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A Different Approach to Project Management: The Use of Soft Skills

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A Different Approach to Project Management:

The Use of Soft Skills

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Thesis

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Abstract

The term soft skills is traditionally used to describe interpersonal and subjective skills such as leadership, communication, and emotional intelligence. This paper addresses a further explanation of soft skills, their relation to project management, project management education, and the highlighted differences between a transactional leader and a transformational leader. Project management has often been defined as the making of schedules/tasks; but more importantly providing the inspiration, motivation, and facilitator of great minds to produce innovative ideas. Because of the sheer necessity for human interaction within the project management profession, soft skills are of crucial concern. Although mastering soft skills is a heavily weighted aspect of the profession, the current education of project managers is lacking the proper emphasis on soft skills. A further case study will be analyzed comparing three project managers and their skill sets based on objective and subjective evaluations of their hard and soft skills. Hypothesizing that the soft skills of the project managers will rate significantly higher than the objective evaluations of their hard skills. Proving that the currently education of only hard skills is not sufficient for successful project managers.

Keywords:

Project Management, Management, Soft Skills, Hard Skills, Technical Skills, Interpersonal Skills, Leader, Effective Project Manager, Transformational, and Transactional.

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Preface

Special thanks should be given to professor Steven Fries for introducing me to this topic that I have become so passionate about. Without his teachings, I would not be the project manager and leader that I am striving to become. I would also like to thank the project managers and their evaluating peers at PCA (Packaging Corporation of America) for acting as my guinea pigs to provide a case study to support my research. Without their honesty, I could not have determined the results of the comparison case study.

Introduction

Project Management as a whole has taken on new meanings in the last few decades; it has been said that project management is the new form of ‘general management’ (Pant, Baroudi 2008). The need for faster deadlines, increased use of teams, and decreased budgets have turned a project manager position into a conundrum of different skills. These skills include project management skills (outlined by the PMBOK®), technical talents of specific trade such as IT or architecture, as well as, soft skills. The incorporation and harmony of each of these skill sets are most often identified as the difference between a transformational or transactional leader. A transactional leader is a leader contingent on reward and manages by exception, which focuses on mistakes (Jensen, Kohn, Rilea, Hannon, Howells 2007). Contradictorily, a transformational leader is one who is comprised of, “idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration” (Jensen, Kohn, Rilea, Hannon, Howells 2007). The difference between the two has always been a point of consideration among leaders and aspiring future leaders. A transactional leader would have both project management and technical skills. The crucial difference between transactional leaders and transformational leaders is the addition of soft skills.

Soft skills are skills that are intangible and include traits such as emotional intelligence, communication, problem-solving, and conflict management (Marando 2012). These interpersonal skills are those that make us more human in nature. This pertinent information leads us to several questions:

- Can a request for proposal be approved without management?
- Can a project manager lead a project without stakeholders?

- Can a project continue without a project team?
- Can you procure without another being to procure from?
- **Can you manage a project without other humans?**

The answer to these questions is absolutely not. Human interaction and therefore soft skills are vital for project managers to complete their tasks.

Project management is managing stakeholders and the project team -- people that are involved in your project. If this is the case, should soft skills be a subset of information compared to the hard skills and technical data? Shouldn't people skills be mentioned for the profession whose responsibilities include managing all assets of the project and the project team, as mentioned in the questions above?

Pant and Baroudi discuss in the International Journal of Project Management, that “the project management discipline still appears to place greater emphasis on hard skills at the expense of the softer human skills” (Pant, Baroudi 2008). In agreement with this statement, the following paper will address a further explanation of soft skills, their relation to project management, project management education, and the highlighted differences between a transactional leader and a transformational leader.

The topic of soft skills/people skills/management skills has always fascinated me because of my technical background. I entered the realm of project management completely by accident. All of my formal training had been of that of an engineering technical skill. In my novice experience as a project manager, I have found a growing passion for the understanding of management skills that transform an employee into a

leader. I will greedily take the findings of this report and put them into action for my own use.

Problem Statement Justification

Pant and Baroudi (2008) discuss in the International Journal of Project Management, that the “project management discipline still appears to place greater emphasis on hard skills at the expense of the softer human skills” (Pant, Baroudi 2008). In agreement with this statement, the following paper will address a further explanation of soft skills, their relation to project management, project management education, and the highlighted differences between a transactional leader and a transformational leader.

The issue of not including soft skills within the project management education should be solved because soft skills lay the groundwork for a transformational leader, versus a transactional leader. According to Pant and Bassam, “project management is viewed as the ‘new’ form of general management which enables organizations to integrate, plan, and control schedule-intensive and one-of-a-kind endeavors in order to improve overall organizational performance... and should be cultivated with the education that includes both technical and human skills” (Pant, Baroudi 2008). The proper training in these management skills should hold a higher emphasis in the education of soft skills if this is, in fact, the growing expectation of project managers.

The education of soft skills should be integrated into project management education because of the forced relationships needed to complete projects. It is imperative that project managers delegate and interact with the stakeholders and internal personnel to ensure the project holds true to the triple constraint--scope, budget, and schedule.

This paper will provide an artifact for an explanation of soft skills, the relationship of soft skills to project management, project management education, and the highlighted differences between a transactional leader and a transformational leader.

A case study will be observed using three current project managers to test the hypothesis that soft skills in comparison to the technical skills taught in the PMBOK® have no bearing on each other to determine the efficacy and leadership quality of a project manager.

The following will not prove how soft skills could be added into the PMBOK® or any other project management education tools. This paper will not prove that the use of soft skills alone will create a great leader (this can only be achieved through the delicate balance of hard and soft skills). The paper will not conclude any research on university education curriculum, or how to approach teaching soft skills, or if soft skills can be learned.

Literature Review – Analysis of Related Work

The Interview

You are in your first interview after college. You have attended your classes and will soon graduate with a nearly perfect grade point average. You have been on the dean's list every semester, your professors are extremely proud of you and your parents are in awe of the child they have raised. All of these thoughts are building in your mind to answer the looming question, why should we hire you? You walk in the door, palms sweaty, but looking your best, and what comes out of your mouth... soft skills.

One of the prominent responses interviewers have after an interview include deficiencies in soft skills such as, “candidates are normally academically proficient, but lacking in soft skills such as communication as well as verbal and numerical reasoning” (Schulz, 2008). Additionally, Schulz says, “people who are extroverted, who are good at marketing themselves, and who are socializing easily are rated superior to others who lack those attributes” (Schulz, 2008). Which leads us to wonder, since these non-technical skills are highly sought after during and interview, are students being taught all the necessary skills to thrive in the business world?

Soft Skills versus Hard Skills

It is imperative that the reader understands the difference between soft and hard skills. There are many different explanations dedicated to this topic; the following is a definition of the two types of skills and their differences.

Hard skills are the technical aspects, usually containing tangible deliverables such as project charter, or a work breakdown structure. These skills are easily taught and replicated through spreadsheets, templates, or hard data (Marando 2012).

Soft skills are interpersonal skills that are intangible and include traits such as emotional intelligence, communication, problem-solving, and conflict management (Marando 2012). These skills are often noted as additional traits in interviews such as motivated, self-starter, being personable, etc. Soft skills are the subjective interpersonal skills.

Both hard skills and soft skills are needed in the profession of project management. A list of more examples of hard and soft skills can be found in the appendix in Table 1.1 Soft Skills vs. Hard Skills. The International Journal of Project Management, Gillard states, “as the field of research surrounding project management continues to grow, it is becoming more evident that success in the role of the project manager cannot be attained with a technical skill set only” (Gillard 2009). Adding soft skill elements can turn an average project manager, into a leader, or possibly even a transformational leader.

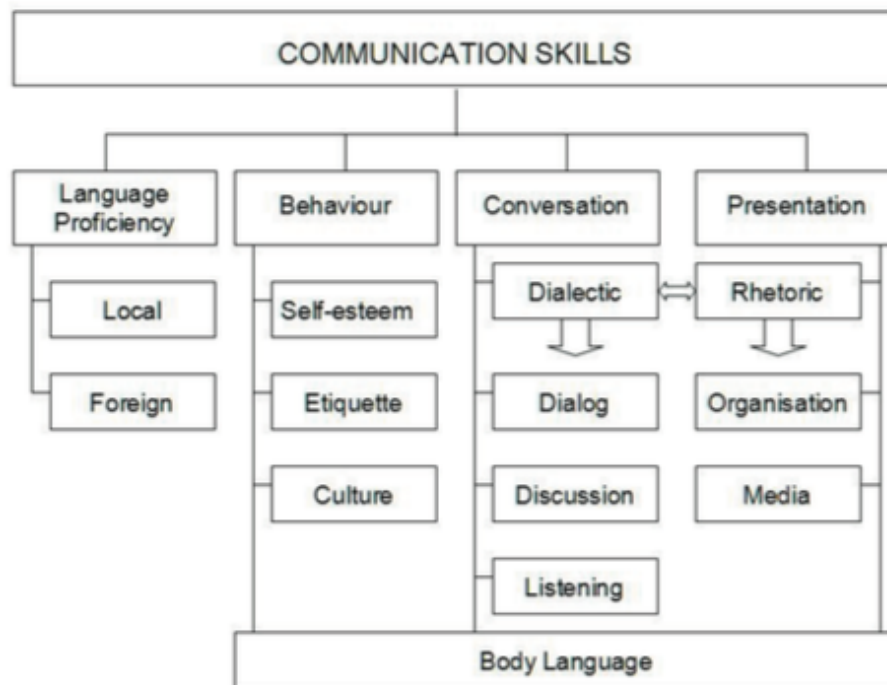
Soft Skills Explained

As mentioned there are many soft skills that one could continue into further study. The following are soft skills that apply directly to project management and the success of the project and the project team.

Communication

Communication is one of the most noticeable soft skills to obtain; this includes your verbal and nonverbal responses. These responses can make or break the interview for

your dream job, or put a halt on an important project. According to Schulz, there have been arguments that communication is not a soft skill, his reply is as follows, “one may have the ‘hard’ skill of knowing what usage is correct and what is incorrect, but lack the ‘soft’ skills of knowing when to use only standard forms and in what tone to use them” (Schulz, 2008). The form and tone are the type of communication that is considered a soft skill. The following chart shows communication skills at their most basic form, language proficiency, behavior, conversation, and presentation. These are further broken down into more advanced communication skills such as dialectic, rhetoric, and body language.



Communications Skills Figure 1 (Schulz, 2008)

Communication skills are the foundation for interactions with others and can be the most basic form of self-advocacy. A project manager must have, the minimum, basic communication skills to interact not only with the project team, but also with stakeholders, and executives. Advanced skills in communication as a project manager are

probably more of a 'nice to have' instead of a 'must have' in comparison for example to the intellect a surgeon would need to perform an appendectomy. However, depending on the culture of the project team and stakeholders you're working with, the need for communication skills may increase. For example, if you're working with a chemist who typically stays in the lab all day, and for the most part does not want to be bothered with chatter like project updates, the need for advanced communication skills may be decreased. However, if you're working as a project manager at a design company wherein the employees attended mostly liberal universities with comprehensive study in rhetoric and critical thinking, you may have an increased need for advanced communication and persuasive skills. In either scenario increased communication skills cannot steer you in the wrong direction no matter what situation you are approached with.

Conflict Management

Conflict can arise from the output of hard skills, such as budget, scope, schedules, and quality. These conflicts can include goal incompatibility, staffing resources, cost constraints, task uncertainty, performance trade-offs, and more. Unless a soft skill is used to lessen the conflict, the sources of the conflict may go unaddressed (Marando 2012). Conflict management can be broken down into five styles: accommodating, avoiding, collaborating, competing, and compromising (Fries, 2016). Accommodating conflict management is when you cooperate with your colleague at a high level. This style can save your relationship with your colleague, however, this could be counter-productive to your own goals and objectives. The avoiding management style is one of the less attractive conflicts management styles. This is when a person avoids the subject or the person and does not actively peruse a solution to help either party. The collaborating

conflict management style is when you join with your college to achieve both of your goals. The collaborating style of conflict management can be complex but ultimately creates a win-win scenario. This can only be achieved if both colleges trust one another, and can require a great amount of time and effort to come up with the best solution for all parties. The competing style of conflict management is the opposite of collaborating, in which the colleges do not attempt to cooperate with one another and creates a win-lose situation. This style does not have a need when quick action is needed to keep the project moving forward, although it can be at the expense of your opposing college. Finally, the compromising style of conflict management creates a lose-lose situation where neither college gets what he or she wants. This can be helpful at times when both parties have equally important reasons for their decided decision. However, compromising is most often used as a fallback when collaborating has failed (Fries, 2016). A project manager must understand all types of conflict management, and when to implement each style for the most effective outcome. Conflict management is especially useful when the project team is fundamentally incompatible. Typically, the project managers do not get to choose their teams to work on projects, which can increase tension and may lead to project failure. Understanding the dynamics of conflict management may help the project manager in overseeing the project and its success. Furthermore, by understanding your tendencies into each of these categories, the project managers can become more self-aware of their actions. Becoming self-aware is only one of the four categories of emotional intelligence.

Emotional Intelligence

According to the Oxford dictionary, emotional intelligence is defined as, “the capacity to be aware of, control, and express one’s emotions, and to handle interpersonal relationship judiciously and empathetically” (Oxford Definition of emotional intelligence). The study of emotional intelligence is divided into four categories: self-awareness, social-awareness, self-management, and social skills. Emotional intelligence requires an understanding of oneself and weaknesses before any category can be learned. A literature review from the University of Pacific department of psychology states the following about the power of intellect in emotional intelligence.

People are put at ease, having managers who are self-aware, achieving a balance between personal life and work, remaining calm in crises, developing and maintaining relationships, preserving in the face of obstacles, taking quick and unhesitating action when necessary, dealing with difficult workers, and being able to change when change is required (Jensen, Kohn, Rilea, Hannon, Howells 2007).

Having a strong aptitude toward emotional intelligence will support a project manager’s ability to lead a team towards success. Not knowing your emotional intelligence needs may lead the project team to consider your impulsivity as mistrust. This can affect the overall outcome of the project. It is even being researched in the same psychology department that, “if IQ is held constant, emotional intelligence abilities will be helpful in distinguishing leaders that are more effective” (Jensen, Kohn, Rilea, Hannon, Howells 2007). Although it may seem obvious, the quotation above makes it clear that having emotional intelligence in addition to the technical skills can give students a competitive edge. This is likely true of all soft skills, without them the students would be fine applicants of nearly any job, but with the addition of soft skills they can surge ahead of their peers to accomplish great things.

Soft Skills in Relation to Project Management

Switching the focus to how soft skills relate to project management specifically, the following information was found. In an article written by Bernd Schulz, he writes, “for decades employers as well as educators frequently complain about a lack of soft skills among graduates” (Schulz, 2008). Similarly, in an abstract of a review called, *Hard Evidence on Soft Skills*, the authors Heckman and Kautz write, “achievement tests miss, or perhaps more accurately, do not adequately capture, soft skills...that are valued in the labor market, in school, and in many other domains” (Heckman, Kautz 2012). As already stated, project management is certainly a domain in which soft skills are needed. Consider the following hard skills through the lens of a project manager. These include tangible items, such as schedules, risk management reports, critical path analysis, budget, etc. (Marando 2012). Creating these elements is not the only task required of the project manager. The elements must then be processed, presented, and upheld through the project progress and manipulated for future projects.

Considering any one of these hard project management skills in an application will also lead to a required soft skill. When creating a schedule, one must consider the human aspects of negotiating timelines for the proper team, or problem-solving techniques if there are family emergencies that alter a team member’s availability. Consider risk management, one must use human error as a potential risk and know that the likelihood of a human error happening is high. The project manager must have clear communication lines for mitigation plans, problem-solving, and even conflict resolution. Essentially, most all of the hard skills in project management, cannot be implemented

without applying a soft skill as well (Marando 2012). This point is reiterated in the table below.

Table 1: Hard Skills that lead to the use of Soft Skills

Hard skills that lead to	The use of Soft Skills
Completed schedules	Decision-making, negotiation
Budget Concerns	Communication, expectations management, negotiation
Risk management	Critical observation; adaptability
Change Requests	Adaptability; conflict resolution
Project Team Building	Leadership; strong work ethic; empathy
Diminished Resources	Problem-Solving; emotional intelligence; leadership
Poorly identified tasks	Decision-making; strong work ethic

In a project created by a student at Brandeis University, the following was noted as the top reasons that cause projects to failure (Marando 2012). Each of these reasons was broken down (subjectively by the original author) into the use of hard and soft skills. The chart below depicts that both soft and hard skills are at play towards the key reasons why a project fails. Reiterating that learning one type of skill at full capacity will not always result in a successful project manager, who's success is directly hinged on the success of their managed projects.



Figure 2: 10 Reasons for Project Failure (Marando, 2012)

Based on the data above, even the top reasons for failure do not exclusively represent one set of skills or the other. It's the combination of both skill sets of the project manager that push the project away from failure and toward success. The application of soft skills in daily project management tasks is why this category should be a primary focus in project management education.

Soft Skills in Relation to the Project Management Process

According to the PMBOK® by the Project Management Institute®, there are five process groups; initiating, planning, executing, monitoring and controlling, and closing (PMI®, 2013). The following are the main aspects of each process and its predisposition towards soft or hard skills (Marando 2012).

Initiating:

SOFT Describing ideas and opportunities to those who influence and authorize projects

SOFT Dialogue needed to reach consensus regarding project

HARD Writing concise and clear project charters

Planning:

SOFT Determining measurable project objectives and outcomes

SOFT Establishing team organization and procedures

HARD Accounting for constraints and their impact

Executing

SOFT Filtering information to the appropriate level of detail for the audience

HARD Ensuring timely, accurate, candid information

SOFT Identifying, evaluating, prioritizing, and communicating risks and issues

Monitoring and controlling

SOFT Report on work that has been done, and is currently in progress

HARD Change management, including implementation of contingency plans

Closing

SOFT Assessing and communicating success criteria

SOFT Persuading team and management to prioritize lessons learned

HARD Effectively transferring responsibilities

Each of the process groups contains hard skills that are vital steps needed to complete the process, but also include the soft skills that cannot be overlooked needed to in turn complete the hard skills. The interpersonal skills offer an advantage to the project manager in achieving the hard skills more swiftly, than without the soft skills.

PMBOK® Coverage of Soft Skills

Studying the Project Management Body of Knowledge, the following is stated as coverage of soft skills:

Interpersonal skills, sometimes known as “soft skills,” are behavioral competencies that include proficiencies such as communication skills, emotional intelligence, conflict resolution, negotiation, influence, team building, and group facilitation. These soft skills are valuable assets when developing the project team. For example, the project management team can use emotional intelligence to reduce tension and increase cooperation by identifying assessing and controlling the sentiments of project team members, anticipating their actions, acknowledging their concerns, and following up on their issues. (PMI®, 2013)

The PMBOK® has been one of the literary anchors for project management since 1987 (PMI®, 2013). PMBOK® explains soft skills as, ‘valuable assets when developing the project team’. Taking the context at its literal word, project managers should only ‘people skills’ when forming a team. Once the core team has been developed, project managers are to rely only on the technical data to push a project towards a success. This is solidified by the hundreds of additional pages of the PMBOK® that focus exclusively on the technical aspects of project management. This is merely a vague interpretation of what soft skills are and the breadth of their importance throughout all project management processes.

In an article published by the International Journal of Project Management, Pant and Baroudi state the following.

The focus of this project management literature [PMBOK®] has always been on the hard skills deemed necessary for managing projects, relegating soft skills to the background. Such an approach has not shifted significantly even in the current edition [2004] and its emphasis is still, in the main, in the delivery of hard concepts such as technical knowledge, scientific management principles, the usage of tools and tangible outputs. In contrast, the coverage of soft skills appears to be both piecemeal and inadequate. Some might even suggest it tokenistic (Pant, Baroudi 2008).

In agreement with the statement above, one can only find one small paragraph dedicated to soft skills out of nearly five hundred pages of hard skills data in the PMBOK®. This seems unimaginable due to the information above showing how significant soft skills are for a project manager.

Furthermore, after using the PMBOK® as a guide to study to take the Project Management Profession exam; the project manager will become certified as a Project Management Professional® by the Project Management Institute®. The certification is held by the top project managers in the industry, the project managers to aspire to become. Since this is the case, how can the PMBOK® accurately house all the information needed to become an aspiring project manager without teaching the soft skills necessary for greatness? Gillard writes, “the skills required for project managers are now often divided fifty-fifty into traditional hard skills... and soft skills” (Gillard 2009). One must consider how the project managers can be near greatness at all, without fifty percent of the skills required.

PMI® Coverage of Soft Skills

Although the PMI® PMBOK® has little to say about soft skills in relation to their need in the study of project management. The Project Management Institute website includes the following on the PMI® Talent Triangle under the training and development section. While technical skills are core to project and program management, PMI® research tells us they’re not enough in today’s increasingly complex and competitive global marketplace. Companies are seeking added skills in leadership and business

intelligence — competencies that can support longer-range strategic objectives that contribute to the bottom line (Talent Triangle).

With such an increasingly complex and competitive global marketplace, only knowing the technical aspects of project manager's role will only get you as far as the piece of paper you take with you into your interview. Beyond the door, the leadership and strategic planning are what will ultimately win you over. There is no question as to why PMI® shows this as one of its first training and development tools. Without the use of all three of the skill sets can leave one severely vulnerable. A chart of the PMI® Talent Triangle is also found below in Figure 3.

The talent triangle reminds me of my last day at my internship. My boss told me her goodbyes and said, “Don't worry, even a monkey could do it”. She was referring to my new job as a project manager across the country at one of our sister centers. A few months later I thought she was right, I was busy working with schedules, plowing through emails, and constantly checking in on my checklists. A few months after that, I began to have more responsibilities and more people looking to me for answers on the way things should be done. The talent triangle describes this situation perfectly. Sure anyone can be told what to do, and do it without asking any questions. But the ideal project manager asks questions, is intrigued with people, and how their leadership skills affect the ones around them. The ideal candidate will not only know what to do, and how to approach almost any project interpersonally but will also have the bigger picture in mind for overall business strategy.

The PMI Talent Triangle



Figure 3: PMI® Talent Triangle

Each of the three parts of the triangle is known as the ‘ideal skill set’ for all project managers. Without each of the three skill sets, a project manager can become less competitive in the business field. Each of the categories is split below for a deeper comprehension (Talent Triangle).

Strategic & Business Management (Business oriented skills)

- Benefits management and realization
- Business acumen
- Business models and structures
- Competitive analysis
- Customer relationship and satisfaction
- Industry knowledge and standards
- Legal and regulatory compliance
- Market awareness and conditions
- Operational functions (e.g. finance, marketing)
- Strategic planning, analysis, and alignment

Technical (domain expertise)

- Agile practices
- Data gathering and modeling

- Earned value management
- Governance (project, program portfolio)
- Lifecycle management (project, program, portfolio, product)
- Performance management (project, program portfolio)
- Requirements management and tractability
- Risk management
- Schedule management
- Scope management (project, program, portfolio, product)
- Time, budget, and cost estimation

Leadership (competency in guiding and motivating)

- Brainstorming
- Coaching and mentoring
- Conflict management
- Emotional intelligence
- Influencing
- Interpersonal skills
- Listening
- Negotiation
- Problem solving
- Team building

As you can see, leadership is the category that most highly identifies with the topic at hand, soft skills. The resounding question still remains—if this is a vital part of a project manager’s role, why is it not included in the initial education. PMI® has approached the Talent Triangle, as an afterthought.

Transactional versus Transformational

Those who are transactional leaders are those who only focus on the hard skills. These project managers are considered to be compassionless and only care to know when the tasks will be finished, not who completed the task and how hard they worked to do a good job. Transactional managers may demand tasks to be completed without concern of the human nature. This leadership style can lead personnel to only do exactly what is asked and nothing more, lack motivation, and show animosity.

A transformation leader is one who energizes the team to improve colleagues individually and as a group. A transformational project manager will use soft skills to effectively push the project to success through more praise, charisma, inspiration motivation, intellectual stimulation, and individualized consideration (Jensen, Kohn, Rilea, Hannon, Howells 2007). These soft skills required for a transformational leader then become the difference between an average leader and a great leader who inspires those around him or her to perform to their best ability with a continuous learning nature.

According to Bill Hogg, there are seven qualities that aid to create a transformational leader. These qualities include a clear vision, courage, self-motivation, inspiration, know your people, set a company standard, and follow through (Hogg, 2016). Each of these at their most simple definition is soft skills. Crafting a work breakdown structure will not help you have self-motivation, nor will it empower you to have courage. An operational leader mandating the daily tasks, a transactional leader, does not see the vision or have goals for the future of the company. A transformation leader, “moves beyond the day to day functions and operate at a higher level that is focused on creating change in people and culture that will lead to innovation and growth” (Hoggs, 2016). In essence, captivating the key aspects of highly developed soft skills.

Method

After the researching soft skills, and their relation to project management, I spent a great deal of time deliberating on how to properly captivate the soft and hard skills of the chosen project managers. I considered several quantifiable project data results initially, but ultimately declined that trail of thought due to the variability of each of the project managers accounts. In the below methodology I propose that the evaluation of personal characteristics by oneself and others is the best way to interpret soft skills. The methodology for the case study in support of the thesis is to provide a case study analysis of several working project managers. This study will include the following.

Part I Self-Assessments

Self-assessments will be given to three working project managers. These project managers work on differing accounts, their background work experience varies, as well as working at differing locations.

These self-assessments will rank the individuals based on their character, leadership, emotional intelligence, communication, and overall project management skills. A full list of the topics and how they relate to the role of a project manager can be found below.

Personal Character:

Self-Confidence – Increased self-confidence cannot only help a project manager in their communications with stakeholders but can also radiate confidence onto the other members of the project team. A not confident project manager can introduce unnecessary doubt in the project and of its leaders.

Positive Attitude and Outlook – Presenting a positive outlook can help involve your project team, help boost their confidence and enhance their work performance. A dreary outlook can be equally infectious to the project team and can lead to lessened project success.

Emotional Intelligence – a project manager must have emotional intelligence as they are the central hub of information for the project. If your emotions as a project manager are out of control you cannot perform to your highest capacity as explained in the text above.

Transformational Leadership

Providing a Compelling Vision of the Future – hand in hand with positive attitude and outlooks, providing a compelling vision of the future is imperative so the project team and stakeholders have confidence in the project and its future.

Motivating People to Deliver the Vision – motivation is one of the most difficult, in my opinion, to achieve. As a project manager, you are constantly telling people what to do, and when the task must be complete. Keeping your workers upbeat and on task can be one of the most draining tasks as a project manager.

Role Model – a person with any management responsibilities it is always important to consider yourself as a role model to others. Management leads to high visibility and shows your workers what is expected of them.

Managing Performance Effectively – Not only managing the performance of the individuals on your team but also as a group is important for a project manager. If one of your team members is performing significantly less than the others you will have to deal with significant conflict management and jealousy.

Providing Support and Stimulation – much like motivating, providing support and stimulation can help carry your team to project completion and team growth.

General Project Management Skills – for obvious reasons, it is important for the project manager to obtain general project management skills like scheduling and resource management.

Project Management

Project Integration – including or consolidating project tasks can be important for a project manager to know to lessen lead times or include important tasks into daily activities.

Scope Management – as a project manager it is vital that the project stays within scope, not only in the eyes of the stakeholders or the eyes of the project team. Without a proper scope outline in the project charter, the project could extend past the due date as well as over budget.

Schedule Management – one of the most highly visible tasks, as a project manager is schedule management. Keeping on schedule is something that not only the stakeholders will be keeping an eye out for, but also your management team within your company.

Cost Management – budget, another high visibility concern. How a project manager handles the budget can make or break the project. Keeping a delicate balance between padding the budget, and coming in over budget is a great concern for the project manager.

Quality Management – keeping an eye on the quality of the work from the project team is valued as one of the top three constraints of the project along with budget and schedule.

People Management – People management encompasses conflict management within the team and stakeholders.

Communication – As mentioned in the text above, without effective communication skills the stakeholders will not understand the project status, nor will the project team understand what is needed from them. Constant communication is key to keeping all participants within the project informed.

Risk Management – Risk management is as equally as important as scope, quality, and schedule. If risks are not properly communicated throughout the project, there is a lesser chance of project success.

Project Procurement – Understanding how and where the funds will be allocated through project procurement is something that the project manager must be cognizant of throughout the project. Losing focus of project procurement can lead to project failure.

The questions in the assessment do not denote the characteristics in a specific order. But will be randomly assorted into a booklet of all thirty-eight questions. The assessments are provided by Mind Tools online assessments (Mindtools). The results of the self-assessment will be categorized based on topic and recorded into a bar graph. Each topic is comprised of two or three questions to create a baseline rank of each category. The thirty-eight evaluation questions can be found in Table 2.1 Project Management Assessment, and Table 3.1 Leadership Skills Assessment sections of the appendix.

Part II

Three co-workers for each project manager will be selected to evaluate the project manager using the same assessment as used in the self-assessment. The evaluators will be comprised of an equal project manager, a direct manager, and a subordinate. This will give a more true alignment of what the individual project manager thinks of himself or herself as well as what the co-workers perceive during daily activities. The evaluations will be turned in anonymously.

To record the data, the workers, and self-assessment scores will be averaged in a table and compiled into a bar chart for ease of viewing.

Part III

As the thesis directly relates to the education therein the PMBOK®, the three chosen project managers will then take a twenty-question practice test of the Project Management Professional Exam provided by professor Stephen Onu (Onu). The practice test can be found in the appendix labeled Sample Questions for the PMP® Exam. As noted within my report and shown below, the PMBOK® is very much related to hard/technical skills of project management.

In an article published by the International Journal of Project Management, Pant and Baroudi state the following. “The focus of this project management literature [PMBOK®] has always been on the hard skills deemed necessary for managing projects, relegating soft skills to the background” (Pant, Baroudi 2008).

The practice PMP® exam will test the individuals on their hard/technical skills as a project manager. This data will then be analyzed in comparison to their evaluation results of their soft skills.

Part IV

Personal statements will be taken on the effectiveness, as well as transformational versus transactional qualities of three project managers by both co-workers and managers. This section, however, will be optional and not all evaluators and project managers will be included in the personal statements section. At least one statement will be taken to reflect each of the three project managers.

Hypothesis

It is in my opinion that the self-assessments and the assessment by others will match closely and will show that the project managers have strong soft skills. I hypothesize the PMP® practice exam will show that the technical skills of the project managers are extremely poor. Finally, the statements from co-workers and managers will further prove that the project managers in question are great project managers because of their soft skills, and not specifically because they have or do not have the hard skill education background as the PMBOK® might suggest as the most important factor.

Findings

After an analysis of the evaluations, and of each project managers practice PMP® exam score, the hypothesis that the project management technical skills and their soft skills have no correlation was proven to be incorrect. I was of the opinion that the PMP® technical skills exam would prove extremely poor ratings overall and in comparison to the characteristic or soft skills evaluations. As seen in the charts below, the assessments tested the individuals in three areas, project management, personal characteristics, and transformational leadership. Based on these assessments there was a clear indication that the project managers can be ranked in the following order Troy, Jenna, and Judson. This finding is almost parallel to the scores reflected in the PMP® practice exam, which rank the project managers in the same order; Troy, Jenna, Judson.

The results show that Troy, ranking highly in evaluations and the PMP® practice exam, creates the best project manager of the three evaluated not only for his leadership skills but the combination of his project management technical knowledge as well. Jenna, and then Judson followed his scores in rank. Although the hypothesis was proven incorrect, the results note that having one or the other set of skills (soft and hard) will not create the best possible project manager. Only in combination will the project manager have the best result.

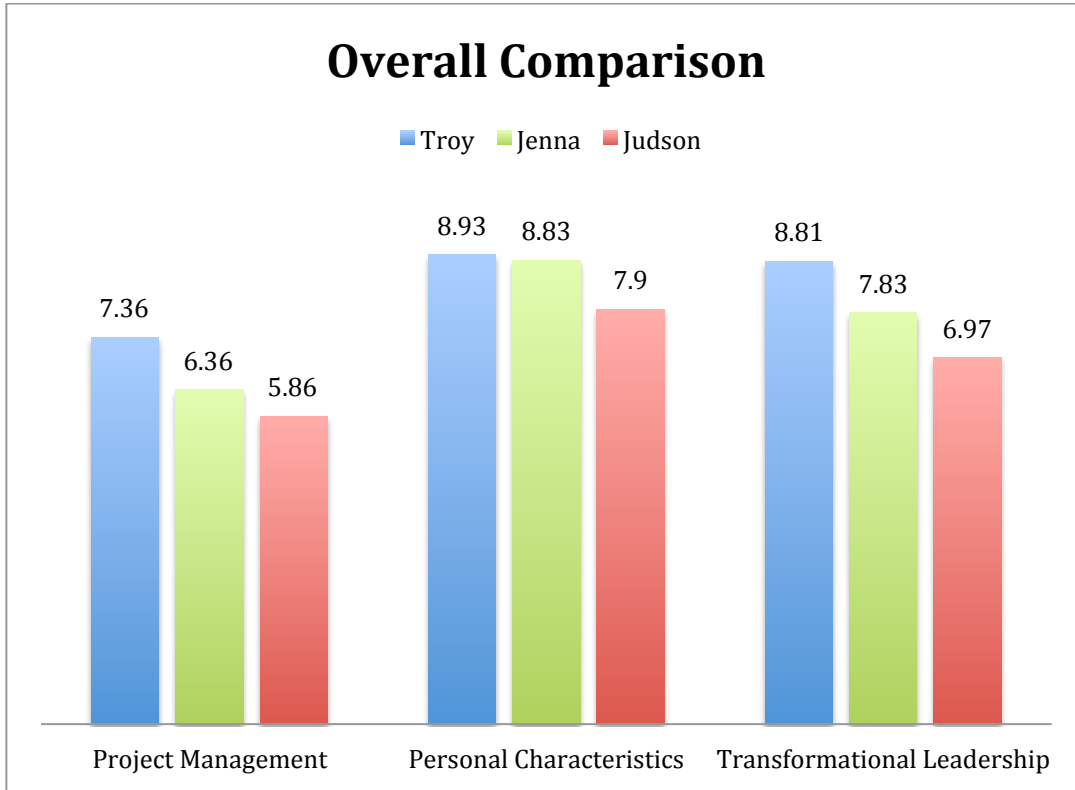


Figure 4.0: Overall Assessment Evaluations

The chart above, Figure 4.0 Overall Assessment Evaluation, evaluates the three project managers on their soft skill subjective evaluations. Taking each of the three evaluator’s scores and averaging them with the self-evaluation score, I obtained the above results. As you can see the skill level of each category is not consistent throughout each person, but the ranking is true throughout. Troy had the highest rating in each category, followed by Jenna, and finally Judson. Each of the project managers had a higher overall score on personal character, while their lowest overall scores were seen in general project management.

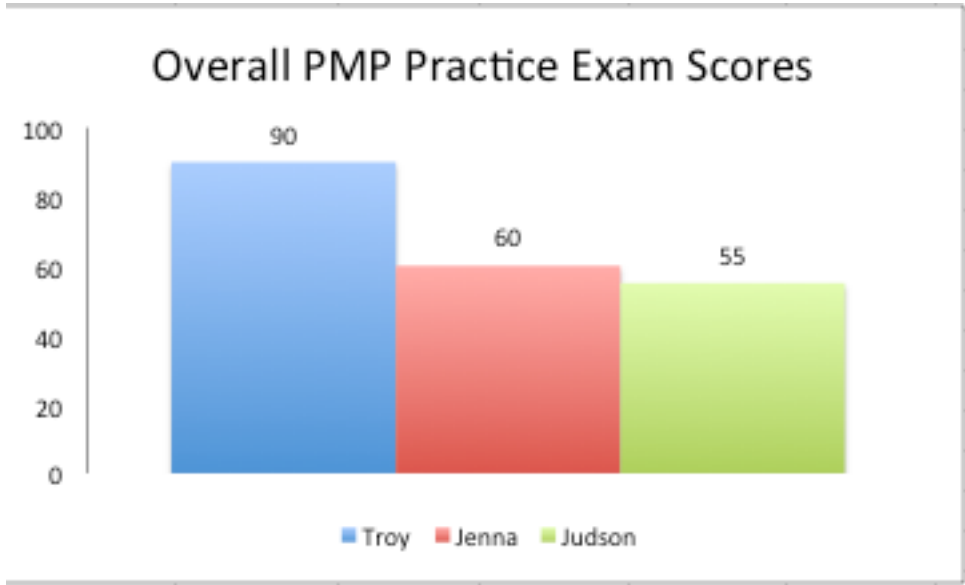


Figure 4.1: Overall PMP® Practice Exam Scores

The chart above, Overall PMP Practice Exam Scores, summarizes the scoring of all three project managers according to the objective technical skills practice exam. The same trend can be found in Figure 4.0, Troy ranks in the highest position, followed by Jenna, and then Judson.

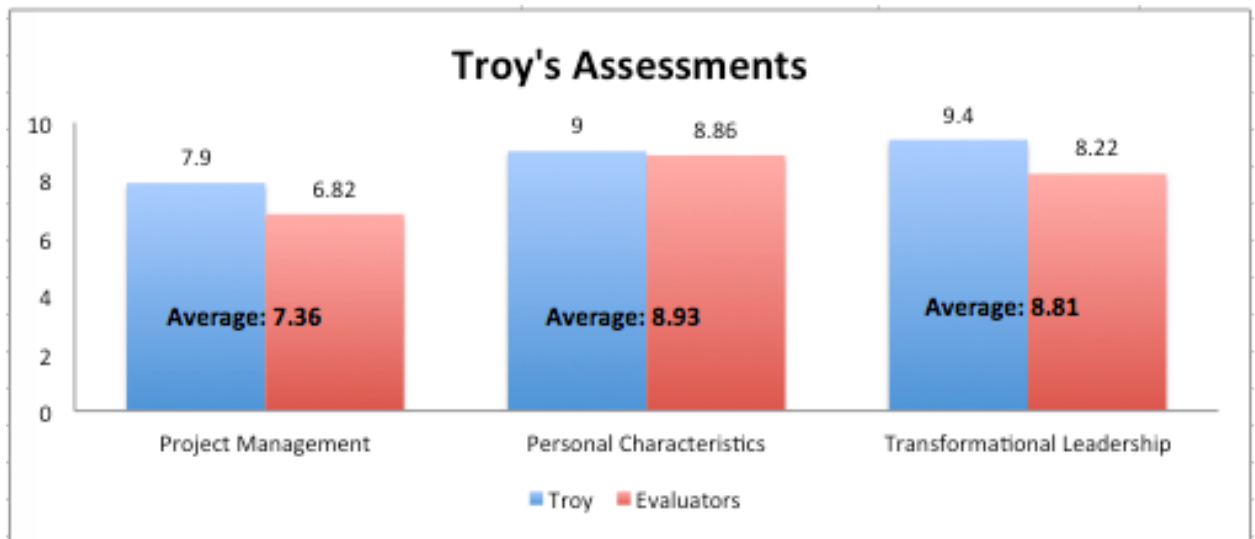


Figure 4.2: Troy's Assessments

Figure 4.2, Troy's assessments show a more in-depth version of his self-evaluation in comparison to the evaluation scores that his peers rated him. The variance of these scores is evaluated in the discussion below.

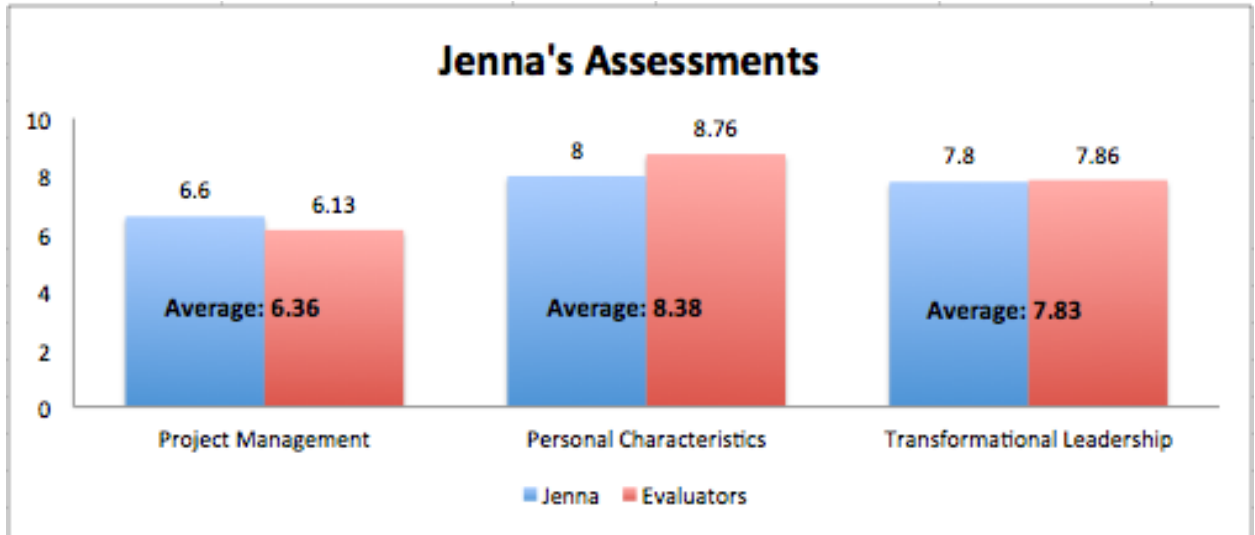


Figure 4.3: Jenna's Assessments

Figure 4.3, Jenna's assessments compare her self-evaluation to the evaluation scores that her peers rated her. The variance of these scores is evaluated in the discussion below.

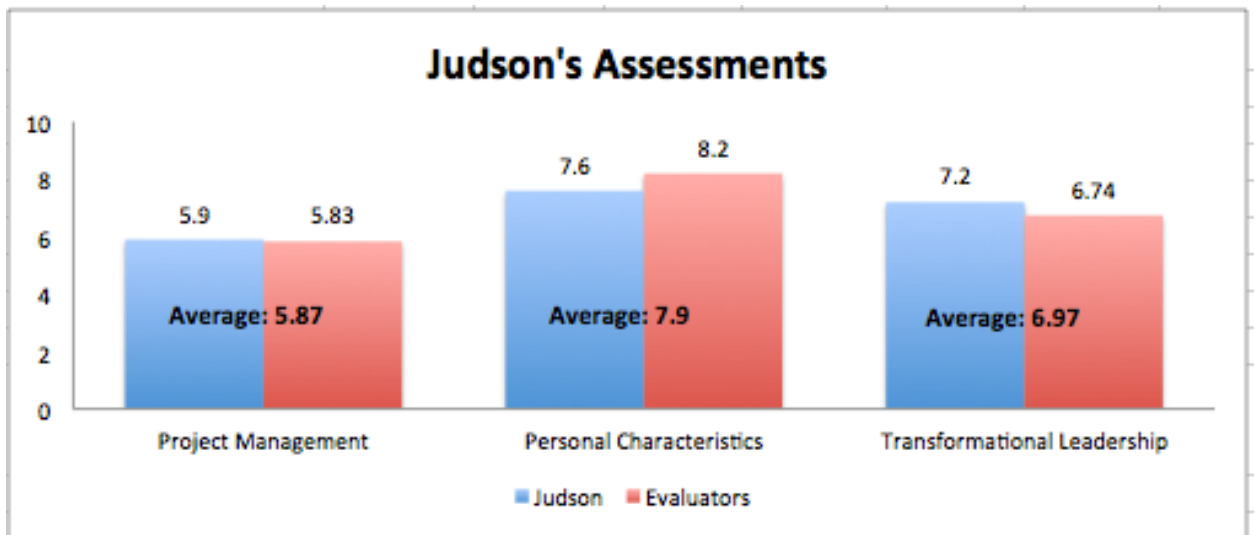


Figure 4.4: Judson's Assessments

Figure 4.4, Judson's assessments show a more in-depth version of his self-evaluation in comparison to the evaluation scores that his peers rated him. The variance of these scores is evaluated in the discussion below.

The following figures 4.5, 4.6, and 4.7 show the expanded category scores. Each of the categories is color coated. Personal characteristics included self-confidence, emotional intelligence, and positive attitude. While project management includes general project management, scope management, project procurement, people management, cost management, project integration, quality management, communication, schedule management, and risk management. Finally, transformational leadership includes motivating people to deliver the vision, being a good role model, provides a compelling vision of the future, managing performance effectively, and providing support and stimulation. Each of the tables is sorted by their combined averages in descending order.

Categories	Combined Averages	Troy	Evaluator Average	Evaluator #1	Evaluator #2	Evaluator #3
Motivating People to Deliver the Vision	9.8	10	9.6	10	9	10
General Project Management	9.8	10	9.6	10	9	10
Self-Confidence	9.65	10	9.3	10	8	10
Being a Good Role Model	9.15	10	8.3	8	9	8
Scope Management	9.15	10	8.3	8	7	10
Emotional Intelligence	9	9	9	9	9	9
Provides a Compelling Vision of the Future	8.8	9	8.6	8	9	9
Project Procurement	8.5	10	7	7	7	7
Managing Performance Effectively	8.3	10	6.6	6	7	7
Positive Attitude	8.15	8	8.3	9	7	9
Providing Support & Stimulation	8	8	8	9	7	8

People Management	7.3	9	5.6	6	5	6
Cost Management	7.15	8	6.3	6	7	6
Project Integration	6.8	8	5.6	5	8	4
Quality Management	6.8	7	6.6	7	6	7
Communication	6.5	7	6	6	6	6
Schedule Management	6	6	6	6	5	7
Risk Management	5.3	4	6.6	8	5	7

Project Management - Personal Characteristics- Transformational Leadership

Figure 4.5: Troy's Evaluations

Categories	Combined Average	Jenna	Evaluator Average	Evaluator #1	Evaluator #2	Evaluator #3
Self-Confidence	8.7	8	9.3	9	9	10
Motivating People to Deliver the Vision	8.7	9	8.3	8	7	10
General Project Management	8.0	8	8.0	7	7	10
Emotional Intelligence	8.0	8	8.0	9	8	7
Positive Attitude	8.0	7	9.0	8	10	9
Scope Management	7.8	8	7.7	7	6	10
Being a Good Role Model	7.8	7	8.7	8	9	9
People Management	7.7	9	6.3	5	8	6
Providing Support & Stimulation	7.2	7	7.3	7	7	8
Provides a Compelling Vision of the Future	7.0	6	8.0	8	7	9
Managing Performance Effectively	7.0	7	7.0	7	5	9
Schedule Management	6.3	7	5.7	5	6	6
Project Procurement	6.2	7	5.3	5	6	5
Quality Management	6.2	7	5.3	5	5	6
Risk Management	5.8	5	6.7	6	7	7
Cost Management	5.7	6	5.3	5	4	7
Project Integration	5.2	5	5.3	5	4	7
Communication	4.8	4	5.7	6	5	6

Project Management - Personal Characteristics- Transformational Leadership

Figure 4.6: Jenna's Evaluations

Categories	Combined Average	Judson	Evaluator Average	Evaluator #1	Evaluator #2	Evaluator #3
Self-Confidence	8.7	8	9.3	9	9	10
Motivating People to Deliver the Vision	7.8	9	6.7	8	7	5
General Project Management	7.8	8	7.7	8	7	8
Being a Good Role Model	7.7	7	8.3	8	9	8
Positive Attitude	7.7	7	8.3	8	10	7
Scope Management	7.7	8	7.3	7	9	6
Emotional Intelligence	7.5	8	7.0	9	8	4
Risk Management	7.2	7	7.3	7	7	8
Providing Support & Stimulation	6.8	7	6.7	7	7	6
Managing Performance Effectively	6.3	7	5.7	7	5	5
Provides a Compelling Vision of the Future	6.2	6	6.3	8	7	4
Quality Management	6.2	6	6.3	6	6	7
Communication	5.8	7	4.7	6	4	4
Project Procurement	5.7	5	6.3	7	6	6
Schedule Management	5.5	6	5.0	5	5	5
Cost Management	4.7	4	5.3	6	5	5
People Management	4.3	4	4.7	6	4	4
Project Integration	3.8	4	3.7	5	3	3

Project Management - Personal Characteristics- Transformational Leadership

Figure 4.7: Judson's Evaluations

Discussion

PMP® Practice Exam Results

Upon the receipt of the PMP® practice exam questions, the three project managers told me that each of them had “failed for sure”, and had to guess on many of the answers. It is this that leads me to wonder, how many of the answers were a guess, or factual knowledge. Each of the questions had only four answer choices. The probability that one could guess the correct answer may not be all that high, but to eliminate a few of the answer choices based on the process of elimination, could significantly improve one’s chances in choosing the correct answer. Table 4.1 PMP® Practice Exam Results can be found in the appendix.

As shown in the table, 7/20 of the questions were answered correctly by all three of the project managers. Does this conclude that 35 points of the exam were of basic project management skill level and technical knowledge? If this is true, were the additional questions a show of knowledge or guess? Although intriguing, this line of questioning has little to no bearing on the conclusions of the evaluation, because the trend in scores is still significant. Jenna and Judson scored very closely and could be attributed to an elimination process, or good guessing. However, Troy’s scores are unwavering, which are telling of his technical project management knowledge, having only missed two out of twenty questions.

Role in Current Work Environment

It was brought to my attention during the evaluations that some of the questions did not apply to the project manager, or were a question of thought process that an

evaluator simply would not know. An example of this is, “When I choose suppliers, I base my decision on their ability to deliver on time as well as on price.” It was this type of questioning that I saw the most variance. Some even left these types of questions blank, and I had to go back and ask them to simply answer based on the knowledge that they had of the project manager. Another issue voice from the evaluators is that their role with the project manager was not limited to only their project management skills. The evaluator worked with the project manager not only to manage projects, but also as a mentor, or direct manager. I had planned on throwing out these outlier questions and questions with the highest variance; however, I kept all the questions from the original evaluations to compare equally among all three project managers. It is difficult to assume if the variance was seen is due to this factor of the unknown, or should lead to questions of the project managers overall effectiveness.

Evaluator Response Based on Professional Status

Although the evaluations were kept anonymous, there was a range of responses. In the beginning, I worked closely with each project manager to choose his or her evaluators. Together, we chose a subordinate, an equal project manager, and a direct supervisor. Within these three evaluators, I saw a strong pattern. Of the three individuals, there was a high scorer, a like scorer, and a poor scorer. Although I cannot prove it, it only seems logical that the direct supervisor would have the highest rating, being somewhat removed from the day-to-day tasks, and the work of the project manager is a direct reflection of his or her supervisor. Rating the project manager poorly would only prove that the manager was a poor mentor to the project manager. The equal project

manager, giving the like rating, understanding entirely what the evaluated project manager does each day. Finally, the subordinate evaluator gives a poor rating of the project manager, having a poor understanding of their daily tasks. It is also my opinion that the subordinate employee may feel a slight ill will towards the project manager if the project manager is a transactional leader. Dishing out tasks without being a great leader can lead to poor respect.

The variation between the evaluators could show a great deal of the project manager's transactional or transformational qualities. If the evaluators (of differing levels of the profession) have a similar rating of the project manager in a particular category, it would be safe to say that the project manager has a clear approach to the category in question. If the answers are varied, I am led to believe that the professional status has an effect on the understanding of the category in relation to the evaluator.

Another variable within the data would be the variance between the evaluator and in the self-reflection. Does the project manager have a different view of himself or herself that does not match those of their peers? Is this caused by a misunderstanding of tasks, the alignment of managerial status, or poor unity and transparency within the workplace? It is my opinion that the variances are the categories that the project managers should focus on the most for improvement.

Highest Averaging Categories

The evaluation analysis tables show the categories in the order of highest to lowest ranking. Both Jenna and Judson show their highest category as Self-Confidence. Oppositely, Troy's analysis showed his highest ranking as Motivating People to Deliver

the Vision, followed by General Project Management, and finally Self-Confidence. In comparison, motivating others instead of elevating one's self is one of the key qualities of being a leader. Putting others in front of your own agenda can be the difference in a transformation and a transactional leader. Perhaps Troy has a higher emotional intelligence than Jenna and Judson in regard to self-awareness and social-awareness that allow his peers to think very highly of him and that he is making decisions for their benefit.

Personal Statements

After the assessments were completed and analyzed I asked for feedback from a few of the individuals that completed the assessment on a volunteer basis. The following is from one of Troy's (the first project manager) co-workers, Cristina:

I like how Troy understands different aspects of our role as Project Manager. It helps me understand why we do certain things and why we do them a particular way. It has helped me learn a lot outside of just my daily responsibilities, which I feel, makes me a more a valuable employee. He is also always willing to help. Even with the smallest thing, that I may have already asked five other times, he always makes time and never makes me feel like I should not be asking him something (Jones, 2016).

Cristina mentioned Troy's project management skills, his leadership, and his likability as a leader. Troy has encompassed all three of the pieces of the talent triangle: technical, leadership, and strategic and business management. Having all the components of the talent triangle can take you from a transactional leader to a transformational leader. Clearly, Troy takes the time to help Cristina understand how much the company needs her and how her role as a project manager is important, further indicating a strong need to motivate others and enhanced emotional intelligence. He takes the time to understand a

problem and come up with a solution, without being condescending or taking authority over Cristina who is the newest project manager at his location.

The second project manager, Jenna, said the following after review her own evaluation results.

When it comes to more intangible, emotional characteristics of the job like personality traits, feelings and criticism my answers seemed to be further apart from the people ranking me. This would suggest that how I actually come across to my peers sometimes is different than how I perceive myself.

When it comes to time management, pricing, and expectations for projects there is a much closer relationship between the answers of how I rated myself and the answers for how my peers rated me. This would seem to suggest that how I think I approach projects and how I actually approach projects are pretty on target (Gonzalez, 2016).

Jenna, like others that were evaluated, has a much higher variability in the leadership questions rather than the general project management questions. Ultimately, only Jenna can tell us how she truly feels about a particular situation or co-worker, so her answers may be the most valid in this portion of the evaluation. However, the perception of your co-workers is what matters in a leadership position. This should tell Jenna that her leadership skills, albeit likely well-intentioned, are not coming across to her team as seamlessly as she may believe.

Finally, I asked one of Judson's evaluators, Tim, to give a description of his thoughts on Judson as his peer, direct manager, and office manager.

I can't say much as to project management since that is not a function in regards to me besides getting my projects through the red tape when asked. From one perspective, he will delegate projects based on the skill set of his subordinates. As a direct manager standpoint, he takes a hands-off approach with most of us and gets involved with projects when needed.

Some people have varying thoughts of how you would like your manager to oversee. From my perspective, that's the type of manager I want and flourish under. I would rather not have the manager always looking over my shoulder, he

trusts that we know what we are doing and can get things done. His fault, like many of us, is that we take ownership and pride in projects that we work on. In that case, you can see that he tends to get overwhelmed at times and needs to delegate projects more to even the workload (Braun, 2016).

Based on Tim's description, one can see why Judson's ratings were lower than Troy and Jenna's. Leadership wise (according to Tim) Judson is great, however, his delegation skills and big picture outlook for workload could use some work. Although Tim does not work with Judson as a project manager, but rather a peer designer and direct manager, he can still see the effects of having a manager that does not have strong suits in both leadership and general project management skills.

Conclusion

Throughout my literary analysis, it became evidently clear that soft skills are becoming increasingly necessary within the career of a project manager, and that the current coverage in highly esteemed books such as the PMBOK® is significantly less than the realistic need of proficiency of soft skills within the project management field. The need for the integration of soft skills not only through interactions with other students in group projects. Instead, introduce including them into the syllabi of criteria for a more intensive study. The aspects that project managers are required to understand becoming the 'new source of management' is exhausting and according to the talent triangle, cannot be achieved without the addition of these soft or interpersonal skills.

Most of these soft skills apply directly to daily tasks within project management. Including conflict management, communication, emotional intelligence, and much more. When analyzing hard skills such as schedules, budget, and risk—one must use soft skills such as decision-making, negotiation, communication, expectations management, critical observation, and adaptability to name a few. Each of the hard skills within the project management field obtains a soft skill that must be put into practice to achieve. This is inclusive of the project management processes; initiating, planning, executing, monitoring and controlling, and closing. Each of these processes is described with hard skills but are initiated due to a soft skill. Although it has been said that the skills required as project managers are split fifty-fifty between hard skills and soft, the PMBOK® coverage of soft skills is slim to none in one small paragraph about creating teams. PMI®, however, gives a more substantial explanation of the need for soft skills in their

talent triangle. This triangle encompasses technical project management, leadership, and strategic and business management.

Nevertheless, how these skills are measured and considered for future roles in a company are less clear. Most consider these skills during the interview process as, how personable the candidate is towards their interviewers. Since these are weighed so heavily as an entrance into the career field, should there be a higher emphasis in the training of a project manager towards the soft skills that are needed to complete the talent triangle.

Following the literary analysis of the works discussing soft skills within the project management field, I chose to complete a case study at my current company to analyze the technical skills versus the soft skills of professionals that I know very well and consider to be highly esteemed individuals. Three project managers underwent objective testing to consider their project management technical skills through a PMP® practice exam. As well as, undergoing subjective evaluations to appraise their soft skills through personal character, transformational leadership, and overall project management skills.

Within the case study of my research, the main basis of my hypothesis was proven incorrect; that the results of the technical skills would not be proportionate of the project manager's soft skills. Although not directly, the data supports my initial claim that soft skills have an importance towards the success of a project manager. The overall comparisons show Troy as the leading project manager, followed by Jenna and Judson. It is at the same ranking that they proved their technical skills by taking the PMP® practice exam (Troy, followed by Jenna and Judson). Perhaps the idea that you can be a transformational project manager by having soft skills is false. However, having the

technical skills enhance your project management skills while having soft skills enhances your transformational leadership qualities. It isn't the question of one or the other--it is both. Having both soft skills and technical skills create great project managers and leading professionals. Including these soft skills in the educational curriculum of our future project managers is vital to future project management and overall business success.

Recommendation for Future Work

In addition to the outlined evaluations above, I would add a more practical aspect to evaluate the technical skills and effectiveness of each project manager. Including a line of quantifiable results like a number of projects delivered as scheduled, within budget, and according to the quality set out in the charter of the project. Obtaining these results from project managers that work on the same types of projects would be vital, in this case, having such varying project managers in my company would not have produced accurate results.

I would also increase the number of evaluated subjects from three to perhaps five or ten. Adding a larger number of project managers and evaluators into the assessment would extend the results to show a potential trend or alignment. If possible, I would like to include a certified PMP® into the evaluation pool to study his or her results as a baseline against non-certified project managers.

In relation to the academic articles found in the literature review, I would add data educational curriculums on how to approach teaching soft skills (if possible). And if available I would review the syllabi of courses that offer training in soft skills for project managers.

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Appendix

Table 1.1 Soft Skills vs. Hard Skills

Soft Skills:	Hard Skills:
Leadership	Schedules
Communication	Budget
Negotiation	Variance analysis
Expectations management	Earned value
Influencing	Risk management
Problem-solving	Procurement
Decision-making	RFP/RFI
Team building	
Strong work ethic	
Emotional intelligence	
Empathy	
Adaptability	
Problem solving	
Critical observation	
Conflict resolution	

Table 2.1 Project Management Assessment

<i>Project Management</i>	Not at	Rarely	Sometimes	Often	Very
	All				Often

<p>1. I communicate what needs to be done by what deadline, and expect the people to whom I assign the work to be responsible for breaking down the work packages into smaller and more manageable pieces.</p>					
<p>2. When I choose suppliers, I base my decision on their ability to deliver on time as well as on price.</p>					
<p>3. I prepare a specific timeline and sequence of activities, and I use this schedule to manage the overall project to ensure its timely completion.</p>					
<p>4. When a project begins, I work with its sponsor to negotiate and agree specific deliverables.</p>					
<p>5. Project teams are only temporary, so I don't worry too much about personalities. I select team members based on the technical skills I need.</p>					
<p>6. At the start of a project, I formally</p>					

outline what, why, who, how, and when with a Project Initiation Document – so everyone can understand how the elements of the project fit together.					
7. I consider a variety of cost alternatives when developing my original project budget plan.					
8. I outline clear expectations for the project team, and I manage their individual and collective performance as part of the overall project evaluation process.					
9. When a project gets behind schedule, I work with my team to find a solution rather than assign blame.					
10. I identify as many potential project risks as I can, and I develop a plan to manage or minimize each one of them, large or small.					
11. Because projects involve so many variables that change so often, I let					

the plan develop on its own, as time passes, for maximum flexibility.					
12. I use customer/stakeholder requirements as the main measure of quality for the projects I manage.					
13. I routinely monitor and reevaluate significant risks as the project continues.					
14. I give people a deadline to complete their project work, and then I expect them to coordinate with others if and when they need to.					
15. I keep all project stakeholders informed and up-to-date with regular meetings and distribution of all performance reports, status changes, and other project documents.					
16. I define specifically what the stakeholders need and expect from the project, and I use these expectations to define and manage the project's scope.					

17. Forecasting costs is more art than science, so I include extra funds in the budget and hope that I'm under cost at the end.					
18. I present project status information in an easy-to-use and easy-to-access format to meet stakeholders' information needs.					
19. Delivering on time and on budget are the most important things for me.					
20. When I contract for goods or services, I often choose suppliers based on familiarity and the past relationship with my organization.					

Table 3.1 Leadership Skills Assessment

<i>Leadership Skills</i>	Not at All	Rarely	Sometimes	Often	Very Often
1. When assigning tasks, I consider people's skills and interests.					
2. I doubt myself and my ability to succeed.					

3. I expect nothing less than top-notch results from people.					
4. I expect my people to work harder than I do					
5. When someone is upset, I try to understand how he or she is feeling.					
6. When circumstances change, I can struggle to know what to do.					
7. I think that personal feelings shouldn't be allowed to get in the way of performance and productivity.					
8. I am highly motivated because I know I have what it takes to be successful.					
9. Time spent worrying about team morale is time that's wasted.					
10. I get upset and worried quite often in the workplace.					
11. My actions show people what I want from them.					
12. When working with a team, I encourage everyone to work toward					

the same overall objectives.					
13. I make exceptions to my rules and expectations – it’s easier than being the enforcer all the time!					
14. I enjoy planning for the future.					
15. I feel threatened when someone criticizes me.					
16. I make time to learn what people need from me, so that they can be successful.					
17. I’m optimistic about life, and I can see beyond temporary setbacks and problems.					
18. I think that teams perform best when individuals keep doing the same tasks and perfecting them, instead of learning new skills and challenging themselves.					

Sample Questions for the PMP® Exam (20)

1. Rather than use Triangular Distribution while doing Three Point Estimation you choose to use Beta Distribution. Based on your analysis and understanding you

are confident that the project would be completed with a total cost of \$ 108,000. You also estimate that a best case estimate would be \$ 90,000 while a worst case scenario would result in the costs incurred to shoot up to \$ 138,000. What would the Three point Cost estimate be using Beta Distribution?

- a. \$ 112000
 - b. \$ 110000
 - c. \$ 101000
 - d. None of the above
2. John is managing a project. The project is about three fourths done when the site engineer reports that due to inherent complexities in a certain task the deliverables would get delayed. This would involve additional analysis and then implementation. He requests that this new work that was not envisioned earlier be added to the scope and also the time required be added to the schedule. You and the site engineer have analyzed the impact of this change to cost, and have written up a change request and requested approval from change control board. Just today you have received approval from the change control board. What should be the immediate course of action?
- a. Start work immediately
 - b. Ascertain the impact of this change to scope, schedule and cost before making any change
 - c. Perform Quality Assurance
 - d. Make sure that the scope baseline and schedule baseline are updated to reflect the approved change before implementing the change

3. You are in charge of managing a software development project which is related to simulations for driving racing cars. In one of your team meetings - it has been reported that a lot of issues have been reported in the air tunnel modelling module. On deeper analysis - it is found that many of the issues could have been prevented had a simple code review checklist been used. You prepare a code review checklist and ensure the code is reviewed as per the checklist. This is a good example of:
- Corrective Action
 - Preventive Action
 - Defect Repair
 - Quality Control
4. You have replaced an earlier project manager in a project .The earlier project manager has left the organization and you are now responsible for the project. On reviewing the project management plan you are disturbed because a number of procurement contracts have been signed and they all turn out to be Cost plus fixed fee types of contracts. Why are you worried?
- All the risk is now with the seller
 - Contracts should always be T and M
 - Seller has no motivation to control cost and in fact cost could spiral
 - Contracts should always be Fixed Price
5. Your team is in its second month of development. You are managing a software development project for a banking product. In one of the team meetings a debate arises if defects found during Quality control need to undergo change control.

Some team members are convinced that all defects should undergo change control while the other half is convinced that defects do not need to undergo change control. Which of the following statements are untrue?

- a. Defects to deliverables need to undergo change control
 - b. Defects to deliverables need not undergo change control
 - c. Corrective actions need to undergo change control
 - d. Preventive actions need to undergo change control
6. You are responsible for managing a project that deals with laying out a freeway connecting two major port cities. Progress on the project has been smooth and you and your team are very confident on completing the project well within the stipulated timelines. On reviewing you see that the project has also run below the budget resulting in savings. You decide to add an extra feature of reflector strips on the road every mile. You do a quick calculation and are satisfied that neither budget nor schedule will slip. You feel that by adding these extra features you could also bag some future projects as well. This is an example of:
- a. Scope Creep
 - b. Gold Plating
 - c. Integrated Change Control
 - d. Fast Tracking
7. You are in charge of a project that deals with laying out a lavish 18-hole golf course. The project work is in progress. You also have a number of contractors working on the project. Being an experienced manager you know that communication is key to success of the project. You have identified 10

- stakeholders with whom you need to communicate. Due to some internal and external organizational changes at the client end three new stakeholders have been added with whom you need to communicate with. You also had to reduce one of the contractors with whom you were communicating. How many communication channels do you have now?
- a. 45
 - b. 78
 - c. 91
 - d. 66
8. You are in charge of a project and to ensure things go well - you have had monthly meetings with the stakeholders. The project is running on schedule and budget. You are in your fourth month of execution - but the stakeholder indicates dissatisfaction with the deliverables. To make changes in the deliverables would mean a delay in the schedule. What would have been the most important process that could have prevented this situation?
- a. Scope Planning
 - b. Scope Control
 - c. Schedule Control
 - d. Risk Monitoring and Control
9. The project that you are in charge has been successfully completed. The last of the deliverables have been formally accepted by the client. You had several contractors with whom contracts were prepared. With the project done you decide

to communicate the completion details and closure of contracts. Which is the best form of communication?

- a. Formal written
- b. Formal verbal
- c. Informal verbal
- d. Informal written

10. Your company has bagged a number of government contracts dealing with setting up infrastructure. This includes setting up roads and bridges. This is a very big and prestigious project so your company would like to ensure everything is planned well in advance. You are the project manager of this project. Considering its importance - you and your team come up with a list of risks. One of the subject matter experts indicates that during the months of July and August the construction work of the bridge across the river would need to stop on account of past history of flooding of the river. You agree with the expert and plan the schedule accordingly. What strategy did you just apply?

- a. Accept
- b. Exploit
- c. Mitigate
- d. Transfer

11. You are in the process of defining activities and have broken down the WBS into individual activities. You now decide to uniquely tag each activity with a unique code. So here what you have done is defined an ___ for each Activity

- a. Schedule Network Diagram

- b. Activity List
- c. Milestone List
- d. Activity Identifier

12. You are managing a project that has teams located in different parts of the world.

While the advantage of colocation is beneficial - the team structure or locations cannot be changed. Being an experienced manager that you are - you realize that without a proper communication channel can quickly lead to chaos. What would your choice of communication be?

- a. Formal and Verbal
- b. Formal and Written
- c. Informal and written
- d. Informal and Verbal

13. You are developing strategies to effectively engage stakeholders throughout the project life cycle. What is process you are working on?

- a. Plan Stakeholder Management
- b. Identify Stakeholders
- c. Manage Stakeholder Engagement
- d. Control Stakeholder Engagement

14. You head the engineering department in your company. Lately you have observed that certain deliveries are missing the schedule. On closer scrutiny you observe this to be occurring with a specific team member. You decide to discuss it out with the team member. Initially the team member is reluctant to discuss but finally opens up and indicates that the cause of the delays is often different

instructions coming in from you as well as the project manager. She indicates that at such times she is confused related to whose instructions to follow - thereby causing delays. What kind of an Organizational structure is this most likely to be?

- a. Functional
- b. Projectized
- c. Weak Matrix
- d. Balanced Matrix

15. The release criteria includes:

- a. The timing of the release of team members
- b. The method in which you will release them
- c. Both of the above are true
- d. None

16. As a project manager you have successfully delivered all project deliverables within stipulated timelines - your senior management wants you to calculate the Cost of Quality - as a project Manager what costs would you NOT consider while making this calculation?

- a. Cost of Hiring
- b. Prevention costs
- c. Appraisal costs
- d. External and Internal Failure costs.

17. Which of the following is part of the Perform Quality Assurance process?

- a. Benchmarking
- b. Cost of Quality

- c. Design of experiments
 - d. Quality audits
18. You are the project manager for a Project. You are updating the WBS during Define Activities, which is often called _____?
- a. Refinements
 - b. Updates
 - c. Activities
 - d. Supporting detail
19. The Project Quality Management process must _____.
- a. Address the quality of the management and product
 - b. Improve the project management and the quality of the product
 - c. Ensure that the project satisfies customer requirements
 - d. All of the above
20. You are a project manager of a company and your project is currently in execution phase. The customer has requested you for additional work. This work will affect the budget, but not the schedule of the project. What should you do next?
- a. Add the additional requirements to the project plan
 - b. Ignore the request
 - c. Explain the change procedure and ask to submit a request for change
 - d. Discuss with the project team about the change

Table 4.1 PMP® Practice Exam Results

	Troy	Jenna	Judson
1	C	B	A
2	D	B	D
3	A	A	A
4	C	C	C
5	B	C	A
6	B	B	C
7	D	A	C
8	B	A	B
9	A	A	A
10	A	C	C
11	D	D	D
12	B	B	C
13	A	C	A
14	D	C	C
15	C	C	C
16	A	D	A
17	D	B	D
18	A	A	C
19	D	D	D
20	C	C	C