjects Methodology	31
5	Survey Results, Analysis and Interpretation Context Observations Questions, Analysis and Interpretation	38

Certifications: MSOD or MPhil
Concentrations
Specific Order of Interest
Certifications: Professional Organizations
Social Characteristics
Soft Skills Training and Professional Work
Non-P3 Courses and Selection Criteria
Non-P3 Courses, Expectations, and Value
Enhancement of Social Characteristics and Non-P3 Courses
Non-P3 Courses and Perceived Organizational Value
Conclusion

6 Summary including Recommended Strategies for Success 65
Strategies for Success
Predictions for the Future

REFERENCES 76

APPENDIX

A Project Management Institute: Who We Are and What We Do

B Process Groups

C Knowledge Process Areas

D Other Project Management Organizations (Worldwide)

E Project Management Institute's Interpersonal Skills

F Questions Eleven through Fourteen: Research Methodology, Survey Results, Analysis and Interpretation

G Elective Course Offerings and P3 Student Interest

CHAPTER 1

INTRODUCTION

Background

In today's global business world projects are an integral component of doing business in a complex marketplace. An organization's ability to adapt to changing market conditions, new technologies, or workforce diversity may depend on its ability to execute projects efficiently and effectively.

Much of what has been written about project management addresses knowledge areas and processes, aligning to the Project Management Institute's, *A Guide to the Project Management Body of Knowledge*, 4th Edition (Project Management Institute, Inc., 2008). Many authors focus on organizational delivery goals as measured by the triple constraints; scope, schedule, and budget. Others address tools and methodologies. Technology, tools, and techniques are not the reasons projects fail; they fail because of people (Flannes & Levin, 2001). Since human beings are social creatures, leveraging social characteristics is important in order to execute projects successfully. As the discipline grows, the human side of project management must be considered.

For purposes of this research, a social characteristic is defined as an interpersonal skill such as collaboration, negotiation, communication, or team building. Social characteristics are human attributes. The importance of a social characteristic may vary from one person to another or from one organization to another organization. Although a definition may be subjective, the field of project management may generally agree on the meaning of a social characteristic; including its importance within the discipline.

Acknowledging the value of social characteristics is important

- from a project perspective
- from an organizational perspective

In a real world context, there are ever-changing, multiple, and dynamic influences that impact projects. The world is messy and increasingly complex. Utilizing social characteristics helps to navigate uncertain, complex issues.

Project managers deal with day to day project challenges which include but are not limited to cross functional politics, sub-team concerns, team member conflict, resource, schedule, and budget constraints. Additionally, organizational goals and leadership pressures often fall downward, to the project manager.

> Over the years, if a project was assessed as a failure, the project managers were blamed and often relieved of their duties and responsibilities. Failures were most often identified as quantitative failures and were associated with poor planning, unreliable cost and schedule estimating, and poor control (Kerzner & Saladis, 2009).

The phrase, the project manager is accountable, is resoundingly true. Project managers quickly learn resilience.

While poor planning, cost estimating, or monitoring and controlling may cause project failure,

> managers often overlooked the fact that failure may have been the result of behavior issues such as poor morale, lack of employee commitment, lack of functional unit commitment or support, poor productivity, and poor human relations (Kerzner & Saladis, 2009).

Project managers feel downward pressure. They also feel upward demands from team members and the day-to-day execution of project activities. Project and organizational pressures often appear to converge at the project management level. Just as project

management is critical to business success, the role of project manager is organizationally pivotal.

Project managers who combine his/her technical skills with social characteristics are well suited to managing projects. They use an integrated project management approach which includes acknowledging and utilizing social competencies while executing processes (initiating, planning, executing, controlling, and closing (*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, 2008). This includes being aware of social costs such as poor human relations, low morale, or employee turnover for they can impact project performance.

Organizations on the other hand, may talk the talk but not walk the walk when bottom line financials are at risk. They emphasize delivering a project in terms of business investment and realized benefit. In today's business environment, many project based organizations are mechanically driven. They emphasize process, methodology, and measure success metrically. The human side of project management is often left solely to the project manager while operating in an environment where social costs are largely ignored.

Organizations that understand social characteristic value are better positioned to provide a culture where project managers are supported. When organizations understand social characteristic value, promote using them, and recognize the use of social characteristics in a daily work environment, it helps to create a culturally aware environment. In many organizations this means a paradigm shift away from a results only perspective to include an intangible understanding that social characteristics are critical to success too.

Social characteristics and their sub-attributes include personal desires such as respect, empowerment, and trust to macro characteristics such as communication, leadership, and team-building. When social characteristics are not valued there are business costs. This includes employee turnover, recruitment and training costs.

As business by projects (Jessen, 2002) becomes more commonplace, organizations will mature. Environments may become more complex adaptive (Remington & Pollack, 2007). Complex adaptive organizations are better able to manage uncertainty and complexity because they use tools and techniques, processes, and socially adept resources to navigate dynamically changing environments. In a complex adaptive environment creativity or a non linear method of figuring things out is allowed.

A complex adaptive model creates a tolerance for out of the box thinking as opposed to linear, task orientation. It permits process tailoring that promotes technical and social competence. A balance between art (interpersonal skills) and science (technical skills) becomes important where perceived balance changes at any point in time depending on project uncertainty and complexity. A socially aware project manager who is organizationally empowered adapts accordingly. Technical aptitude and experience contribute to his/her decision-making process.

This Capstone's goal is threefold: First, it is to validate that social characteristics are an essential project management element; Second, it is to raise awareness that integrating social characteristics into organizational culture provides a supportive project management environment; Third, it is to assist the Organizational Dynamics graduate program, at the University of Pennsylvania, to assess the Organizational Project Management Studies concentration.

To study these topics both a literature search and survey were conducted. The survey's target population was graduate students who are project or program managers; or, who aspire to become project or program managers. A ready population existed with candidates who are pursuing Organizational Dynamics studies at the University of Pennsylvania. Their Master of Science (MSOD) and Master of Philosophy (MPhil) degrees attract mid-career professionals who recognize that social characteristics are important in the business world. Students in this program value an Organizational Dynamics education over formal business training. Five respondents had earned a business degree previously, including one who had graduated from Wharton, the University of Pennsylvania's business school. Other backgrounds and degrees vary, ranging from history to engineering, with most working across a broad industry spectrum that includes the pharmaceutical, healthcare, higher education, utility, or aerospace industries.

Specifically, this survey includes students or graduates of the MSOD or MPhil programs who graduated or plan to graduate with an Organizational Project Management certificate. These students took six core courses ranging from Project Management, Program Leadership Skills, Managing Project Portfolios, Managing Project Risk, to Business Essentials for Strategic Planning. Concentration courses culminated with a comprehensive Team Strategy project. For purposes of this study Projects, Programs, and Portfolio courses are considered to be technical. To complete degree requirements, remaining courses were selected from a broad course offering. Elective courses are considered topics pertinent to social competencies (see Appendix D).

Depending on the courses chosen outside of the Projects, Programs, and Portfolios concentration, other certificates can be earned. Most often these courses led to overlapping certificates in Organizational Project Management Studies, Organizational Leadership Studies, and Organizational Development and Change Studies which is also known as Practitioner.

Results from this study will identify whether practitioners, who are in a formal academic program studying organizational project management, chose elective courses based on course social characteristic content. Furthermore, if elective courses align to social characteristics, are some social characteristics more desired than others, and why? Is there a common denominator among this population that identifies the same social characteristics or does an interest in a particular social competency depend on one's background, area of interest, personal and professional feedback? Although there are academic requirements which must be met for graduation, the Organizational Dynamics masters program at the University of Pennsylvania is somewhat flexible in allowing students to design their own curriculum.

Additionally, is there consensus surrounding social characteristic identification for a project manager; including a ranking of the top three to five social competencies? If so, do the social characteristics identified by Organizational Dynamics students align with what the literature indicates? Lastly, what does project management literature reveal regarding the discipline and the perceived value and impact of people skills?

The survey will also facilitate an assessment of the Organizational Project Management Studies concentration. Introduced to the MSOD and MPhil degree programs in 2006, the Organizational Project Management Studies certificate is a

relatively new area of concentration. Approximately twenty-seven students have either graduated from or have completed the final Team Strategy course which ensures that they will graduate with this certificate. At this time, the Organizational Dynamics graduate program shows interest in understanding student satisfaction with the certificate program.

Chapter 2 addresses a discussion of the literature. It will include the topics of the Project Management Institute, project management, the history of project management, a project, and what is a project manager. Chapter 3 continues a literature discussion by addressing an overview of social characteristics or what is commonly referred to as the softer side of project management. Here, the interpersonal skills that project managers need will be examined.

Chapter 4 details the type of research conducted and the methodology used. Chapter 5 describes research results, an analysis of questions asked via phone interviews, and interpretations. An exceedingly high response rate of seventy percent was met. This demonstrates a high degree of community interest in this topic. Lastly, Chapter 6 presents a summary including recommended strategies for success. It will identify whether or not the thoughts and behaviors of Organizational Dynamics candidates, with a certificate in Organizational Project Management Studies, align with current trends or if different patterns are indicated.

Since social characteristics, within the project management discipline, are emerging as an area of study it is possible that students in this program have a more complex adaptive perspective themselves which is one reason for their interest in an Organizational Dynamics versus a business degree. This research focuses on project management and the perceived value and impact of social characteristics.

CHAPTER 2

PROJECT MANAGEMENT AND THE PRACTITIONER: AN EMERGING AWARENESS OF SOCIAL CHARACTERISTICS

Project Management Institute (United States)

The Project Management Institute (PMI) was founded by project manager practitioners in 1969. It is a non profit organization whose

> primary goal is to advance the practice, science and profession of project management throughout the world in a conscientious and proactive manner so that organizations everywhere will embrace, value and utilize project management and then attribute their successes to it (see Appendix A).

Its emphasis has been on the delivery of hard concepts such as technical knowledge, scientific management principles, the usage of tools and tangible outputs (Pant & Baroudi, 2008). Lesser importance has been given to soft skills including the,

> two knowledge areas concerned with human aspects, such as Project Human Resources Management and Project Communications Management, … typically seen as secondary to the more technically based areas. Even within these knowledge areas the emphasis would appear to be more about process and tools than human relations and thought (Zwikael & Bar-Yoseph, 2004).

As of 2008 there were 425,000 members which include PMI certified project managers from over 170 countries.

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) is in its fourth edition as of 2008. It is one of twelve PMI global standards. Its purpose is to ensure that a basic project management framework is applied consistently worldwide. PMI promotes the book as an essential reference for the library of every project manager (*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, 2008). PMI's focus has been on the science of project management while not addressing its art.

However, for the first time in the Fourth Edition of *A Guide to the Project Management Body of Knowledge (PMBOK® Guide*, 2008), Appendix G identifies interpersonal skills.

> Effective project managers acquire a balance of technical, interpersonal, and conceptual skills that help them analyze situations and interact appropriately … While there are additional interpersonal skills that project managers use, the appropriate use of these skills assists the project manager in effectively managing the project.

PMBOK® references the following interpersonal skills: leadership, team building, motivating, communication, influencing, decision making, political and cultural awareness, and negotiation.

As the discipline of project management continues to emerge, PMI has started to develop tools which identify the skills project managers need and to define career paths. Just as interpersonal skills are now listed in the Fourth Edition of *A Guide to the Project Management Body of Knowledge (PMBOK® Guide*, 2008), PMI's educational foundation (www.pmi.org/pmief/) recognizes what it calls 21st century skills. These skills include but are not limited to leadership, team building, and presentation skills.

While the skills practitioners need continue to be defined, PMI research indicates that approximately seventy percent of organizations do not have defined project manager career paths. This means that although more and more organizations do business by projects, they have not clearly defined requisite project manager skills nor how to encourage the discipline within their organizations. Thus, PMI has created a career framework that includes a repository of job descriptions for the project management discipline.

> The framework provides the tools and resources necessary to identify employee strengths and weaknesses and implement a project management career ladder (www.pmi.org/Pages/PMIPathPro).

In September, 2009, PMI launched PathPro. It is a tool that can be tailored to meet the individual needs of an organization, including different steps within the project process and different roles within the organization (www.pmi.org/Pages/PMIPathPro). The tool benchmarks skill sets that are recommended for different project manager levels. It can be used, by organizations, for career planning and development purposes. Additionally, practitioners can use sample job descriptions for self assessment.

As project management emerges as a discipline, PMI encourages research. They partner with researchers from universities globally, executives, and management professionals to study new methods for meeting business' emerging needs. Lastly, the Project Management Institute credentials (see Table 1) and provides development opportunities for business professionals to advance careers in project, program, and portfolio management.

Table 1. Project Management Institute's Credentials

Certification	Professional Designation
Certified Associates in Project Management	CAPM
Project Management Professionals	PMP
Program Management Professional	PgMP^{SM}
PMI Scheduling Professional	PMP-SP^{SM}
PMI Risk Management Professional	PMI-RMP^{SM}

Project management organizations can be found on multiple continents (see Appendix B). All project management organizations strive to support an ever-growing business need for project management. Most are process and technically based although there does seem to be a trend toward recognizing art in project management. For purposes of this research, project manager interpersonal skills will be discussed using

precepts from the Project Management Institute, a United States based organization that supports a worldwide membership.

Project Management

The Project Management Institute or PMI®'s logo includes a tagline which states, "Making project management indispensable for business results®." Today's organizations meet their business needs by identifying projects that can be executed cross functionally to achieve desired results. Many IT organizations use tools, methodologies, and processes that add rigor to the project life cycle. In this way, organizations have a disciplined approach to executing projects. Metrics can be captured and reported via dashboards to senior executives.

Formally, PMI defines project management as "the application of knowledge, skills, tools and techniques to a broad range of activities in order to meet the requirements of a particular project (www.pmi.org/AboutUs/Pages/About-PM)." The profession relies on five process groups which apply across industry (see Appendix B). Each of the five processes integrates with the other in a unique undertaking which is tailored to a project's needs.

The art of project management includes understanding each of the processes, how they interact, and applying the processes iteratively in a dynamic environment. Processes are connected. Therefore, a change in one process will impact another process and its related processes. These process interactions often require tradeoffs among project requirements and objectives, and the specific performance tradeoffs will vary from project to project and organization to organization. To meet stakeholder requirements a project manager needs to actively manage process group interactions.

In addition to process groups there are nine knowledge areas applicable across almost every industry worldwide. PMI's identified Knowledge Areas are: Integration, Scope, Time, Cost, Quality, Human resources, Communications, Risk Management, and Procurement (see Appendix C). As with Process Groups, processes within a specific Knowledge Area interact, are iterative, and overlap. Project management can be messy. As project complexity increases there is a greater need for process integration. The art of project management comes to the foreground in not only understanding each knowledge area and how they inter-relate; but, through experience applying processes when and as needed for each unique project.

It can be said that each project is a unique system comprised of many components with emerging behaviors. As project management evolves as a discipline, scholars are noting that a shift needs to occur from an emphasis based on technology and control to a focus on interactions and learning (Buckle & Thomas, 2003).

Project Management History

New methods of management are required in today's business world.

> … participative management is replacing the traditional management that operated under a command-and-control philosophy . The old view of the project manager as a boss and "in control" has shifted to the project manager as a facilitator, team member, team player, and coach … Behavioral people skills are considered vital for project success (Flannes & Levin, 2001).

Indeed, project management has evolved as a profession as diagramed in Figure 1 by Kerzner and Saladis (2009).

Figure 1. Management Style
(Kerzner & Saladis, 2009)

Traditional Project Management	Renaissance Period	Modern Project Management
Reactive Management	Reactive Management	Proactive Management
(Never enough money to plan it right the first time, but plenty of money to replan it for the second and third times.)	(Project plans are organic: they feed, breathe, grow, change, etc.)	(Bring problems to the surface and we will help you. Bury the problem and your job is in jeopardy.)

1960-1985: Era of Traditional Project Management

Project management was used for large aerospace and defense projects with extensive resources. Each project was assigned a dedicated team. The project manager was a technical expert; project teams focused on technology with project mechanics such as costs and schedule being less important. Project management's value was hard to measure while there was much publicity surrounding cost overruns and scheduling delays, even when these problems were the result of scope changes (Flannes & Levin, 2001).

1985-1993: Renaissance of Project Management

Industries outside of aerospace, defense, and construction realized that project management could help improve their profitability. Multi-disciplinary teams were formed as functional areas realized the value of project management. Project

management software was developed and began to be used widespread throughout organizations.

1993 to the Present: Modern Project Management

Organizations began realizing changes in the qualitative and organizational aspects of project management (Flannes & Levin, 2001). They started training programs and encouraged certification programs. An environment of matrix teams grew where empowerment, reengineering, risk management, and life-cycle costing became the order of the day. Improved tools and techniques became available to support project management as it spread to all business areas. Commonalities between project management and total quality management (Flannes & Levin, 2001) were observed.

A shift began from a mechanistic, command and control style to adapting in uncertain, complex environments. Project managers who combine a technical skill set with being socially aware are better able to manage people. These managers have a high delivery success rate. Their ability to execute projects successfully is critical to an organization and its ability to achieve strategic goals and objectives.

Project

> A project is a temporary endeavor undertaken to create a unique product, service, or result. A project has a definite beginning and a concrete end. *Unique* means that the product, service, or result is different in some distinguishing way from all other products or services (A Guide to the Project Management Body of Knowledge (*PMBOK*® Guide) 2008).

Project deliverables include characteristics which are unique to the project. Reframing the definition of a project to include its human aspects (Turner, 1999), a project is an

> … endeavor in which human, financial and material resources are organized in a novel way to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives.

On it Business Solutions webpage (www.pmi.org/BusinessSolutions), PMI states,

> Regardless of your industry or mission, project management is the value driver that helps your organization get the most out of its performance. When tailored, or "fit", to an organization's culture, project management brings value by improving:
>
> • The execution of strategy, through repeatable, reliable performance and standardization;
> • The integration within the organization, through elimination of "silos" and better communication and collaboration;
> • The learning that a projectized organization undergoes as it explores new products, processes and markets.

In a letter to readers of *Leadership Through Project Management* (2009, Volume 5), PMI President and CEO, Gregory Balestrero states, in a current world of "great global distraction … project management can be an agent of change at this crossroads in world history." There is much promise in the profession as it integrates more within the fabric of international business. Yet, in order to meet increasingly complex business needs in an era of uncertainty, project management as a discipline needs to change with the times. To do so, its technical orientation needs to be re-examined. Organizations are dynamic and change rapidly. As a result, project management must adapt to their changing dynamics. The art of project management introduces the ability to adapt. Because it is qualitative in nature, it can be more fully understood by studying social characteristics.

Project Manager (PM)

A project manager (PM) is the person assigned by the performing organization to achieve the project objectives (*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, 2008). They possess a wide range of roles and responsibilities.

> Project managers functioning within a matrix organizational structure and championing large-scale initiatives are in a communication paradigm unparalleled by any other management position (Sukhoo, Barnard, Eloff, Van der Poll, & Motah, 2005).

It is the project manager who must delicately balance the art and science of project management by satisfying stakeholders, building a team, organizing and planning the project, communicating across functional areas, understanding corporate culture and politics. The list continues. While juggling the multiple dimensions of project management, the project manager is also organizationally aware that they hold accountability for successful project delivery. Conversely, when a project successfully delivers based on the triple constraints (scope, schedule, and cost), the project manager must recognize that delivery was a team effort. Each team member holds a unique role that contributes to project implementation.

CHAPTER 3

SOCIAL CHARACTERISTICS

Social characteristics, competencies, human, or soft skills can be defined as interpersonal skills. They are considered the art component of managing projects because they relate to managing and working with people (Kirsch, 2004). Soft skills are often acquired though experience (Belzer, 2004). Organizations are dynamic as are the people who work in them and fulfill functional roles. Thus, as the discipline of project management emerges, there is increasing global awareness that interpersonal skills or social characteristics are an important component to managing projects successfully.

Just as the Project Management Institute included an appendix addressing Interpersonal Skills in its Fourth *PMBOK*® edition (2008), the P2M, a Guidebook for Project & Program Management for Enterprise Innovation (Project Management Association of Japan, 2001) includes an innovative Japanese framework for project management. There is reference to a need to respond to social change.

Furthering that line of thinking in the Japanese version of Complex Project Management for Enterprise Innovation in a Turbulent Environment,

> human talents are noted … an awareness of cultural awareness, social and intelligent space. Leadership, teamwork, and collaboration are listed as being important in a new hybrid project model (Ohara, 2003).

The College of Complex Project Management addresses competencies that are needed over and above traditional project manager skills when environments are complex, uncertain, and dynamic. Workplace behaviours are referenced as are leadership, systems thinking, strategy, and business.

Social characteristics research is becoming an ever significant component of understanding how project teams interact, what makes a project successful, and how project teams fit within an organizational context. That said, researchers vary on what interpersonal skills are important as well as their order of priority. Table 2 presents a listing of common social characteristics.

Table 2. Common Interpersonal Skills

- leadership
- communication
- negotiation
- conflict management
- persuasion
- politically savvy
- understanding of organizational dynamics
- team behavior and building
- collaboration
- adaptability
- decision-making ability
- be pro active
- use of socialized power
- accountability
- passion

Several characteristics will be discussed based on the frequency with which they are referenced in current research. Many social characteristics can be bundled together under one topic. For example, leadership may include organizational skills, adaptability, passion, resilience, and being emotionally intelligent. Relationship management may include stakeholder management, networking, and mentoring.

It is difficult to list, rank, and conduct a comparative analysis across publications. Many publications list the same social characteristics but prioritize them differently. This is an ad hoc exercise where heuristics or personal biases may influence the outcome.

Communication

> Communication skills refer to the ability to convey ideas easily and clearly in order to ensure that the team moves to a common goal (Belzer, 2004).

Ideas must be articulated in a way that fosters open communication and acceptance. Understanding the audience, their wants and needs, and being able to deliver messages of multiple complexities with sufficient levels of detail is a talent that takes time to develop. It includes understanding what motivates people and a willingness to engage in discussion with them. Active listening is essential. Project managers must be aware of audience diversity.

Facilitating meetings and negotiating resolutions are part of communication. They may choose to communicate some news in a personal conversation, a hallway chat, e-mail, an informal Instant Message (IM), a team meeting, or as a formal presentation, or a letter.

Body language and voice tone are both important to how communication is delivered and received. Because each team member has a different communication style,

the same message may be interpreted differently within one audience based on the delivery mechanism and perceived tone. Cultural differences may alter interpretation. Whether a team is co-located or working in a remote or virtual environment also influences communication.

Team members must understand team communications, their tasks and activities, as well as overall project goals and objectives. An important part of communication is seeking clarification. Responsibility for clarification rests with both the project manager and their team members. In an uncertain environment and as project complexity increases, effective communication is recognized as being a highly regarded social characteristic.

Leadership

Managing versus leading has been a hotly debated topic. In today's business forum, there are other emerging thoughts. Among them are developing climates of leadership or lead from wherever you are in the organization.

> … you have to acknowledge the interdependence of people throughout the organization … It is an illusion to expect that an executive team in its own will find the best way into the future. So you must use leadership to generate more leadership deep in the organization (Heifetz, Grashow, & Linsky, 2009).

As organizations change to meet the demands of a world economy, the need to adapt quickly is pervasive. Leaders are learners (Wallace & Trinka, 2007). Anyone, at any level of the organization has something to learn and can exhibit leadership skills.

Generally, leaders tend to be self aware. They have a passion for what they do. Leaders seem to exhibit high emotional intelligence when interacting with others. Yet, as

sensitive as they may be when understanding the corporate landscape, including political environment, and understanding other people, they must be resilient.

Leaders have different styles. Most are known to be organized, highly motivated, highly driven individuals. Consider that a project manager's role is similar to that of an orchestra leader. Both functional roles necessitate understanding what component parts are needed for the entire project or composition to be realized. They need to know how components must integrate and at what time. If the timing of any component is a little off, either the project manager or conductor must find a way to be flexible, to recover, and deliver all parts together. They strive for harmony but understand how to resolve discord.

A project manager who builds a team through empowerment, trust, and respect is able to partner with his/her sub-team leads. When the entire team meets for statuses communication is clear, work efforts are complete per plan, cost objectives are met. In essence, the project manager is able to guide and direct. As a leader the project manager may be busy but also must be approachable and available when needed. True leaders empower their team. They lead by example while mentoring others. They delegate and feel good when a team member succeeds. Lastly, a project manager who acts as a leader makes it a best practice to recognize and reward team members.

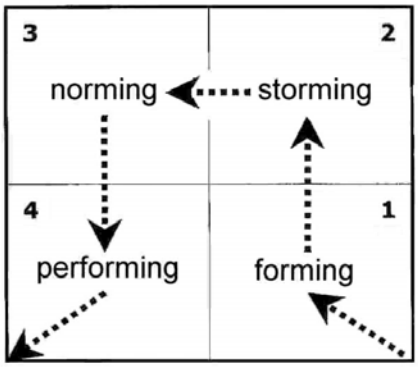
Team Building

Today's organizations use matrix project teams that come together for a specific purpose for a limited period of time. They are temporary. A team is greater than the sum of its parts. In an ideal world the project manager is instrumental in hand picking his/her

team members. In reality, team members are assigned from a resource pool based on skill set and availability. They may be one hundred percent assigned to a project or have only partial commitment as part of a matrix work environment. Often team members work within a functional domain area while being assigned to multiple projects.

A project manager's job includes managing scope, cost, and schedule while understanding that his/her project may not be a team member's highest priority. In a dynamic environment, that is impacted by multiple sub-systems, building a team can be challenging. According to Tuckman (1965) team development typically proceeds through stages: forming, storming, norming, and performing (see Figure 2). Adjoining was added in 1975. It refers to deforming and mourning as the team disassembles to move on to other work. The adjourning phase is more oriented to the people in the group and their well-being rather than the main task of managing and developing a team (www.businessballs.com/tuckmanformingstormingnormingperforming).

Figure 2. Tuckman's 4-Stage Model



When project management occurs in a matrix environment there is much interaction among cross functional resources working together for a common purpose. A project manager must be adept at team building in order to deliver projects successfully. Team building can foster effective communication. The project manager can

demonstrate an interest in team member career development by acting as a coach. Overall, team member ownership and team commitment to the project is possible.

Conflict Management

Conflict is a natural process in the development, project, and team process (Irwin, 2008). It must be embraced and addressed in order to be resolved. Where ambiguity exists, communication is important. When uncertain, it is a natural human tendency to be fearful. A project manager's ability to organize, plan, and communicate openly with their team will help alleviate potential conflict. Having a reliable information stream is vital to mitigating conflict. It levels the playing field for all team members.

However, during the team building stages of forming and storming, conflict is inevitable. As team members get to know one another, each has their own perspective based on their functional area, personal style, experience, and expectations. Each team member has a different tolerance threshold. For these reasons, the project manager must be proactive in assessing the risk for team member conflict. Where possible, they need to triage personality issues offline so as not to disrupt the project team. In order to do this, team members must be willing to trust that the project manager will listen to them, assist in negotiation, and rally to their cause as long as it fits within the context of being good for the project. If the team member is alone in his/her position, he/she needs graciously yield to majority opinion. Conflict can be constructive or destructive. A project manager must use best judgment in order to referee the situation appropriately.

> Conflict resolution skills are necessary for a software project manager to prevent behaviors of team members from degenerating into irreconcilable situations that may prohibit them from ever working together productively again (Newstrom & Davis, 2001).

When managing a matrixed project team, project managers have no formal power yet are organizationally accountable for the team and for successful project delivery. This presents an awkward situation that can easily lead to conflict. Learning to influence and negotiate are valuable project management tools. To mitigate a personal risk, a wise project manager will build personal connections with his/her team members. Usually, this social capital can be leveraged during stressful times to diffuse a situation. Humor helps too.

Political Awareness

Project management involves understanding, navigating, and facilitating multiple stakeholder agendas. It means understanding how the goals and objectives of a project align to corporate strategy. Understanding organizational culture and environment is important during project execution. If additional scope is requested, a project manager must understand how it will impact cost and schedule.

Additionally, what is the impact to the sponsoring organization, the ancillary teams? Whose organizational voice is loudest; yet, what is the functional importance of the change? How will disagreement be negotiated? Ultimately, who within the organization has final decision-making ability? In a cross functional project environment, these can be messy questions to ask. A project manager must sort through a wealth of information to identify what is perceived as the best course of action. Sometimes they have all of the information needed to accurately assess a situation. There are other times when deliberately or not, they may only have a subset of the information needed to make a sound decision. Even seasoned project managers step on a landmine

from time to time. When this happens, they try to recover as best possible, adding the experience to his/her tool chest and focusing on the things they can control.

In a constantly changing, dynamic environment there are many tasks and activities that are planned for and that can be successfully monitored and controlled. There are other unplanned events that happen without warning. These events become part of the manager's personal lessons learned repository. Most likely, questions will be asked during his/her's next project's planning process and they will be included in the work breakdown structure. Of course, the best lesson is to understand organizational culture along with the nuances of what is changing, why, and how. A project manager who is self aware, who has solid negotiating skills, is well networked, and is able to influence is in the best position to navigate organizational politics.

The social characteristics highlighted above are also included in the listing identified by the Project Management Institute (see Table 3). This aligns with other studies too. Overall, researchers seem to identify the same social characteristics. What needs further study across the genre is acknowledgement of and agreement on benchmarking social characteristics. Once benchmarking occurs, a follow-up activity will be to rank social characteristics in order of perceived project management value. More studies will be needed.

Table 3. Project Management Institute's Interpersonal Skills
(*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, 2008)

Leadership	Leadership involves focusing the efforts of a group of people toward a common goal and enabling them to work as a team. In general terms, leadership is the ability to get things done through others. Respect and trust, rather than fear and submission, are the key elements of effective leadership. Although important throughout all project phases, effective leadership is critical during the beginning phases of a project when the emphasis is on communicating the

	vision and motivating and inspiring project participants to achieve high performance.
Team Building	Team building is the process of helping a group of individuals, bound by a common sense of purpose, to work interdependently with each other, the leader, external stakeholders, and the organization. The result of good leadership and good team building is teamwork. Team building activities consist of tasks and processes. It involves handling project team problems and discussing team issues without placing blame on individuals. It is essential during the front end of a project and is an ongoing process. Outcomes of team building include mutual trust, high quality of information exchange, better decision making, and effective project control.
Motivation	Project teams are comprised of team members with diverse backgrounds, expectations, and individual objectives. Motivating in a project environment involves creating an environment to meet project objectives while offering maximum self-satisfaction related to what people value most. These values may include job satisfaction, challenging work, a sense of accomplishment, achievement and growth, sufficient financial compensation, and other rewards and recognition the individual considers necessary and important. The overall project success depends upon the project team's commitment, which is directly related to their level of motivation.
Communication	Communication has been identified as one of the single biggest reasons for project success or failure. Effective communication within the project team and between the project manager, team members, and all external stakeholders is essential. Openness in communication is a gateway to teamwork and high performance. It improves relationships among project team members and creates mutual trust. Listening is an important part of communication. Listening techniques, both active and effective give the user insight to problem areas, negotiation, and conflict management strategies, decision making, and problem resolution.
Influencing	Influencing is a strategy of sharing power and relying on interpersonal skills to get others to cooperate towards common goals.
Decision Making	There are four basic decision styles normally used by project managers: command, consultation, consensus, and coin flip (random). There are four factors that affect the decision style: time constraints, trust, quality, and acceptance. Project managers may make decisions individually, or they may involve the project team in the decision-making process. A six phase decision –making model is sometimes used: problem definition, problem solution generation, ideas to action, solution action planning, solution evaluation planning, and evaluation of the outcome and process.
Political and Cultural Awareness	Organizational politics are inevitable in project environments due to the diversity in norms, backgrounds and expectations of the people involved with a project. The skillful use of politics and power helps

	the project manager be successful. Conversely, ignoring or avoiding project politics and inappropriate use of power can lead to difficulty in managing projects. In today's global environment, the project management team must understand and capitalize on cultural differences. In this way, they are more like to creat an environment of mutual trust and a win/win atmosphere.
Negotiation	Negotiation is a strategy of conferring with parties of shared or opposed interests with a view to compromise or reach an agreement. Negotiation is an integral part of project management and done well, increases the probability of project success.

One research team in South Africa speaks to the integration of soft and hard skills in software project management. They created a table entitled, Soft Skills Activation (Sukhoo, Barnard, Eloff, Van der Poll, Motah, (2005) that identifies which soft skills need to be used at different phases of a project's life cycle (see Table 4). The project life cycle aligns to PMI's process groups. Furthermore, they note that because each project is unique, the project manager needs to adaptively determine which skills are needed at what point in time.

Table 4. Soft Skills Activation

Soft Skills	Project Management Phases				
	Initiating	Planning	Executing	Controlling	Closing
Communication skills			X	X	X
Team building			X		
Flexibility and creativity	X	X	X		
Leadership			X	X	
Organizational effectiveness		X	X		
Stress Management			X	X	
Time Management		X	X		
Change Management			X	X	
Trustworthiness			X	X	

Conflict Management			X	X	

As researchers study project management it must be acknowledged that each practitioner is a unique individual. This means that an interpretation of what social characteristics are meaningful is inimitable. The significance of a social characteristic will depend on a practitioner's experiences and expectations as they manage projects or navigate an organizational environment. And, because an individual's world is dynamic as is the context within which each project executes, as is the organizational world at large, the priority an individual places on a specific social characteristic may change over time. Human nature and its very complexity weigh heavily into a social characteristic assessment.

A project manager who successfully delivers projects knows how to build a team, communicates information effectively, is proactive in anticipating and triaging risks and issues, and in building and maintaining stakeholder relationships. In other words, a project manager supports his/her team while interacting with and adapting to multiple other influences. As the project manager leads a project team they interact with business and technical leaders, each of whom have an agenda and work within multiple organizational contexts. Although organizations have one corporate culture, the culture of each division, department, or team within the organization will be heavily influenced by its leadership.

Russell L. Ackoff was a proponent of systems thinking. He included corporate organizations in his definition of a social system.

> They have a purpose of their own, are made up of purposes that have parts of their own, and are parts of larger systems that have purposes of their

> own and contain other systems that have purposes of their own. All of these can be relevant to the enterprise (Ackoff, 1994).

This is becoming increasingly evident as complex project management is emerging as a field. Many organizations today continue to function in a less mature, command and control model where social characteristics are undervalued. This model was more effective, albeit suboptimal, when projects were simpler; and, business demands slower paced and less uncertain. Stephen Jonathan Whitty and Harvey Maylor are among today's researchers turning attention to dynamic interaction complexity (see Figure 3).

> Managerial complexity in the project environment comes not only from individual structural elements (categorized as being external stakeholders, task characteristics and organizational complexity) and their interaction, but also from the dynamic effects of each of these changing and then interacting as they change, causing further change in other parts of the system.
>
> Projects … have been described as complex systems that require management, not only because they deal with technological issues but because they deal with the wider organizational factors largely beyond the project manager's control ... Also, projects are socially constructed entities , and so can be described as complex adaptive systems. (Whitty & Maylor, 2009)

Figure 3. Structural Dynamic Interaction (SDI) Matrix

	Independent	Interacting
Structural	1. Independent structural Complexity	2. Interacting structural complexity
Dynamic	3. Independent dynamic Complexity	4. Interacting dynamic complexity

Multiple organizational systems increase the complexity of the project manager's role. Socially competent managers are needed to manage the interactivity of an enterprise's component parts. Thus, an effective project manager needs good people skills to manage

the risks inherent in organizational complexity. As a result, his/her organizational value increases. Flannes and Levin (2001) write,

> Leading researchers and scholars view the twenty-first century as the age of project management, which is the means to ensure organizational effectiveness and competitiveness.
>
> … Project management is considered to be 80% art and 20% science.

Project management takes place within organizations that will increasingly need to balance art and science in an uncertain, complex marketplace.

CHAPTER 4

RESEARCH METHODOLOGY

Subjects

Twenty-seven students have either graduated from the MSOD program with a certificate in Organizational Project Management Studies or have completed the Project Team Strategy course indicating that at graduation, they will be awarded the Organizational Project Management Studies certificate. It is this combined population of program graduates and current students to whom survey questions were asked.

As stated on the program's website, www.organizationaldynamics.upenn.edu/od.cgi/review/courses, the Project Team Strategy course is an "opportunity to synthesize the knowledge, skill, and creativity gained from the other P^3 courses." It represents the culmination of coursework for students with a Projects, Programs, and Portfolio Studies (P3) concentration. It is different from a degree requirement to complete a Capstone course (DYNM 705) based on coursework taken in the program-at-large. However, the Capstone course (DYNM 705) can be based on work previously completed during the Project Team Strategy course.

Inception of the Projects, Programs, and Portfolios concentration began in the Fall semester, 2006. The first graduating class to include students awarded with an Organizational Project Management Studies certificate was in December, 2007.

Methodology

Data acquisition took place by means of phone interviews. A qualitative, fifteen question survey (see Table 5) was constructed. Questions 1 through 10 were analyzed

with results discussed in this paper. Questions 11 through 14 are included in Appendix F and are being made available to the Organizational Dynamics program.

Table 5. Questionnaire for Phone Interviews

1. What certifications do you intend to/did you earn as part of the Master of Science in Organizational Dynamics (MSOD) program? a) How did you decide what concentrations to pursue?
2. What concentration(s) did you select when you applied to Organizational Dynamics?
3. Did you have a specific order of interest?
4. Are you CAPM, PMP, or PgMP certified; (Certified Associate Project Manager, Project Manager Professional, Program Management Professional) a) What professional certifications have you earned from any organizations?
5. What are the top 3-5 social characteristics or competencies that are important for your professional work? (interviewee defines for themselves what they mean by the phrase social characteristic or soft skills)
6. a) How important or valuable do you feel soft skills training is to your professional work? Very Little 1 2 3 4 5 A Great Amount b) Rate your own perceived competencies to use soft skills in your professional work: Very Low 1 2 3 4 5 Very High c) To what degree are soft skills training used effectively by colleagues or leadership where you work: Very Little 1 2 3 4 5 A Great Amount
7. On what basis – why or using what criteria - did you select the non-P3 courses in your curriculum? (will leave open ended and not posit reasons for others)
8. a) To what degree did your non-P3 courses meet your expectations or criteria

Very Little 1 2 3 4 5 A Great Amount

b) Which courses in particular did you find most valuable and why?

9. a) To what degree did your non-P3 courses enhance your social characteristic competencies/soft skills?
Very Little 1 2 3 4 5 A Great Amount

b) Can you give a very brief example from your workplace?

10. To what degree do you expect the soft skill education from coursework will add value to/make you successful in the role you perform in your current organization
Very Little 1 2 3 4 5 A Great Amount

11. a) To what degree are/were your core P3 classes applicable to your current work
Very Little 1 2 3 4 5 A Great Amount

b) Which courses in particular?

c) To what degree do you feel P3 courses are required to be successful in your professional work
Very Little 1 2 3 4 5 A Great Amount

d) Overall, did the P3 courses/concentration meet your expectations;
Very Little 1 2 3 4 5 A Great Amount

e) Please describe and include recommendations for changes

12. To what degree is the structure of allowing people to select courses (rather than required to take certain courses) in Organizational Dynamics valuable or important to you
Very Little 1 2 3 4 5 A Great Amount

13. To what degree does selecting courses affect/meet your individual learning interests or needs
Very Little 1 2 3 4 5 A Great Amount

14. Rate the degree to which the management of complex projects (multiple interdependencies) has a better chance of successful delivery when they are led by a project manager who applies soft skills training to project efforts
Very Little 1 2 3 4 5 A Great Amount

15. What is your personal perception of the value of the MSOD degree:

a) for your career development within your current organization

Very Little 1 2 3 4 5 A Great Amount

b) to your organization

Very Little 1 2 3 4 5 A Great Amount

c) to your career development in finding another job opportunity

Very Little 1 2 3 4 5 A Great Amount

Demographic information

a) Student or graduate

b) Age

c) Years in workforce

d) Years as a PM
- Was being a PM a career goal

e) Length of time at current job

f) Years between promotions,
- APM, to PM, to SPM, to Program Manager

g) Industry

Question style was mixed from being open ended to answers being solicited using a Likert Scale (1 (very little or very low) – 5 (a great amount or very high). Answers were recorded by the interviewer and typed into a questionnaire as the survey took place. The interviewee's name was recorded for follow-up questions if needed; but, was maintained confidential when presenting findings. The survey was conducted on an initial population of four students. Questions were deemed suitable for the survey. No

modifications were made. The remaining fifteen subjects were surveyed over an approximate ten day timeframe.

Question content was constructed based on the assumption that non-P3 courses are considered courses where social characteristics are taught; whereas, the core six courses required for the Projects, Programs, and Portfolios concentration place a heavier emphasis on teaching technical and process principles. Per the discussion in Chapters 2 and 3, researchers believe that both technical and soft skills are important to project management. It is believed that as organizational changes occur more rapidly and project complexity increases, the need for project managers to utilize social characteristics in project management increases. In general, social characteristics are outcome based but not quantifiably measured. A project manager who leverages social characteristics when managing projects becomes a valuable organizational asset.

At the beginning of each interview, questions 1 through 3 established that either the student is pursuing or program graduate did pursue an Organizational Project Management Studies certificate. Once it was established that the student concentrated on project, program, and portfolio management, question 4 asked whether the student or graduate holds professional certifications from other organizations such as the Project Management Institute (PMI). Question 5 was open ended. It asked, “What are the top three to five social characteristics or competencies that are important for your professional work?” Interviewees defined, for the interviewer, what the phrase social characteristics or competencies mean.

Question 6 included three questions inquiring about the importance of soft skills to the interviewee’s professional work and how do they perceive their own soft skills

competencies. The third question in this series asked about colleagues or leadership where one works and whether or not they use soft skills effectively.

Once these foundational questions were asked, the survey moved towards how or on what basis did the student or program graduate choose their non-P3 courses (question 7). As an example, was their decision made because they recognized a social characteristic weakness that could be enhanced by taking organizational politics; or, was a course selected because it better fit their unique professional needs and personal work schedule. Perhaps the course was chosen for another reason or a combination of reasons.

Question 8 pursued the degree to which non-P3 courses met expectations. A follow-up question asked which courses in particular were valuable and why. To what degree did non-P3 courses enhance social characteristic competencies/soft skills (question nine)? Question 9 asked for a very brief workplace example.

The next question (10) asked about soft skill education and will it add value to or make one more successful in their current organization.

At the end of the interview, participants had the option to answer nine demographic questions. Demographic questions pertained to areas not academically related. They provided interviewee background on the following: student or graduate, age, years in workforce, years as a PM (project manager), was being a PM a career goal, length of time at current job, years between promotions (APM, to PM, to SPM, to Program Manager), and industry sector.

Using the questions outlined above, MSOD students who earn an Organizational Project Management Studies certificate, can be studied to gain insight into the perceived

value and impact of social characteristics for project managers. Also, the efficacy of the Projects, Programs, and Portfolio Studies (P3) concentration can be assessed.

CHAPTER 5

SURVEY RESULTS, ANALYSIS AND INTERPRETATION

Context

Before discussing survey results, it is important to provide some contextual information. Contextual information was elicited using eight demographic questions included at the end of the survey. Providing context offers the reader insight to the population studied; including, a framework within which to begin analysis. Nineteen people, of a possible twenty seven subject population, agreed to participate in a phone interview. The subject population was chosen because they have either graduated from the MSOD program with a certificate in Organizational Project Management Studies or have completed the Project Team Strategy course indicating that at graduation, they will be awarded the Organizational Project Management Studies certificate.

The average interviewee's age is forty years old (see Table 6, frequency distribution). The average number of years in the workforce is seventeen. The average number of years in their current job is six. All survey respondents are functioning within their organizations as a project manager or had been a project manager before advancing to other positions.

Table 6. Number of Students by Age Range

Age Range	Number of Students
20-29	3
30-39	7
40-49	4
50+	4

Sixty-three percent of those interviewed did not aspire to a project management career. Thirteen respondents (sixty-eight percent) currently work as project managers; three respondents are aligned to program management positions, two respondents work in portfolio management, one student aligns to PMO Management (see Table 7). Those surveyed who currently work in program, portfolio, or PMO positions have at sometime in their careers served in a project manager role. Cross industry sector, eleven respondents work in information technology project, program, or portfolio management positions. Three respondents are Project Management Professionals as certified by the Project Management Institute, an internationally recognized project management organization. Respondents did not seem to follow a specific career progression although all survey participants had been a project manager at some point in his/her career.

Table 7. Project Management Careers

Position	Interviewees
Project Manager	13
Program Managers	3
Portfolio Managers	2
PMO Management	1

Only four of the thirteen respondents who are project managers consider themselves to be following a project management career path as identified by the Project Management Institute (www.pmi.org/BusinessSolutions/Pages/Organizational-Career-Framework.aspx). This means starting in the discipline as an associate project manager, becoming a project manager, and then advancing to a senior project manager position.

Throughout the interviews, one respondent referred to project management as a discipline; whereas, one respondent acknowledged that what he does has only recently been defined as project management. One student decided to concentrate in P3 (Projects, Programs, and Portfolio Studies) because she wanted formal training with a project management focus. Another respondent mentioned that project management is a broad category.

Ten respondents are students while nine interviewees have graduated. Multiple industry sectors are represented ranging from pharmaceutical, utility, healthcare, information technology (IT) consulting, academia, television, aerospace, management consulting, health insurance, telecommunications, and life sciences industries. This indicates that business by projects is increasingly universal and not related specifically to information technology projects or specific industries.

Observations

Several observations will be noted before presenting an in depth analysis of survey findings. First, nineteen people participated in phone interviews from a possible twenty-seven subject population. This is a very high, seventy percent, response rate indicating strong interest in supporting the study. Secondly, interest in project management is assumed since all interviewees are either actively engaged in the profession or part of the P3 concentration, within the MSOD program, at the University of Pennsylvania. Two respondents acknowledged a deliberate action to enroll in an Organizational Dynamics degree program as opposed to a Master in Business Administration degree program because they felt that soft skills are critical in today's business arena. Overall, all respondents provided answers indicating that social

characteristics are an essential part of doing business and leading projects successfully; yet, they may not be recognized by executives who prioritize bottom line results no matter how they are achieved. Lastly, some answers may have been influenced by whether or not a student was in a course taught during the concentration's inception as a pilot class or if the course had matured after several semesters of student feedback.

Survey respondents are mostly mid-level professionals who are career minded, professionally established, deliberate and committed to higher education and to applying what they learn in their workplace. As such, this is also the premise behind the Projects, Programs, and Portfolio Studies concentration in that is it designed for mid-career professionals. It teaches skills that are immediately applicable to the workplace. Many core P3 courses use workplace case studies, albeit confidentially, for analysis and experiential learning.

The P3 concentration was introduced to the Organizational Dynamics program in the Fall semester, 2006 as the 5th available (see Table 8).

Table 8. Concentrations within the MSOD Degree Program

Concentration	Graduate Certificate
Global Organizational Studies (GL)	Graduate Certificate in Global Organizational Studies
Organizational Leadership and Management Studies (LM)	Graduate Certificate in Organizational Leadership Studies
Practitioner of Change and Development Studies (PR)	Graduate Certificate in Organizational Development and Change Studies
Organizational Coaching Studies (OC)	Graduate Certificate in Organizational Coaching Studies
Organizational Consulting and Executive Coaching (OCEC) *New,Fall, 2009*	Graduate Certificate in Organizational Consulting and Executive Coaching
Projects, Programs, and Portfolio Studies (P3)	Graduate Certificate in Organizational Project Management Studies
Sustainable Development Studies (SD)	Graduate Certificate in Sustainable

New, Fall, 2009	Development Studies
Health Leadership and Nursing Administration Studies (MSN students) *Not applicable to MSOD or MPhil students*	Graduate Certificate in Organizational Dynamics of Healthcare Systems

Questions, Analysis and Interpretation

Certifications: MSOD or MPhil

1. What certifications do you intend to/did you earn as part of the Master of Science in Organizational Dynamics (MSOD) or Master of Philosophy (MPhil) programs?

Upon program admission, seventeen of nineteen respondents selected it as part of their application process (see Table 9). Eighty-eight percent of students, who selected P3 as an area of concentration, also chose it as their primary area of interest. All of them either graduated or intend to graduate with a Graduate Certificate in Organizational Project Management Studies.

The two remaining students, one a MSOD student and the other student a MPhil student, were well into their coursework when the P3 concentration was introduced. They chose it later in their program once it emerged as a concentration. Both of these students combined P3 with an Organizational Leadership and Management Studies concentration. This raises the percentage completion rate for this concentration to one hundred percent.

Four students had interest in P3 and Leadership, Practitioner, Global, or Coaching. A student who intended to concentrate in Coaching, because of personal interest, chose courses that led him to a Projects, Programs, and Portfolio concentration. Then, he had a class that sparked his interest in leadership. The course was titled, *Leadership in Organizations: Public and Private, Personal and Professional.*

Table 9. Concentrations Selected When Applied to Organizational Dynamics

Concentration		Students Selected as Primary	Students Selected as Secondary	Students Selected as Tertiary	Total		
					MSOD	MPhil	MSOD & MPhil Combined
Projects, Programs, and Portfolio Studies (P3)	MSOD	13	2		15	0	17
	MPhil	2			0	2	
Organizational Leadership and Management Studies (LM)	MSOD	3			3	0	4
	MPhil	1			0	1	
Practitioner of Change and Development Studies (PR)	MSOD			1	0	1	1
	MPhil			0	0	1	
Global Organizational Studies (GL)	MSOD		2		0	2	2
	MPhil				0	0	
Organizational Coaching Studies (OC)	MSOD				0	0	0
	MPhil				0	0	

Of the two respondents who chose Global Organizational Studies as a concentration although only one student fulfilled course requirements to graduate with both the Organizational Project Management and Global Organizational Studies certificates. The other student is still matriculated and plans to graduate with a P3 concentration; and possibly, Leadership. One student selected Practitioner as a third area of concentration; he also was interested in P3 and Leadership. Lastly, one student started taking courses to complete the Organizational Project Management Studies (P3) certificate and was undecided on whether he would complete the full degree program.

That student did decide to pursue the full degree and has one course remaining to complete graduation requirements.

Although students choose to concentrate in P3, many have an almost equal interest in Leadership. And, because of course coding, the majority of students who graduate with P3 and Leadership concentrations, also graduate having earned a certificate in Organizational Development and Change Studies (practitioner concentration).

1a. How did you decide what concentrations to pursue?

Students chose to concentrate in P3 because of alignment with their jobs, their organizations, or because it appeared to be a tangible concentration that can be supplemented with a broad elective course selection based on career needs or student goals. Without solicitation, most respondents commented on the value of an Organizational Dynamics degree versus a business degree. Students mentioned several courses as offering personal and organizational awareness which they found practical in understanding and navigating their workplaces. Specifically, the following courses were Mentioned: Process Improvement, Overcoming Organizational Barriers to Success, The Psychodynamics of Organizations, and Mastering Organizational Politics and Power. Fifty-nine elective courses were taken by twenty-seven P3 students (see Appendix D).

Concentrations

2. What concentration(s) did you select when you applied to Organizational Dynamics?

Table 9 summarizes the concentrations selected when the student applied to the Organizational Dynamics program. It lists the concentration, degree program applied for, and whether the concentration was a primary, secondary, or tertiary area of interest.

Specific Order of Interest

3. Did you have a specific order of interest (see Table 10)?

Thirteen of nineteen respondents applied to the MSOD program selecting P3 as their primary area of concentration. The remaining six students applied with the intent to concentrate in leadership. P3 was not an available concentration when these six students applied to the degree program. However, when the P3 concentration became available, they added those courses to their curriculum.

Table 10. Concentration Order of Interest

Concentration		Students Selected as Primary	Students Selected as Secondary	Students Selected as Tertiary	Total		
					MSOD	MPhil	MSOD & MPhil Combined
Projects, Programs, and Portfolio Studies (P3)	MSOD	13	2	1	16		19
	MPhil	2	1			3	
Organizational Leadership and Management Studies (LM)	MSOD	3			3		4
	MPhil	1				1	
Practitioner of Change and Development Studies (PR)	MSOD			1		1	2
	MPhil			1		1	
Global Organizational Studies (GL)	MSOD		2			2	2
	MPhil						
Organizational Coaching Studies (OC)	MSOD			1		1	1
	MPhil						

Both students who considered the Global concentration chose it as a secondary concentration. The one student who chose a practitioner concentration selected it as a secondary area of interest.

Both the strong interest in the P3 concentration and the one hundred percent completion rate of students earning the Organizational Project Management Studies certificate indicate that the subject matter is pertinent in today's workplace. It also indicates that the formal education being offered at the University of Pennsylvania is found to be worthwhile.

Certifications: Professional Organizations

4. Are you CAPM, PMP, or PgMP certified; (Certified Associate Project Manager, Project Manager Professional, Program Management Professional)

4a. What professional certifications have you earned from any organizations?

Only three P3 students hold a Project Management Professional (PMP) credential from the Project Management Institute. However, four students have attended exam preparatory classes and all four intend to take the certification exam in 2010.

Two students have earned a Six Sigma Green Belt with a third student planning to earn a Six Sigma Black Belt second quarter, 2010. This means that ten of the nineteen interviewees expressed interest in either project management or process credentialing in addition to a formal academic education.

Three students have earned either a clinical license or a teaching certification. Six interviewees have master's degrees and are pursuing either the MSOD or MPhil degrees either because of their subject matter interest or job appropriateness. A student who is a management consultant observed that the P3 concentration has universal business application.

Previous masters' level work centered mostly in engineering or business. This, in itself, is an interesting phenomenon in that those students who already have advanced degrees in more technical, analytic, or business fields are returning to school to pursue Organizational Dynamics. As mid career project management professionals, they apparently recognize that in today's organizations, technical and business acumen are only some of the components needed for successful leadership in today's complex environment.

Survey results indicate that there is student interest in acquiring both technical certification and formal academic training in project management. This supports what was found when researching project management as a discipline. It also supports what was found when researching social characteristics.

Social Characteristics

5. What are the top 3-5 social characteristics or competencies that are important for your professional work? (interviewee defines for themselves what they mean by the phrase social characteristic or soft skills)

This question was framed so that each survey respondent defined what a social characteristic or soft skill is. The frequency of a response helped to prioritize its ranking as an important social characteristic. For purposes of this research the top five will be described (see Table 11).

Table 11. Social Characteristics Important for a Project Manager's Professional Work (as Identified and Prioritized by MSOD Students or Graduates; Sub-Attributes as Bundled by the Author)

1	**Communication**

	• Set clear goals and objectives
	• Use verbal and written messages
	  • Informal and formal mechanisms
	  • Engage team

	• Know your audience
	  • Their area of interest
	  • Level of detail desired
	• Encourage feedback
	• Practice active listening
	  • Professional level
	  • Connect at a personal level
	• Do not hidden agendas
	  • Be honest; tell it the way it is
	• Inspire to motive and encourage creativity
	• Understand cultural differences

2	**Leadership**
	• Be passionate • Be self aware • Be socially aware or emotionally intelligent • Ability to solve problems • Ability to multi-task • Manage expectations • Manage professional perception • Be a team leader • Control emotions • Be resilient • Desire to succeed
3	**Relationship Building/Management** (not a Human Resources function)

	• Build trust and respect
	• Be honest
	• Accept ownership
	• Be accountable
	• Manage stakeholder relationships
	• Be empathetic
	• Network
	  • Connect with others
	• Be accountable (do what you say you are going to do)
	• Be able to influence
	  • without direct authority
	• Mentor
	  • Be willing to be mentored
	• Be of good character
	  • Act with integrity

4	**Decision-Making**

• Ability to deal with ambiguity • Ability to work in a decentralized environment • Take ownership • Prioritize • Delegate • Ability to adapt	
5	**Organizational Awareness**

• Know the corporate mission, vision, and value statements
  • Understand organizational strategy
• Understand organizational politics
  • Be able to navigate
• Be able to manage upward and downward (balance)	

Nineteen people participated in the survey. This means that there could be as few as three answers or as many as fifty-seven (three social characteristics identified) to ninety-five (five social characteristics identified) different answers depending on whether interviewees identified social characteristics similarly. As individuals, each person has a different frame of reference, different educational background, and varied organizational experiences. So, this question tested whether students who are concentrating in Projects, Programs, and Portfolio Studies share similar thoughts; ultimately, it will identify if results from P3 students or graduates agree with what current literature describes as social characteristics and their perceived value in leading complex projects.

Importantly, interviewees were consistent in stating that they felt social characteristics or soft skills are inherent personality traits or characteristics. They are part of a leader's natural abilities. They cannot be taught but they can be enhanced through education. This line of thinking agrees with much of what is written in project management literature in relation to its human side.

Three social characteristics were most often identified by the survey population. In order of the most responses received they are communication (first), leadership (second), and relationship management (third). Decision-making ability and being organizational savvy were also identified as key social characteristics but they were not mentioned as frequently or by as many survey participants. When analyzing results, the interviewer took liberty in identify sub-attributes that can be aligned to each social characteristics. These associations were made based on historical reference, professional experience, and educational coursework and research.

Many of the attributes listed under Relationship Building/Management, Decision-Making, and Organizational Awareness could also be bundled under Leadership. Social characteristics are rank ordered based on response frequency.

Communication was noted as being important cross functionally, cross culturally, within teams, and upward and downward within organizations. Respondents noted that communication includes articulating verbally, presenting well, as well as actively listening. It means the ability to interact and engage with another person or the ability to effectively convey information to an audience of many people.

Leadership encompasses many characteristics. P3 students acknowledged that leaders need to be self aware. They are motivated individuals who have a passion for what they do. Leaders manage expectations and perception yet they also are team leaders. This means that they empower their team members. They partner when necessary and mentor when appropriate. Leaders are socially aware. These findings are similar to what has been written in the last decade.

Building relationships is the glue that holds organizations together. P3 students appear to recognize the power of relationships. Social capital is built when trust and respect is built with all project stakeholders. This, too, was acknowledged as being important in relationship-building/management. They agree that in circumstances without direct authority, the ability to influence is important to managing projects successfully. When managing matrix project teams, a relationship savvy manager learns to connect with team members, peers, or their management individually. P3 students listed networking as being part of relationship-building. It can be a competitive edge. Decision-making ability was acknowledged as another social characteristic or competency important for professional work. Project coordination, managing risk, prioritizing, taking ownership, adapting rapidly to changing circumstances, and delegating require sound decision-making. The field of change management was noted as needing effective decision-makers.

Lastly, being organizationally or politically savvy ranked among the top five social characteristics. Comments ran the gamut from needing to be aware of organizational goals, and understanding organizational strategy, to understanding the balance of managing both upward and downward. Additionally, respondents commented on how having the ability to understand and navigate organizational politics is important to basic organizational survival. Furthermore, it is important for a project manager to understand the organizational structure and context within which a team functions. As P3 students learn in DYNM 621, *Managing Project Portfolios*, each team's work efforts should be aligned to the corporate mission, vision, and value statements so it is important that managers, especially those who manage complex projects, be organizationally savvy.

By so doing, they are positioned to manage risk (mitigate threats and exploit opportunities) thereby having a more positive organizational impact (*DYNM 605: Managing Project Risk)*. This is an example of P3 students putting into application what they have learned in their coursework.

When analyzing social characteristics, survey findings reinforce what other research indicates. That is, there is an emerging awareness that although technical skills are important to managing projects, social characteristics are increasingly being perceived as valuable and having a positive impact.

Soft Skills Training and Professional Work

6. Soft skills training and professional work; a Likert Scale was used to answer each Question (see Table 12).

6a. How important or valuable do you feel soft skills training is to your professional work?

Table 12. The Importance of Soft Skill Training

Very Little	1	2	3	4	5	Great Amount
	0	1	3	2	13	

Thirteen interviewees (sixty-eight percent) responded with a five rating or a great amount when asked about soft skill importance to their professional work. One student commented that he chose an MSOD degree over a business degree because he believes that tactical skills are 20% relevant to professional work while the remaining 80% is soft skills dependent. A graduate commented that he is not sure how much soft skills can be taught. A person either has an affinity to them or they do not; however, if a person has an inclination toward social competencies those tendencies can be developed with formal training or learning on the job.

6b. Rate their own perceived competencies to use soft skills in their professional Work (see Table 13)?

Table 13. Perceived Competencies to Use Soft Skills in Professional Work

Very Little	1	2	3	4	5	Great Amount
	0	0	2	12	5	

While respondents believe that soft skills matter a great deal in their professional work, one less person or twelve interviewees stated that they rate their soft skills as high. Seventeen out of nineteen interviewees rated their soft skills as either high or very high (eighty-nine percent). Students pursuing an Organizational Dynamics degree may have a natural inclination toward social competencies. Also, although they may have a natural affinity to social competency, they apparently also recognize that formal education will improve their inherent characteristics. It must be remembered that students are typically mid-career professionals who are career minded and most likely hoping to advance their careers with an advanced degree. Many may be considered high achievers. They may already be considered self-aware, a leadership characteristic, yet also want to improve their social assets.

6c. To what degree are soft skills training used effectively by colleagues or leadership where you work (see Table 14)?

Table 14. Soft Skills Training Effectively Used by Colleagues or Leadership

Very Little	1	2	3	4	5	Great Amount
	0	10	4	2	1	

When asked if soft skills training is used effectively by colleagues or leadership where they work, ten interviewees answered “little.” Only three people rated their colleagues or leadership either high or very high.

It is evident that those affiliated with the P3 concentration value soft skills training, perceive their social characteristics or competencies to be high or very high, but perceive their colleagues or leadership usage of soft skills training to be very little. Perhaps, this is due to the fact that training has not been provided to work colleagues. Or, colleagues or leadership where they work do not possess natural tendencies for social characteristics; or, a need exists for formal training to teach them how to apply soft skills within the organization. The reason for a low score may be a combination of all identified reasons. However, there is a gap between MSOD students’ self perceptions and their perceptions of colleagues or organizational leaders.

Non-P3 Courses and Selection Criteria

7. On what basis – why or using what criteria - did you select the non-P3 courses in your curriculum? (leave open ended and not posit reasons for others)

Table 15 notes that the majority of interviewees said they took courses that interested them. A secondary reason seemed to be course selection based on current job assignment. One student identified soft skill personal development areas and/or issues at an organizational and strategic level for her five year plan and a longer term ten year career plan and chose courses accordingly. Three respondents chose courses based on what would fit into their work schedules. Lastly, one graduate acknowledged that he gravitates to quantitative classes so he deliberately wanted to become sensitized to risk and change management. Interviewees may have responded with multiple reasons for choosing a course.

Table 15. MSOD Candidates and Their Reasons for Choosing Courses

Ranking	Percentage of All Interviewees	Reason for Choosing Courses
1	37%	Interest in Course Content
2	58%	Job Assignment and Needs including Organizational Career Development
3	16%	Schedule Fit
4	10%	Degree Requirement or to Earn a Certificate
5	5%	Personal Career Development (short, mid, long term plan)
6	5%	Become Sensitized to Soft Skills

Non-P3 Courses, Expectations, and Value

8a. To what degree did your non-P3 courses meet your expectations or criteria (see Table 16)?

Table 16. Non-P3 Courses Met Expectations

Very Little	1	2	3	4	5	Great Amount
	0	1	4	6	7	

Thirteen of nineteen interviewees responded that non-P3 courses met their expectation either a good or a great amount. Four respondents indicated a middle of the road or three rating. One student had only completed core P3 courses and had not yet taken any elective courses.

8b. Which courses in particular did you find most valuable and why?

Process Improvement was a practical course where what was learned could be immediately applied to the workplace. Coaching courses are helpful for becoming more self aware. The Art and Science of Organizational Coaching provided psychological

insight which helped the student both personally and professionally. Mastering Organizational Leadership and Power was cited as the most excellent course ever taken. This student holds two advanced degrees (MSOD and MPhil) and is currently writing his dissertation (organizational leadership). Organizational Deviance validated one student's thinking about a then current organization. Mastering Organizational Politics and Power helped in understanding the language and self interest of people in politics. One student stated that the Effective Leadership and Effective Entrepreneurship course was the best course he ever had in his entire life. Another course, Overcoming Organizational Barriers to Success had immediate applicability as it aligned to what a student did on a daily basis. Again, there was immediate course value as this student was able to apply what was learned in his current role, within his current organization. A graduate said that Statistical Analysis for Decision-Making gave him a quantifiable way to do things and helped with him demonstrate real benefits to his more technical clients.

Just as students have diverse backgrounds, each of their answers to this question was different. Because of the program's structure to allow students to select courses rather than be required to take certain courses, there is flexibility to customize coursework to specific areas of interest and to career development needs. Students appear to appreciate the program's adaptability as is indicated by question twelve's (see Table 27) answers.

Enhancement of Social Characteristics and Non-P3 Courses

9a. To what degree did your non-P3 courses enhance your social characteristic competencies/soft skills (see table 17)?

Table 17. Non-P3 Courses Enhance Social Characteristic Competencies

Very Little	1	2	3	4	5	Great Amount
	0	0	4	7	7	

An overwhelming majority or fourteen respondents (seventy-four percent) answered either a good or great amount. No answers fell below the mid-point or a three rating.

9b. Can you give a very brief example from your workplace?

As with question 8, each student started the program with a different skill set, a different frame of reference, different experiences, and different goals and objectives. Answers varied but centered on several themes. Coincidently, the three themes are the same as those identified in question five when asked what are the top three to five social characteristics or competencies that are important to your work. These are leadership, relationship management, and communication.

Included within a broader leadership category were answers such as ethics, team-building, being proactive, and gaining self awareness. Secondly, relationship management which included references to learning how to influence and negotiate was noted as being an important soft skill that is transferable to the workplace. Additionally mentioned was becoming culturally aware by taking study abroad classes. One student stated that being culturally aware, having an understanding of various soft skills, an understanding of their significance and nuance within a culture is important when building relationships. As an example, depending on the culture little things you say, do, or do not say or do can have a big meaning. It can greatly influence a business relationship.

Learning how to analyze communications to more effectively deliver a message, prepare presentations, and develop better listening skills was the third most offered response. When answering question nine regarding how non-P3 courses enhanced social characteristics or competencies relative to workplace experience, responses related to leadership were the most highly rated. Relationship management related courses were second; and communication courses rated third. Question 5 asked about social characteristics important to your work. Communication was the most highly rated, leadership was second, and then, relationship management third. The top three social characteristics or soft skills were the same but the rank ordering was different.

Two students mentioned that an organizational politics course better prepared them to understand current happenings in their workplace, including how to navigate a specific situation. In one case, the student was working in an organization that had recently hired a new public affairs coordinator. The public affairs coordinator ignored the student who was functioning as a management consultant. After taking the organizational politics course, the student better understood what was happening and how to address the situation. Interestingly, as question nine was focused on enhancing social characteristics, not one interviewee gave an answer related to decision-making. Decision-making was the fourth highest rated category when asked about the importance of social characteristics to your workplace. Decision-making can be considered a leadership attribute and for purposes of answering question nine may have been blindly included within the leadership traits of self-awareness, cross functional leadership, or team building.

In addition to specific workplace examples that rolled up to major themes, other interviewees responded with general comments. Two students mentioned that in addition to enhancing their soft skills, non-P3 courses validated their thoughts and workplace behaviors. One in particular researched organizational deviance as a part of her coursework. A program graduate spoke to the fact that courses provided him a lot of confidence. Several students said that non-P3 courses gave them fresh perspectives on how to approach work scenarios. These observations may attest to organizational deficiencies, albeit organizational areas of improvement, if social characteristics provide a communication, leadership, and relationship management backbone.

Another striking finding is that when asked about social characteristics important for your professional work, communication was the number one ranked competency. Leadership and relationship management were ordered the same when asked about social characteristics important to your professional work; and also, when asked to what degree did your non-P3 courses enhance your social characteristic competencies/soft skills. Perhaps, those individuals with a social characteristic affinity, innately sense a disconnection from less mature, mechanically based organizations. And, since leaders are self-aware this creates a desire to passionately pursue an understanding of what the gap is, the drive to understand it, improve their social competencies, and return to their organizations as influential change agents. More research is needed to validate this premise.

Non-P3 Courses and Perceived Organizational Value

10. To what degree do you expect the soft skill education from coursework will add value to/make you successful in the role you perform in your current organization (see Table 18)

Table18. Soft Skill Education Adds Value to Your Current Organizational Role

Very Little	1	2	3	4	5	Great Amount
	0	1	5	9	4	

One student answered that the MSOD degree will only take him so far. He needs to apply what he learned. Overall, sixty-eight percent of respondents rated this answer with either a four or a five (a great amount). Five interviewees provided a three rating and one interviewee answered with a two rating. No one questioned the value of their soft skill education; more so, they are hesitant to say that their current organizations will value their degree.

Conclusion

In conclusion, all Projects, Programs, and Portfolio Studies (P3) students surveyed work in the project, program, or portfolio management professions. One hundred percent of the students who selected the P3 concentration when they applied to the MSOD program either graduated or plan to graduate with the Organizational Management Studies certificate. Most students who concentrate in P3 and Organizational Leadership Studies also earn an Organizational Development and Change (Practitioner) certificate. The majority of students are mid-career level.

Although less than ten percent of P3 students have earned PMP certification, an additional ten percent plan to take the exam in 2010. Overall, more than fifty percent hold some form of project management or process (Six Sigma) credential. This indicates that students recognize project management as a discipline. They seek formal education and believe there is value to credentialing available through professional organizations.

Approximately one third of the respondents already have a masters degree, primarily in either business or engineering. Most chose the Organizational Dynamics program because of the Organizational Projects Management Studies concentration or because they felt that Organizational Dynamics offered elective courses to enhance social characteristics. For non-P3 courses considered social characteristic in nature, respondents noted a broad course offering which can be tailored to each student's interest or career development needs. For students wanting to learn or enhance social characteristics, the structured yet flexible curriculum was a good fit.

Respondents acknowledged that social characteristics are an essential project management element. They did so by answering with high and very high ratings when asked about social characteristics being valuable when managing projects. They agree that social characteristics are important to their professional work; and, to their professional work in their current organizations.

Students chose elective courses based primarily on either their areas of interest or perceived improvement areas. Secondly, courses were selected based on personal schedules and when classes met. The most highlighted elective courses were those that students felt had applicability for them, in their workplace. This includes courses on workplace dynamics, communication and diversity, leadership, self and organizational awareness (social psychology). Organizational Management Studies students identified the same top three social characteristics (communication, leadership, relationship management) as what is indicated in current literature.

Respondents noted P3 courses as being directly applicable to their workplaces. Experiential learning was considered highly valuable. Students perceive that they are

able to immediately add value to and influence their organizational environments. Conversely, respondents did not believe that colleagues and leaders within their current organizations utilize social characteristics. Nor did they believe that his/her MSOD or MPhil degree will be organizationally recognized as being valuable. Answers were mixed when asked to rate the perceived value of the MSOD program to their current organizations. Respondents answers were either neutral (3 rating) or rated the perception of organizational value as a 4 (a good amount).

Since all P3 students or graduates are interested in project management, they agreed that a broad course selection was beneficial to both their academic training and career development. Project management includes many social competencies. Many social characteristics are represented in MSOD elective course offerings.

Overall, ninety-five percent of respondents perceive that their degree is valuable to their career development and will help them find future job opportunities. Thus, P3's current state of affairs is strong. The concentration is viable. It has perceived value as its areas of study are impacting students and graduates in a practical and positive manner.

The organizational impact of formal training may not be known for years. Future research will be needed to measure the impact of the MSOD/MPhil programs and other formal training mechanisms within organizations. When measuring the efficacy of formal training programs many variables need to be considered. It is important to note that this survey was qualitative in nature. The way a question is worded may influence the response. However, responses were consistent from question to question which leads one to believe that question structure had little to no influence on a respondent's answer.

Generally, the soft skills learned in elective courses (art) combined with the more technical aspects of the Projects, Programs, and Portfolio Studies courses (science) align well to the project management discipline. As projects become increasingly complex, using the art and science of project management allows a manager to adapt in uncertain, fast changing, and dynamic environments.

For some students, the program acted as a validation mechanism that there is more to project management than delivering results. How a manager achieves results, including relating to and communicating with an organization's human capital, is important too. Students who graduate from either the MSOD or MPhil programs are trained to be critical thinkers. They understand that there is not a one size fits all solution. This means that the education students receive at the University of Pennsylvania charges them with becoming influential change agents.

The Organizational Dynamics degree program captivates its students by listening to and respecting their different needs, mentoring, presenting, and influencing (social characteristics). Also, it sets an example for and positions its students to return to their workplaces with both the technical and social characteristics needed to lead complex projects in dynamic organizations. As mid-career professionals, program graduates are organizationally positioned to mentor those who report to them, influence those they report to, and to overall set an example of being technically competent and socially adept. One program graduate succinctly says "dynamic people, do dynamic things, dynamically."

CHAPTER 6

SUMMARY INCLUDING RECOMMENDED STRATEGIES FOR SUCCESS

Project Management organizations have been institutionalized by practitioners. Since the mid-1960's organizations such as PMI and IPMA have identified and written Bodies of Knowledge. Practitioners saw a need and have demonstrated leadership in forming organizations that provide a framework for their profession. Communicatively and collaboratively, they have shared information about tools, methodologies, and processes. Using teamwork, global standards have been identified with project management practices developed to support them. Organizations such as the Project Management Institute act as communication mechanisms for distributing information. They also serve as a means to build relationships.

Projects and project managers function within multiple systems. Each of these systems has its own unique set of characteristics, changing dynamics, and maturity levels. This is project management's ever-present challenge. As organizations increasingly depend on projects to meet business needs, it is unrealistic for organizations to expect project managers to function in a tools, methodology, and process environment alone. The more dynamic the environment, including its speed of change and cultural diversity, the more social characteristics positively impact project management. Socially aware project managers act as the glue that hold project teams together, thereby delivering successful projects. In many organizations they manage matrix teams of specialists who perform technical activities. Similarly, project uncertainty and complexity are best addressed in a complex adaptive environment that accounts for social awareness and flexibility.

While project managers need to possess some degree of technical skills, those who are socially competent are poised to build and empower teams, create an environment of trust, partner with and mentor team members, and sustain morale for high performance teams. Socially savvy project managers seem to recognize, acknowledge, understand, and leverage people skills, both within themselves and their team members. They value the need for social interaction to manage stakeholder relationships, connect with team resources to influence positive outcomes, and network as a means to achieving project success**.** As project uncertainty and complexity grows, they adapt more easily as do their teams. Socially aware project managers are well positioned to manage large, interdependent initiatives.

A literature search from the past decade found that communication, leadership, and team building are most frequently noted as being social characteristics that are important to managing projects. The Project Management Institute's interpersonal skill identification includes leadership, team building, and communication. It also includes motivation, influencing, decision making, political and cultural awareness, and negotiation although no mention is made to prioritization. PMI recognizes that project managers need a balance of technical, interpersonal, and conceptual skills to be effective.

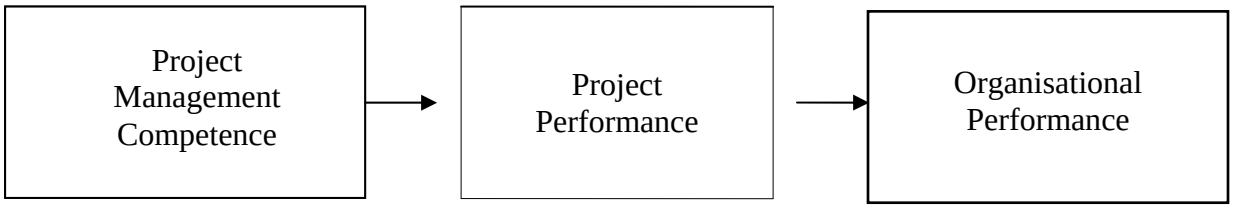
The P3 survey (Organizational Dynamics Graduate Students at the University of Pennsylvania with a Projects, Programs, and Portfolios Concentration) identified communication (first), leadership (second), and relationship management (third) as the top three social characteristics a project manager considers important to his/her professional work. These characteristics were considered a common denominator at a cross functional, organizational level. When selecting non P3 courses to enhance social

characteristic development, students chose topics related to leadership (first), relationship management (second), and communication (third) respectively. It is possible that students already felt prepared in terms of communication skills so did not choose communication courses. Or, it is possible that the university did not offer as many communication specific courses within the MSOD/MPhil programs. Since communication, by way of listening, speaking, reading, presenting, voice and body tone, are inherent in everything a student does, it is also possible that communication education is a by-product of any course taken. Many survey respondents commented that social characteristics are inherent personality traits which can be enhanced through formal education.

Communication, leadership, and relationship management are mentioned frequently across audiences (literature, PMI, and P3 survey participants) and were determined by this author to be the top three social characteristics important to project management. However, a literature search did not reveal that prioritization has occurred, even within what appear to be the top three social characteristics. A question was asked in the P3 survey regarding what are the top 3-5 social characteristics important to one's professional work. P3 respondents identified and prioritized social characteristics that appear to align to other research findings, readings, and as identified by multiple professional organizations. Multiple entities also mentioned the importance of being politically, organizationally, and culturally aware.

Social characteristics are outcome based and not quantifiably measured. There is an emerging recognition, within the project management discipline, that social characteristics are valuable and they have a positive impact when managing projects.

Figure 4. Relationship between Project Management Competence and Organizational Performance (Crawford, 2005)



There is a direct correlation between project management competence vis-à-vis delivery results and organizational performance. Just as social characteristics are increasingly important in project management they are also important within the context or sub-system within which a project is executed. Organizations must support managing the interactions of their organizations with other organizations within their environments (Ackoff, 1994). Thus, it becomes increasingly more important for organizations to be socially aware. This means promoting the use of social characteristics, starting with the executive team, so that a culture is created where interpersonal skills permeate the organization.

As indicated by P3 survey comments, practitioners want to work in a culturally supportive project management environment. When organizations mature they can create an environment where people skills (human side of project management) can be successfully integrated into the project execution process. As an example, cultivating relationships and communicating effectively take time. If a project manager works in an environment where they must constantly multi-task to complete his/her workload, then task orientation takes priority over social competence. Being over-capacity is a resource constraint that takes a negative toll on project resources, time, and money. Eventually, it becomes counter productive organizationally too. One survey respondent said that he

will always be honest with his team. He wants to communicate authentically because his experience is that an organization communicates one message; but, behaviorally it operates differently. Logically, the next step towards organizational maturity is to formalize an awareness of interpersonal skill value and its positive impact.

Both organizations and project management practitioners have several options for learning more about project management; and specifically, about the social characteristics identified for effective project management. They can invest in formal academic training, join a professional organization that encourages credentialing, or engage in unique research opportunities. Worldwide project management organizations, such as the Project Management Institute (United States), the Office of Government Commerce (United Kingdom), and the College of Complex College Management (Switzerland) (see Appendix D) recognize interpersonal skills. These professional organizations are beginning to incorporate social characteristics in their Bodies of Knowledge. Conference speakers address social characteristics in presentations.

Project managers who are investing in formal academic training are sensitized to the fact that projects cannot be managed by PMs who are only technically trained. This supports the premise that there is increasing awareness that social characteristics are important to the project management discipline. Research is prevalent within professional organizations and academic communities.

> In today's project management education environment, we now appear to have a balance between behavioral courses (soft skills) and quantitative courses (hard skills) (Kerzner & Saladis, 2009).

Academic institutions such as the University of Pennsylvania recognize that formal training will help advance both social characteristic or interpersonal skill

awareness and the project, program, and portfolio management professions. At the University of Pennsylvania, the Organizational Dynamics master's degree program blends both the technical and social aspects of project management. Students who earn the Organizational Project Management Studies certificate (technical component) choose elective courses, to complete either the MSOD or MPhil degree. Student perception is that elective courses enhance social characteristics. They receive a holistic and well rounded education by learning about the disciplines of projects, programs, and portfolios; and also, by gaining an understanding of and learning how to adapt organizationally.

Survey participation was exceptionally high. Respondents answered, "a good amount" when asked about soft skill education from coursework and how it will add value to/make them successful in his/her role in his/her current organization. Overall, P3 students are satisfied with the concentration and find that skills learned are immediately applicable to their workplaces (see Appendix F for program Recommendations for Change (11f)). Much of what the Organizational Dynamics program supports is the inter-relationship of complex environments. This is evidenced by a newly added concentration (Fall 2009), Sustainable Development Studies (see Figure 4).

Figure. 4 Integration of Program Concentrations
(www.organizationaldynamics.upenn.edu/od/images)

Lastly, although the degree program is a part of the university's school of Arts and Science, professors eclectically come from many schools within the university. This cross section of multiple disciplines and perspectives enhances the breadth and depth of elective course selection. The operating model is similar to matrix project teams whose members come from diverse, cross functional areas.

Non profit organizations, government offices, or credentialing organizations are beginning to partner with academic institutions. The Project Management Institute is partnering with organizations to introduce project management into high school curriculum. Many other alliances promote certificate programs addressing project management education in university business, public management, or engineering schools. Some partnerships exist only to help practitioners prepare for certification examinations. However, certification programs do not seem to be fulfilling the need to enhance project manager skill sets. Instead, formal academic training is needed.

As observed by the PMO Executive Council (2007), an academically degreed candidate with a business, economics, or social science degree is most likely to be a high performing project manager. When project management and social psychology courses are included in these degree programs, it positions project managers for success.

> Soft skills are acquired through experience, but sensitization of students is necessary during formal software project management courses. In addition, psychology may be incorporated into software project management curricula and this is confirmed by Cook (2004) who stated the need for project managers to have a clear grasp of social psychology to insure optimum performance of project teams (Sukhoo, Barnard, Eloff, Van der Poll, Motah, (2005).
>
> People skills … (come) easier to some project managers than others, (yet) can be learned and applied successfully by people willing to invest in their time and energies (Flannes & Levin, 2001).

Engaging in either an academic community or a credentialing organization allows self-development. It develops integrated thinking for practitioners who can then meet short term and emerging organizational demands. Specifically, academic coursework can help project managers learn to lead from whatever organizational level they currently reside, whether it be from the middle or top of an organization. Today's organizations need help in navigating through uncertain and chaotic environments. Project managers are positioned to fill that need.

Strategies for Success

Project managers can develop strategies to create awareness that social characteristics are an essential project management element. By doing so, they will also raise organizational awareness that integrating social characteristics into organizational culture will provide a more supportive, efficient and effective project management environment. Recommended strategies for success are:

- formalize training
- gain a greater awareness of organizational dynamics
- example to their corporate systems (teams, departments, divisions) by combining technical competencies with social characteristics
- raise awareness by participating in extracurricular activities that promote social characteristics
    - within their workplaces
    - within professional organizations
- courageously be change agents in an emerging discipline
    - understand that it is uncomfortable to be in a functional role that is misunderstood by many organizations
    - find community with other project managers
- be leaders, communicate, and continue to build relationships
- be patient

By following these strategies effective change will happen over a period of time. As with most projects, these strategies create a framework for change. As with most project life cycles, change will happen in an integrative and iterative manner. Communication is critical. Relationships will be built along the way. Leadership will be increasingly needed in complex, dynamic environments.

Predictions for the Future

If the current trend continues, project management will become a formally recognized field as opposed to its current discipline status. Organizations will continue to conduct business by depending on project outcomes. In fact, project management is likely to become the "new" management. PMI recently changed the title of one of it periodicals from *Leadership in Project Management* to *Leadership Through Project Management* (2009, Volume 5). It emphasizes business' dependence on projects and the need for a project manager to provide an environment in which team members work together with economic, psychological, and social satisfaction (Cleland and Ireland, 2000). Organizations will increasingly recognize the value of social characteristics.

As business increasingly depends on projects to achieve results, organizational respect for project management will increase. Strategic goals and objectives are more easily obtained when business by projects means being able to adapt to changing conditions. Project managers who are socially aware will influence his/her organization by delivering results but also by sensitizing organizations to the human side of project management. Project managers will be change agents as they assume roles that include leader, mentor, facilitator, coach, sponsor, advocate, chaplain, comforter, trainer, teacher, team player, and entrepreneur. In essence, project managers are becoming "new

managers" (Flannes & Levine, 2001). Whitty and Maylor (2009) agree with this assessment.

> … a gap exists between what practitioners think about social characteristics versus their organizations' perceived social characteristic impact. Although organizations may be becoming increasingly aware that a new type of behavioral management is needed, most do not understand it. How to direct that change is another challenge. If organizations continue to conduct business by projects they will need to adapt to a changing world environment. To do so will mean investing in a new vision that will lead their organizations into more social awareness. A global economy means greater cultural and workforce diversity. It means that multiple generations will have to learn to work together. More teams will work remotely including across multiple time zones. Management's need to understand social psychology will be ever present.

As a result, C-level executive support for culture change is likely.

A paradigm shift from a driven, mechanically based project culture to one which is more socially and complex adaptive will empower a project manager to lead from anywhere within the organization. It will support open communication, collaboration, and the preservation of human and intellectual capital by respecting relationships. Since the process of relationship building takes time, it also develops trust and loyalty. When managing projects in uncertain and complex environments these attributes are important. A project manager who is culturally supported by his/her organization manages from a eustress position. A win-win scenario is created for both the project manager and the organization. Organizational delivery results will be realized while project managers and their teams who understand the value of social characteristics will be better integrated into the fabric of socially aware organizations.

In summary, project management combines both art and science. Both technical and social characteristics are important to successful project delivery with a new era of project management emerging. In the next decade, awareness will continue to increase

that social aptitude and the human side of project management needs to be combined with technical skills when managing projects. Organizationally, a hybrid model of managing projects that includes a combination of technical and interpersonal skills will be socialized. Project managers are at the forefront of re-shaping how organizations manage. Their influence will shape enterprise organizational changes in the next decade.

REFERENCES

Ackoff, Russell L. (1994). Systems thinking and thinking systems. *Systems Dynamics Review*. 10, (2-3):175-188.

Belzer, K. (2004). *Still More Art than Science*. Retrieved on November 8, 2009 from: www.pmforum.org/library/papers/BusinessSuccess.htm

Buckle P and Thomas, J. (2003). Deconstructing project management: a gender analysis of project management guidelines. *International Journal of Project Management.* 21(6):433-41.

Cleland DI, Ireland LR. (2000). *Project Manager's Portable Handbook*. New York: McGraw-Hill.

Cleland Ph.D., David and Bidanda, Ph.D., Boyaya (2009). *Project Management Circa 2025*. Newtown Square: Project Management Institute, Inc

Cook, R. (2004). *Social Psychology in Project Management.* Retrieved on November 8, 2009 from *w*ww.pmforum.org/library/papers/pmppsych1.htm

Crawford, Lynn. (2005). Senior Management Perceptions of Project Management Competence. *International Journal of Project Management*, 23:7-16.

Flannes, Ph.D, Steven W and Levin, Ginger, DPA. (2005). *Essential People Skills for Project Managers*. Virginia: Management Concepts.

Flannes, Ph.D, Steven W and Levin, Ginger, DPA. (2001). *People Skills for Project Managers*. Virginia: Management Concepts.

Gillard, Sharlett. (2009). Soft Skills and Technical Expertise of Effective Project Managers. *Issues in Informing Science and Information Technology*, 6:723-729.

A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Fourth Edition. (Newtown Square: Project Management Institute, Inc. 2008).

Heifetz, Ronald, Grashow, Alexander, and Linsky, Marty. (2009). Leadership in a (Permanent) Crisis. *Harvard Business Review*. 87(7/8):68.

Hollingsworth, Chauncey. (2009). Brain Freeze. *Leadership through Project Management*. 5:35-40.

Irwin, Brian, PMP. (2008). *Managing Politics and Conflicts in Projects*. Virginia: Management Concepts.

Kerzner, Ph.D., Harold and Saladis, PMP, Frank P. (2009). *What Executives Need to Know About Project Management*. New York: International Institute for Learning, Inc.

Kirsh, L.J. (2004). *Software Project Management: An integrated Perspective for an Emerging Paradigm.* www.pinnaflex.com/pdf/framing/CH15.pdf

Muzio, Edward, Fisher, Deborah J., Thomase, Erv R., and Peters, Valerie. (2007). Soft Skills Quantification (SSQ) for Project Manager Competencies. *Project Management Journal*, June:30-38

Nesbit, Trevor. (2009). *Project Manager Skills: for Employability in Information Technology*. Paper appeared at the 22nd Annual Conference of the National Advisory Committee on Computing Qualifications (NACCQ). New Zealand.

Newstrom. J.W. and Davis, K. (2001). *Organisational Bahavior: Human Behavior at Work.* New York. McGraw-Hill.

OHara, Shigenoby. (2003). *P2M – The Japanese Version of Complex Project Management for Enterprise Innovation in Turbulent Environment.* Chiba Institute of Technology. 1-5.

Pant, Ira and Baroudi, Bassam. (2008). Project management education: The human skills imperative. *International Journal of Project Management*, 26:124-128.

Pellerin, Charles J. (2009). *How NASA Builds Teams*. New Jersey. John Wiley & Sons, Inc.

PMI Leadership Through Project Management, Volume 5, (Project Management Institute, 2009) 3

PMO Executive Council™. (2007). Attributes of a High-Performing Project Manager *A Quantitative Analysis of the Drivers of Project Manager Effectiveness*, Corporate Executive Board, 1-84.

Remington, Kaye and Pollack, Julien. (2007). *Tools for Complex Project Management*. Burlington. Gower Publishing Company.

Sukhoo, Aneerav, Barnard, Andries, Eloff Mariki M., Van der Poll, John A., Motah, Mahendrenath. (2005). Accommodating Soft Skills in Software Project Management. *Issues in Informing Science and Information Technology*, 691-700.

Tuckman, Bruce W. (1965). Developmental sequence in small groups. *Psychological Bulletin*, 63, 384-399. The article was reprinted in *Group Facilitation: A Research and Applications Journal* - Number 3, Spring 2001 and is available as a Word document: http://dennislearningcenter.osu.edu/references/GROUP%20DEV%20ARTICLE.doc. Retrieved on November 8, 2009.

Turner, J. Rodney. (2003). *People in Project Management*. Vermont: Gower Publishing Company

Wallace, Ph.D., Les and Trinka, James, Ph.D. (2007). *A Legacy of 21st Century Leadership*. New York: iUniverse, Inc

Whitty, Stephen Jonathan and Maylor, Harvey. (2009). And then came Complex Project Management (revised). *International Journal of Project Management,* 27:304-310.

Zwikael, Ofer and Bar-Yoseph AB. (2004). Improving the capabilities of project team management using the Gestalt cycle of experience. *Team Performance Management,* 10(7/8)137-144.

APPENDIX A

PROJECT MANAGEMENT INSTITUTUE: WHO WE ARE AND WHAT WE DO
(www.pmi.org/AboutUs/Pages/FactSheet)

Not-for-Profit Professional Association

At PMI, our primary goal is to advance the practice, science and profession of project management throughout the world in a conscientious and proactive manner so that organizations everywhere will embrace, value and utilize project management and then attribute their successes to it.

- Founded in 1969 by working project managers
- 420,000 members and credential holders

Membership

PMI Membership supports and encourages all project professionals to pursue a new balance of global and local best practices, relationship building and sharing resources.

- 250 chapters in over 70 countries

Global Standards

Global standards are crucial to the project management profession. Standards ensure a basic project management framework is applied consistently worldwide.

- 11 global standards (including Program and Portfolio Management)
- 2 million *A Guide to the Project Management Body of Knowledge* (*PMBOK*® *Guide*) Circulation

Credentials

PMI's credentials and professional development opportunities can help business professionals start, build or advance their careers in project, program and portfolio management.

Certified Associates in Project Management (CAPM®)

- Understand the processes and terminology and have a fundamental knowledge of the *PMBOK*® *Guide*
- Demonstrate knowledge of project management practices

- Contribute to project team as a Subject Matter Expert

Project Management Professionals (PMP®)

- Are responsible for all aspects of the project for the life of the project
- Lead and direct cross-functional teams to deliver projects
- Demonstrate sufficient knowledge and experience to apply a methodology to projects

Program Management Professionals (PgMP) ®

- Are responsible for achieving an organizational objective by overseeing a program that consists of multiple projects.
- Define and initiate projects and assign project managers to manage cost, schedule and performance.
- Maintain alignment of program scope with strategic business objectives.

PMI Risk Management Professional (PMI-RMP℠): A project risk management professional provides expertise in the specialized area of assessing and identifying project risks, along with plans to mitigate threats and capitalize on opportunities.

- Responsible for identifying project risks and preparing mitigation plans.
- Supports project management and the team as a contributing member.
- Minimum of three years of project risk management experience.

PMI Scheduling Professional (PMI-SP℠): A project scheduling professional provides expertise in the specialized area of developing and maintaining the project schedule.

- Responsible for creating and maintaining the project schedule.
- Supports project management and the team as a contributing member.
- Minimum of three years of project scheduling experience.

Network of Registered Education Providers (R.E.P.s)

The PMI Registered Education Provider (R.E.P.) network consists of training organizations, executive development centers at universities and in companies that

provide quality project management training services. Their educational offerings have been assessed by PMI. During this assessment, R.E.P. organizations have demonstrated their capability to provide effective project management training. Only courses offered by R.E.P.s are pre-approved by PMI as meeting the requirements for either attaining or

maintaining PMI's professional credentials. There are more than 1,200 organizations that belong to the Registered Education Provider Program (R.E.P.) in over 60 countries. They range from commercial training providers to universities, corporations to governmental agencies and non-profit PMI practitioner groups. In the last two years, R.E.P.s have trained more than one million people.

Research Program

PMI is the only project management association with a dedicated research arm, responsible for initiating academic research taking place at institutions around the world, and guiding and coordinating PMI-funded research. To date, PMI has invested US $16 million in project management research and has been directly involved in the release of more than 350 publications. PMI's *Project Management Journal*, published in partnership with John Wiley & Sons, is a leading academic journal devoted to advancing the discipline of project management. The Research Department also organizes the PMI Biennial Research and Education Conference that brings together academics and senior practitioners committed to the advancement of empirically-based knowledge in the field.

Academic Program Accreditation

The PMI Global Accreditation Center for Project Management (GAC) is the world's leading global accrediting body for project management degree programs. The GAC's mission is to advance excellence in project management education, worldwide, and to ensure that GAC accredited programs meet current and anticipated talent needs for qualified project professionals. There are over 50 degree programs at more than 20 academic institutions currently accredited by PMI GAC. Several other programs are at various stages of the accreditation process.

APPENDIX B

PROCESS GROUPS

Process Groups	
Initiating Process Group	Defines and authorizes the project or a project phase.
Planning Process Group	Defines and refines objectives, and plans the course of action required to attain the objectives and scope that the project was undertaken to address.
Executing Process Group	Integrates people and other resources to carry out the project management plan for the project.
Monitoring and Controlling Process Group	Regularly measures and monitors progress to identify variances from the project management plan so that corrective action can be taken when necessary to meet project objectives.
Closing Process Group	Formalizes acceptance of the product, service, or result and brings the project or a project phase to an orderly end.

APPENDIX C

KNOWLEDGE PROCESS AREAS

Knowledge Process Areas	
Integration Management	Describes the processes required to ensure that the various elements of the project are properly coordinated. It consists of plan development, project plan execution, and integrated change control
Scope Management	Describes the processes required to ensure that the various elements of the project are properly coordinated. It consists of initiation, scope planning, scope definition, scope verification, and scope change control
Time Management	Describes the processes required to ensure timely completion of the project. It consists of activity definition, activity sequencing, activity duration estimating, schedule development, and schedule control
Cost Management	Describes the processes required to ensure that the project is completed within the approved budget. It consists of resource planning, cost estimating, cost budgeting, and cost control
Quality Management	Describes the processes required to ensure that the project will satisfy the needs for which it was undertaken. It consists of quality planning, quality assurance, and quality control
Human Resource management	Describes the processes required to make the most effective use of the people involved with the project. It consists of organizational planning, staff acquisition, and team development
Communications Management	Describes the processes required to ensure timely and appropriate generation, collection, dissemination, storage, and ultimate disposition of project information. It consists of communications planning, information distribution, performance reporting, and administrative closure
Risk Management	Describes the processes concerned with identifying, analyzing, and responding to project risk. It consists of risk management planning, risk identification, qualitative risk analysis, quantitative risk analysis, risk response planning, and risk monitoring and control
Procurement Management	Describes the processes required to acquire goods and services from outside the performing organization. It consists of procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout.

APPENDIX D

OTHER PROJECT MANAGEMENT ORGANIZATIONS (WORLDWIDE)

In addition to the Project Management Institute many other project management organizations exist worldwide. Below is a representative sample with a brief description of the organization.

- Office of Government Commerce (United Kingdom)

  The Office of Government Commerce (OGC) is an independent office of HM Treasury, established to help Government deliver best value from its spending. The OGC works with central Government departments and other public sector organisations to ensure the achievement of six key goals.

  One of these goals is, driving forward the improvement of central Government capability in procurement, project and programme management, and estates management through the development of people skills, processes and tools (www.ogc.gov.uk).

- International Project Management Association (founded 1965, Swiss based)

  IPMA® is a world leading non-profit making project management organisation. IPMA® represents 50 project management associations from all continents on international level.

  IPMA® actively promotes project management to businesses and organisations around the world. In order to increase the recognition of the profession, we certify project managers, award successful project teams and individuals, and provide a number of project management publications.

  IPMA® has spread from Europe to North and South America, Asia, Africa and the Middle East, and the number of member associations is steadily growing. Through IPMA® project managers from all cultures and all parts of the world can network, share ideas and bring project management forward in good co-operation (www.ipma.ch/about)

IPMA has established credentialing programs with over 40,000 members in over 40 countries.

- Association for Project Management (United Kingdom)

  APM's mission statement is: "To develop and promote the professional disciplines of project and programme management for the public benefit"

  APM is the largest independent professional body of its kind in Europe. We have 17,500 individual and 500 corporate members throughout the UK and abroad. Our aim is to develop and promote project management across all sectors of industry and beyond.

  The Association for Project Management has over 35 years combining its members' extensive experience in developing the science and art of project management. This is encapsulated in the *APM Body of Knowledge…* (www.apm.org.uk)

- Australian Institute of Project Management (www.aipm.com.au)

  This organization encourages excellence through professionalism in project management and is affiliated with the IPMA (International Project Management Association). The AIPM website references the 2010 AIPM National Conference (www.aipm2010.com.au) to be held in Darwin from 10-13 October 2010. When highlighting the future of project management, social is listed as one of four areas to be addressed at the conference.

  Must project managers demonstrate a higher recognition of the overall social / economic and behavioural impacts of projects within todays cultural and social diversity?

- International Project Management Commission (United States based)

  The International Project Management Commission is the global Board of Standards for project management industry professionals. Our graduate designations are for those with an accredited degree or vast PM experience.

This organization appears to align itself with specialized Masters Certification graduate programs. Only professionals who have been trained by an IPMC approved provider are eligible to take their credentialing exam.

- College of Complex College Management (Switzerland)

This is a non profit organization which recognizes that as project uncertainty increases, traditional project management strategies, tools and methods for delivering complex projects need to be enhanced. The organization strives to be an international voice in growing the profession of complex project management.

It is moving beyond traditional project management bodies of knowledge such as scope, cost, schedule, integrated communication, risk management, human resource management, procurement, and ethics.

In a public release by the Australian Defence Materiel Organisation, Version 2.0 September 2006, the following was written about traditional bodies of knowledge.

> These areas are mirrored in the competency standards of: the Australian Institute of Project Management (AIPM); the International Project Management Association (IPMA); and the Project Management Institute (PMI). These existing project management competency standards, and their bodies of knowledge are, however, very limited and do not have a sufficient theoretical base on which to establish the emergent profession of complex project management. In addition, they are limited in their application to projects with relatively high levels of scope certainty.
>
> The depth of existing traditional project management competency standards and the validity and reliability of assessment, is increasingly becoming a contentious issue with clients, consultants, and contractors. There is a clear need to:
> • significantly increase the depth of behaviours in the workplace (expanded traditional competencies);
> • increase and prescribe the level of underpinning knowledge required;

- add new competencies such as leadership, systems thinking, strategy, business, etc; and
- make the assessment process rigorous

… Traditional project management is highly effective in delivering projects where there is relatively high scope certainty and low levels of development and complexity. It however, is increasingly being recognised as a primary cause of project failure when it is applied to projects where there is complexity, and high levels of uncertainty

Complex projects are characterised by uncertainty, non-linearity, and recursiveness, and are best viewed as dynamic and evolving systems. The competencies required to project manage complex projects go well beyond those required for traditional projects. Complex project managers require much greater breadth and depth in the new competencies than that required by traditional project managers (College of Complex Project Managers, and Defence Materiel Organisation: Competency Standard for Complex Project Managers) (Commonwealth of Australia (Department of Defence) 2006))

APPENDIX E

PROJECT MANAGEMENT INSTITUTE'S INTERPERSONAL SKILLS
(*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, 2008).

Leadership	Leadership involves focusing the efforts of a group of people toward a common goal and enabling them to work as a team. In general terms, leadership is the ability to get things done through others. Respect and trust, rather than fear and submission, are the key elements of effective leadership. Although important throughout all project phases, effective leadership is critical during the beginning phases of a project when the emphasis is on communicating the vision and motivating and inspiring project participants to achieve high performance.
Team Building	Team building is the process of helping a group of individuals, bound by a common sense of purpose, to work interdependently with each other, the leader, external stakeholders, and the organization. The result of good leadership and good team building is teamwork. Team building activities consist of tasks and processes. It involves handling project team problems and discussing team issues without placing blame on individuals. It is essential during the front end of a project and is an ongoing process. Outcomes of team building include mutual trust, high quality of information exchange, better decision making, and effective project control.
Motivation	Project teams are comprised of team members with diverse backgrounds, expectations, and individual objectives. Motivating in a project environment involves creating an environment to meet project objectives while offering maximum self-satisfaction related to what people value most. These values may include job satisfaction, challenging work, a sense of accomplishment, achievement and growth, sufficient financial compensation, and other rewards and recognition the individual considers necessary and important. The overall project success depends upon the project team's commitment, which is directly related to their level of motivation.
Communication	Communication has been identified as one of the single biggest reasons for project success or failure. Effective communication within the project team and between the project manager, team members, and all external stakeholders is essential. Openness in communication is a gateway to teamwork and high performance. It improves relationships among project team members and creates mutual trust. Listening is an important part of communication. Listening techniques, both active and effective give the user insight to problem areas, negotiation, and conflict management strategies, decision making, and problem resolution.

Influencing	Influencing is a strategy of sharing power and relying on interpersonal skills to get others to cooperate towards common goals.
Decision Making	There are four basic decision styles normally used by project managers: command, consultation, consensus, and coin flip (random). There are four factors that affect the decision style: time constraints, trust, quality, and acceptance. Project managers may make decisions individually, or they may involve the project team in the decision-making process. A six phase decision –making model is sometimes used: problem definition, problem solution generation, ideas to action, solution action planning, solution evaluation planning, and evaluation of the outcome and process.
Political and Cultural Awareness	Organizational politics are inevitable in project environments due to the diversity in norms, backgrounds and expectations of the people involved with a project. The skillful use of politics and power helps the project manager be successful. Conversely, ignoring or avoiding project politics and inappropriate use of power can lead to difficulty in managing projects. In today's global environment, the project management team must understand and capitalize on cultural differences. In this way, they are more like to creat an environment of mutual trust and a win/win atmosphere.
Negotiation	Negotiation is a strategy of conferring with parties of shared or opposed interests with a view to compromise or reach an agreement. Negotiation is an integral part of project management and done well, increases the probability of project success.

APPENDIX F

QUESTIONS ELEVEN THROUGH FOURTEEN FOR THE ORGANIZATIONAL DYNAMICS PROGRAM

RESEARCH METHODOLOGY, SURVEY RESULTS, ANALYSIS AND INTERPRETATION

Research Methodology

Question 11 was composed of several inquiries specific to P3 courses. Question eleven's first sub-part (11a) asked about P3 courses and their work applicability with a follow-up question (11b) about any courses that were more valuable than others. Question 11c asked to what degree students and program graduates feel P3 courses are required to be successful in their professional work. 11d asked, did Project, Program, and Portfolio certificate courses meet expectations. A part of answering the question was to describe and include recommendations for change.

Question 12 took a broader approach in asking, to what degree is the structure of allowing people to select courses (rather than required to take certain courses) in Organizational Dynamics valuable or important to you. The Master of Science in Organizational Dynamics degree program promotes workplace application and integrated thinking. Therefore, although there are curriculum guidelines which must be met, each student has significant flexibility in choosing courses. Course offerings are deep and wide with professors having varied backgrounds from many schools within the University of Pennsylvania. (i.e. College of Arts and Sciences, Wharton School of Business, Penn Law, School of Engineering). Question 13 more narrowly focused on each student in asking to what degree selecting courses meets individual learning interests or needs.

Question 14 addressed leading complex projects. It asked if complex projects have a better chance of successful delivery when they are led by a project manager who is soft skill trained. Lastly, question 15 focused on student or program graduate perception. Again, a series of questions explored several topics. Each question asked about personal perception of the value of the MSOD degree (a) for career development within your current organization, (b) to your organization, and (c) to your career development in finding another job opportunity.

Survey Results, Analysis, and Interpretation

P3 Courses, Current Work Application, and Expectations

11a. To what degree are/were your core P3 classes applicable to your current work (see Table 23)

Table 23. Degree to Which Core P3 Classes are Applicable to Your Current Work

Very Little	1	2	3	4	5	Great Amount
	0	1	1	4	13	

Thirteen people responded with a five or a great amount rating indicating that the core P3 courses are applicable to their current work. Four responded with a four rating (good amount); one person each responded with a three or a two rating (little amount).

11b. Which courses in particular (see Table 24)?

When asked which courses in particular were most valuable, the breakdown starting with most valuable was Managing Project Portfolios, Program Leadership, Managing Project Risk, all core classes, and Process Improvement Tools and Strategies.

Three students mentioned Organizational Project Management as a P3 course with work applicability.

Since the all P3 students are currently either functioning in a project management role or have advanced beyond it, Organizational Project Management course feedback focused on wanting a more in-depth study rather than an introduction to many broad topics. Many interviewees responded with more than one course but ranked them according to the first, second, or third course they found most valuable.

Table 24. P3 Course Class Ranking

Course	Ranking	Percentage of All Interviewees
Managing Project Portfolios	1	74%
Program Leadership	2	47%
Managing Project Risk	3	42%
Organizational Project Management	4	16%
All Core Classes	5	11%
Process Improvement Tools and Strategies (not an original core course)	6	11%

11c. To what degree do you feel P3 courses are required to be successful in your professional work (see Table 25)

Table 25. Degree to Which You Feel P3 Courses are Required to be Successful Your Professional Work

Very Little	1	2	3	4	5	Great Amount
	0	1	7	7	4	

Twenty-one percent of respondents said “a great amount” (five rating). Seven interviewees (thirty-seven percent) gave a four rating and seven interviewees provided a three rating. One person responded with a two rating. One comment was that before P3 courses were taken, the graduate had a foundational level of the subject matter. Practical knowledge was learned while taking courses. Consensus is that with every course there is immediate workplace application which translates to a win-win for the student and their organization.

11d. Overall, did the P3 courses/concentration meet your expectations (see Table 26)

Table 26. P3 Courses/Concentration Meet Your Expectations

Very Little	1	2	3	4	5	Great Amount
	0	2	3	9	5	

Seventy-four percent answered either a good or great amount (four and five ratings). Three people responded with a three rating; two interviewees responded with a two rating (little amount). The two people who responded with a two rating were in pilot courses that did not meet their expectations. As the Projects, Programs, and Portfolio Studies concentration matured, student feedback was interwoven into classes and improvement was noted. An overwhelming majority of students (nine interviewees) rated the P3 concentration with a four rating (a good amount) that their expectations were met. Five interviewees provided a five (a great amount) rating.

Both high response and satisfaction ratings support the premises with which the MSOD program and P3 concentration are designed. They support students who have a

propensity toward learning about the art and science of project management. Seemingly, the university identified a niche need. The University of Pennsylvania is among institutions of higher learning that are offering project management classes. Likewise, mid-career professionals recognize that social characteristics need to be integrated into management models and want to learn the practical mechanics of how to do this.

11e. Please describe and include recommendations for changes

Below are the answers received divided by Projects, Programs, and Portfolio Studies concentration strengths and improvement areas.

<u>Concentration Strengths</u>

- Having professors who are practitioners is important
- Most courses are tangible; content can be applied to any function, in whatever role or organization one is in
- Cross industry exposure
- Team Strategy Course (application)

<u>Areas for Improvement</u>

- Provide more exposure to people who are in the industry
- Enhance courses by bringing in more speakers with practical experience (different from luncheon speakers)
- Some courses were a pilot and needed time to mature
- Without a Project Management Professional (PMP) certification the degree is not marketable. Program needs to tie into what is already industry established rather than go out on its own. Being distinct from PMP is not a value to students.
- Need more continuity between professors for the core P3 coursework

- Add more quantitative analysis courses
- Team Strategy Course
  - Value can be gained by pairing students up for a collaborative project
  - Align with an organization that will allow students to work with them
  - Not a good end-cap; should be optional or come out all together
  - Remove the course and ask students to do their Capstone on a P3 topic
  - Need a formal academic class that ties everything together; the course does not do that as it is currently structured

Observations

- Courses were cookbook or "how to;" elective courses expanded the mind
- By adding P3 courses, original continuity between the six core courses may be lost
- The real life experience and examples that professors provide is valuable
- Formalize relationships with external partners for more experiential learning
- Be more involved in the corporate or business side of project management (i.e. Corporate Executive board, Gartner, Forester) with maybe a link to the Project Management Institute

Organizational Dynamics Program: Course Selection Structure

12. To what degree is the structure of allowing people to select courses (rather than required to take certain courses) in Organizational Dynamics valuable or important to you (see Table 27)

Table 27. The Importance of Course Selection Flexibility

Very Little	1	2	3	4	5	Great Amount
	0	0	2	7	10	

Seventeen interviewees (eighty-nine percent) agreed that being allowed to select courses was valuable or important to them. They responded with either a good amount (four) or a great amount (five) rating. One student commented that they would like a little more guidance in choosing classes based on identifying what their program objectives are. However, a graduate stated that each student can choose courses based on their current skill sets and areas of interest. This means that they can explore different directions and change direction as they progress through the program. Their conclusion was that the MSOD program is very well rounded. Another graduate expressed enthusiasm and said that he loves choices. Only one student found the course selection structure to be limiting. The reason given is that graduation requirements limited her ability to take more courses based on interest.

An overall opinion seemed to be that everyone has strengths and weaknesses. Also, that each student starts the program with distinct experiences and skill sets. Therefore, it is good for students to have choices about what courses they take. In that way, each student can choose courses customized to their goals and objectives to enhance soft skills.

13. To what degree does selecting courses affect/meet your individual learning interests or needs (see Table 28).

Table 28. The Degree to Which Selecting Courses Meets Individual Learning Needs

Very Little	1	2	3	4	5	Great Amount
	0	0	1	6	12	

Ninety-five percent respondents answered a good to great amount. Comments included that course selection flexibility makes a big difference in the program's value. Another said that course selection structure allowed for each student to make the best choice for them and get the most they can from the degree program. In fact, the MSOD program's recognition of allowing students freedom of choice when selecting courses is representative of practicing what it teaches in the social competency arena. The program is connecting with its students while mentoring them. In essence, while academic courses are enhancing leadership skills, the Organizational Dynamics Department is building a relationship with its students. Energy within the degree program self-perpetuates and is sustainable because of this win-win scenario.

Complex Project Management and Soft Skill Training

14. Rate the degree to which the management of complex projects (multiple interdependencies) has a better chance of successful delivery when they are led by a project manager who applies soft skills training to project efforts (see Table 29)

Table 29. The Degree to Which Complex Projects Have a Better Chance of Successful Delivery When Led by a Project Manager Trained in Soft Skills

Very Little	1	2	3	4	5	Great Amount
	0	1	0	4	14	

Seventy-four percent of respondents responded with a great amount rating. Overall, eighteen of the nineteen respondents (ninety-five percent) answered with either a four or a five rating. The one person who provided a two rating said that soft skills are not the most important thing. Rather, being business savvy and having project acumen are more important. An observation is that this graduate also stated in an earlier question

that he is more quantitative oriented and tended to select courses accordingly. Also, he said that part of his reason for pursuing an Organizational Dynamics degree was because he wanted to become more sensitized to soft skills.

Other comments included:

- soft skills are important regardless of project size
- soft skills are needed to manage ambiguity
- more senior level project managers need soft skills
- organizations believe that soft skills are important; however, organizations do not make decisions and execute projects using the premise
- organizations do not walk the talk

MSOD Degree Value and Perceptions for Career, Organization, Future Opportunities

15. What is your personal perception of the value of the MSOD degree (see Table 30):

15a. for your career development within your current organization

Table 30. The Value of the MSOD Degree for Career Development within Your Current Organization

Very Little	1	2	3	4	5	Great Amount
	0	2	7	5	5	

Only ten of the nineteen subjects (fifty-three percent) provided either a four (good amount) or a five (great amount) rating. Seven interviewees (thirty-seven percent) provided a three or mid-point rating. Common perception seemed to be that although students think that the MSOD degree is valuable, including the soft skill courses, they hesitate to declare that their organizations acknowledge its value too.

15b. to your organization (see Table 31)

Table 31. The Value of the MSOD Degree to Your Current Organization

Very Little	1	2	3	4	5	Great Amount
	0	3	7	2	6	

Confirming answers to the question regarding the value of the MSOD degree for your career development within your organization, six students answered a great amount (five rating). Only two interviewees answered this question with a four rating and seven provided a mid-point or three rating. Notably, two interviewees provided a rating of two.

Comments for the question about value of the MSOD degree to your organization included;

- remains to be seen as far as benefit within the organization
- there are tangible returns organizationally as a project manager brings soft skills back to the organization
- with a former company there was little to no value acknowledged but with a current company, they seem to value the degree more
- no, because of the current economic environment (independent consultant)

These results align to answers provided to earlier questions. Meaning, that although organizations may know that social characteristics are important when leading, communicating, or building relationships, organizations continue to focus on executing to drive bottom line results. A realization that social characteristics can enhance the ability to achieve results while increasing an opportunity for sustaining them is beyond what most organizations either understand or have current capability to change.

15c. to your career development in finding another job opportunity (see Table 32)

Table 32. The Value of the MSOD Degree to Your Career Development in Finding another Job Opportunity

Very Little	1	2	3	4	5	Great Amount
	0	0	1	6	12	

Twelve interviewees (sixty-three percent) responded with a five rating (a great amount). Two of the twelve enthusiastically said they would respond with a five plus if given the option. Six interviewees (thirty-two percent) responded with a four rating; and, one responded with a three or midline answer. Overall, ninety-five percent of students or graduates perceive that a Master of Science in Organizational Dynamics degree from the University of Pennsylvania will help them find another job.

One student who graduated in Summer 2008, has already changed jobs twice since earning his degree. A current student stated that the degree program has added a strategic management perspective to his existing skill set. Conversely, another interviewee commented that a lot of people still do not know what organizational dynamics is so it has to be explained to them.

Although a MSOD degree is not necessarily perceived by organizations as holding great value, student perception is that it does have great value to their career development within their current organization(s); also, in finding other job opportunities. Thus, many students have an interest in continuing to learn about organizations and enhancing personal social characteristics beyond graduation. To this end, a PhD program resonates for many graduates with the hope that it, too, will come to fruition in the short term.

The Organizational Dynamics and University of Pennsylvania communities are affable and intellectually stimulating. Also, exceptional networking can be found where students meet people from all industry sectors. A small but present international body of students adds to class diversity. The program's self-sustaining energy was referred to multiple times during phone interviews. Those students who have spent time off campus working on Independent Studies or their Capstones miss the interaction of meeting on campus and relating with classmates and professors. The complex and dynamic interactions of the program's structure, its broad course offerings, diverse students, and professors from multiple university colleges is what brings it alive.

APPENDIX G

ELECTIVE COURSE OFFERINGS AND P3 STUDENT INTEREST

Elective Course Title	P3 Students Registered/Completed Course
DYNM 602: Leader-Manager as Coach	2
DYNM 603: Administrative Decision-Making & Problem Solving	4
DYNM 604: Organizational Risk Management	1
DYNM 606: The Individual and the Organization	2
DYNM 607: Psychodynamics of Organizations	2
DYMN 608: Organizational Dynamics of Working in the Global Marketplace	1
DYNM 610:: Knowing Yourself: The Coach as an Instrument of Change	2
DYNM 611: If Not for Profit, for What? A Study of Nonprofit Organizations	1
DYNM 612: Mastering Organizational Politics and Power	3
DYNM 616: Globalization: World Politics, Social Order, and Economic Impacts	1
DYNM 618: Who is Peter Drucker?	2
DYNM 622: Building Effective Organizations: Getting Things Done	
DYNM 625: Decision Making Systems	1
DYNM 626: Leading the Professional Service Organization	1
DYNM 629: Organizational Consulting: Proseminar in Organizational Development	2
DYNM 630: Business Process Excellence- From Vision to Reality	1
DYNM 631: Strategic Planning & the Process of Implementation	2
DYNM 636: Coaching Across Cultural and Geographic Distances	1
DYNM 637: Coaching and Facilitating Teams	2
DYNM 638: Evaluation of Plans & Programs of Organizations	1
DYNM 639: Leading the Virtual Organization	1
DYNM 640: Virtual Forms of Collaboration	2
DYNM 641: Art and Science of Organizational Coaching	
DYNM 642: Allocating Resources: Economics, Technological, and Human	2
DYNM 644: Strategic Thinking, Planning, and Forecasting	1
DYNM 645: Project Based Laboratory-Project Team Strategy	3

DYNM 648: Ethics and Leadership	1
DYNM 651: Group Team Dynamics: Understanding the Overt and Covert Dynamics	2
DYNM 655: Using the Political Process to Effect Organizational Change	5
DYNM 657: Understanding and Preventing Organizational Deviance	1
DYNM 758: Sweden: Strategies for Thriving in the 21st Century	3
DYNM 660: Mistakes and Errors, Accidents and Disasters	1
DYNM 664: Organizational Culture and Learning	3
DYNM 661: Organizational Culture Change: Theory & Practice	1
DYNM 668: Organizational Ethics and Integrity	2
DYNM 669: Leadership in Organizations: Public and Private, Personal and Professional	3
DYNM 670: Intercultural Communications	1
DYNM 671: Ownership Matters	4
DYNM 672: A Systems Approach to Crisis Preparation and Building or Resilience	1
DYNM 675: Advanced Seminar in Organizational Politics	1
DYNM 677: Human Capital and Human Nature: Sources of Creativity and Innovation	1
DYNM 681: Processes of Interpersonal Communication	1
DYNM 684: Organizing for New Services and New Markets	1
DYNM 685: Contemporary Communications: Credibility, Accuracy/Inaccuracy	1
DYNM 694: Statistical Tools for Improving Organizational Effectiveness	2
DYNM 697: The Business of Coaching	1
DYNM 699: Independent Study	3
DYNM 702: Master's Project 1	1
DYNM 705: Capstone	12
DYNM 712: Master's Project II	1
DYNM 724: China in Transition, Greater China, and the US-West	1
DYNM 754: China in Transition 2	3
DYNM 766: Perspectives on Change in the Czech Republic	1
DYNM 780: Great Britain: European Community and the US	2
DYNM 783: European Approaches to Large Project Management and Strategic and Creative Leadership	8
DYNM 899: MPhil Final Paper	3
DYNM 990: Master's Continuation	1
DYNM 991: Transfer Course 1	2
DYNM 992: Transfer Course 2	2

There is an expansive selection of possible elective classes. As a result, most courses had three or fewer of the twenty-seven subject population enroll. The following courses had greater than three or more students from the study population enroll. They are:

- Leadership, Global, Practitioner, and P3 concentrations

  DYNM 783: European Approaches to Large Project Management and Strategic and Creative Leadership (eight students). Since the P3 concentration is focused on the discipline of project management this finding makes sense.

- Leadership and Practitioner concentrations

  DYNM 655: Using the Political Process to Effect Organizational Change (five students)

- Leadership concentration

  DYNM 612: Mastering Organizational Politics and Power (three students)

  DYNM 671: Ownership Matters (four students)

- Practitioner concentration

  DYNM 603: Administrative Decision-Making and Problem Solving (four students)