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Minnesota State University, Mankato

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**A Study of the Soft Skills that Contribute to the
Success of Newly Graduated Business Students in the Workplace**

By

Promeet Jaswant Singh

This Dissertation is Submitted in Partial Fulfillment

of the Requirements for

the Educational Doctorate Degree

in Educational Leadership

Minnesota State University, Mankato

Mankato, Minnesota

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A Study of the Soft Skills that Contribute to the
Success of Newly Graduated Business Students in the Workplace

Promeet Jaswant Singh

This dissertation has been examined and approved by the following members of the student's doctoral committee.

Jason Kaufman - Advisor

Anne Weyandt - Committee Member

Melissa Siebke - Committee Member

Abstract

This quantitative study is focused on assessing the soft skills that newly graduated business students possess. Using the first and only skills inventory in the United States that has been endorsed by Department of Labor, the study seeks to determine what sets employees apart based on their level of performance on the job. The main purpose was to assess and interpret the soft skills that employees bring to the workplace soon after graduating. The population for the current study was human resources professionals from a variety of industry sectors in the state of Minnesota. The businesses represented a range of sizes from small and medium businesses to large, global corporations. Results of the survey could benefit not just the businesses that hire graduates but also those in higher education and current and future students.

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Chapter I

Introduction

Background of the Problem

The technology industry in India, which includes Information Technology and IT-enabled services (ITeS) such as Business Process Outsourcing, employed a few hundred thousand in the year 2000. Today, the industry employs over 3.5 million (Ramaswamy, Vilvarayanallur, & Kumar, 2013).

India's rapidly growing IT and ITeS sector was fueled by corporations of various sizes, and the largest included names like Dell and IBM. Dell started its first sales team which was located outside the United States in September 2002 (Corcoran, 2004). Because of this it was necessary for Dell to hire, train, and manage large teams of employees which was a considerably difficult task because not all of the newly hired employees were sales professionals. Meanwhile, IBM was ramping up the operations of its largest global procurement hub in the world. Based on the author's role at Dell and IBM, it was known that the task of operations managers at both companies was to interview dozens of fresh college graduates, as well as experienced professionals, almost on a daily basis for three years. Both companies hired hundreds of new employees each year. This intense growth was sustained because it was part of a broader competitive strategy to not just gain access to rapidly growing markets in emerging nations, but also to harness the available local talent. Gupta, Govindarajan, and Wang (2008) describe this global strategy for a number of corporations and cite IBM for its unique "procurement hub" model. The authors wrote, "IBM has made its Indian operations one of the most important global hubs for the delivery of IT services to clients worldwide. Nearly one-

sixth and a growing proportion of IBM's global workforce is now based in India” (p. 255).

Based on the author’s role at the time, which included hiring and training employees for Dell and IBM, it was observed that it took a lot of time and effort to ramp up the skills of new employees, and to make them productive. Part of this was due to the fact that India’s education system “does not have content that prepares professionals for the industry,” there is no “development of interpersonal skills,” and school curriculums have not been revised decades (Ramaswamy et al., 2013, p. 51).

Adding competent employees to the workforce, and also providing these new employees with the necessary skills to make them effective at their jobs, remains a constant challenge for corporations in India. Jha (2015) summarized this effectively when he wrote, “While employment augmentation remains a priority, the critical concern is that the young workforce entering the job market every year continues to lack the skills it needs to qualify as employable or require significant training investment once employed. With about 12 million individuals joining the workforce every year, tackling the pressing issue of skills gap is imperative as it could derail India’s growth story” (The skills gap and what it means for your business, para. 4).

Gupta et al. (p. 234) wrote about the need for corporations to collaborate across geographic boundaries in order to maintain or improve upon their competitive positions. But in order to do this, corporations probably expect all the college graduates that they hire to have a certain minimum level of skills and competencies. However, according to Tony Wagner (2008), there is in fact a global achievement gap that “remains invisible to most of us” (p. 9). Wagner goes on to state that this is partly due to the fact that this

achievement gap is fueled by “fundamental economic, social, political, and technological changes that have taken place so rapidly over the past two decades that they seem more like static in people’s lives than like tangible forces that are shaping our future” (p. 9).

Researchers across the globe have been fascinated about tangible and intangible skills, and the way in which they define our working relationships. The literature suggests that the first attempt to formally define a set of skills was in the United States. As far back as 1991, the Employment & Training Administration, which is under the United States Department of Labor commissioned a report commonly referred to as the SCANS Report. The purpose of the report is to determine the key to taking America’s workforce into the year 2000 and beyond by equipping the workforce not just with the technical skills needed to acquire jobs and build the competitiveness of America’s industry, but also the personal attributes needed to help people lead lives that are more satisfying. This path breaking report adopted a “360-degree,” systemic approach to competency development with the intention of alerting educators, parents, students, and corporations of the reality of global competition and the need to reorganize each workplace into the “high performance environment of the future” (Secretary's Commission on Achieving Necessary Skills, 1991, p. iv).

According to the report, “One reason for the lack of educational improvement lies in the confusing signals exchanged between the education and the business communities. The educator asks, ‘What do you want in our graduates? We are confident we can produce it.’ The response is, too frequently, a set of contradictory cues from various businesses” (SCANS Report, p. 4). What makes the findings of this report noteworthy is the fact that even though it was published in 1991, more recent studies confirm a

persistent theme across corporate America even today – Businesses still need employees who have a mix of technical skills as well as personal attributes in order to be successful, but new graduates often fall short of the minimum required competencies.

According to Stevens (2005), the technology industry in Silicon Valley believes successful careers are based on “the ability to communicate effectively both orally and in writing” (p. 2). These critical success factors are prioritized differently by employers, students, and university professors. However, we can still conclude that there is indeed a preparedness gap because students overestimate the skills that they have, and employers find students ill-equipped to deal with real-world challenges faced in organizations. Today’s employers are increasingly facing the same challenge all over the world namely “building and sustaining a strong talent pipeline” (Stahl et al., 2012, p. 25), in addition to other competitive pressures.

In a study conducted by Hart Research Associates (2015) on behalf of the Association of American Colleges and Universities, student readiness for taking on real-world responsibilities was evaluated. This was done by comparing the levels of readiness that students perceive themselves to have to enter the workforce and the extent to which employers believe they are ready to take on real-life responsibilities. The gap between the two groups was found to be significant and the study shows that students do not have realistic expectations of their levels of workforce preparedness. Some of the *soft* or *adaptive* skills in which students’ assessment scores of themselves were less than half that of the employers’ were critical thinking, being creative, and applying knowledge or skills to the real world (p. 12).

In a study conducted by the McKinsey Center for Government, Mourshed, Farrell, and Barton (2012) seemed to confirm the existence of the readiness gap as perceived by recent college graduates and employers (p. 40) and as reported by Hart Research Associates (p. 12). While only 42 percent of employers believed their recent hires were adequately prepared by their pre-hire education for an entry-level position, a lower percentage of students (45 percent) believed they were adequately prepared for an entry-level position in their chosen career field. An interesting, third dimension of the same McKinsey study indicates that 72 percent of education professionals believe their graduates are suitably prepared for an entry-level position (p. 39). The gap between perceived and actual skills suggests that college students might be better prepared for jobs after completing their education if industry needs were addressed more specifically in college courses.

Problem Statement

The amount of money spent on training fresh graduates who are new employees to make them better equipped to do their jobs is hard to estimate. In 2011, PricewaterhouseCoopers and the Atlantic Council hosted a roundtable for senior leaders from business, government, and academics to identify some of the skill gaps that hinder worldwide economic growth. One of the interesting findings of this roundtable was that the amount of public investment by the US on developing human capital was “between \$1.5 and \$2 trillion annually, with only a fraction of that going into retraining of people already in the active labor force” (p. 6). This finding suggests that the cost of hiring new employees is quite high. It does not provide any reason for this high cost, but could the readiness gap be one of the reasons? Similarly, the McKinsey Global Institute examined

the extent of inefficiency in educational institutions worldwide and found that the United States misallocated funds to the extent of \$19 billion (A labor market that works: Connecting talent with opportunity in the Digital Age, p. 53). This figure, largely an opportunity cost, is based on a number of factors such as schools and universities providing students with skills that are not perfectly aligned with the needs of the industry, and new graduates taking up jobs for which they are over-qualified and under-paid.

Looking at education with a systems theory lens would be a helpful starting point towards creating strategies that can improve efficiency one step at a time. Systems exist in nature in the form of climate patterns, and in man-made structures such as organizations. Systems in nature self-regulate but in a manmade context, rules of engagement, policies, and processes are necessary. A higher education institution is an example of a system which consists of professors, administrators, students, written rules on academic policies, and unwritten social norms that determine how individuals and groups interact with each other. Von Bertalanffy (1972) suggested that the foundations of systems theory were laid even before the Socratic era, in the sixth century BC (p. 407). Meadows (2008) defines a system as “an interconnected set of elements that is coherently organized in a way that achieves something” (p. 11). The author goes on to explain that a system consists of three different things namely “elements, interconnections, and a function or purpose.” To understand higher education as a system, one would need to take into account all the internal and external resources available to provide education to students. It would also include creating a feedback loop by understanding what the “consumers” of college graduates, namely the employers of college students, want to see in the form of knowledge and skills. Designing high-impact learning plans is one of the

many ways in which a feedback loop can be effectively used. The results of this proposed study are intended to be used as one of the inputs to the system that can guide the development of better learning plans. Bencotter and King (2016) provide some insight into how a feedback loop works within an open system; it “receives inputs from the environment, transforms them through operations within the system, submits outputs to the environment, and receives feedback indicating how well those functions are carried out. To survive, any open system must gain advantages from its transactions with the environment” (p. 11). Once completed, this study can also help identify gaps and then build classroom strategies that systematically develop the skills and resources needed to get specific results. These results can include better utilization of educational funds, closer alignment of industry needs and academic inputs, and motivation of individuals and groups to sustain the efforts that result in an improved learning experience for students.

Purpose of the Research

The purpose of the present study is to examine the *non-academic attributes* exhibited by newly graduated students in the workforce within a year of graduating from college. There are a number of non-academic attributes that are also valued by employers, and by society at large. An exhaustive list of attributes can be compiled using a variety of sources, but based on the scope of the proposed study, the author decided to use an information source that was better aligned to the requirements of employers. The World Economic Forum (2016) states that “social skills—such as persuasion, emotional intelligence and teaching others—will be in higher demand across industries than narrow technical skills, such as programming or equipment operation and control” (p. 3).

The present study will seek to focus on graduates from business schools in Southern Minnesota and will identify the attributes displayed by those who have been rated above average in their first performance review, thereby placing them in the category of high-performing employees. It will also attempt to identify the attributes displayed by those who are ranked below average for the purpose of comparison. The present study will seek to determine the kind of non-academic skills that correlate with success among graduates. The results could be a subset of the skills that were identified by prospective employers by Hart Research Associates. When hiring new graduates, Hart Research found that employers prioritize the following five skills out of a total of 17 knowledge areas that were tested:

- Written and oral communication skills.
- Teamwork skills.
- Ethical decision-making.
- Critical thinking skills.
- The ability to apply knowledge in real-world settings (p. 1).

Robles (2012) compiled a list of the most important adaptive or soft skills that are needed for workplace success. The top five skills employers want their employees to have are listed below:

- Communication – oral, speaking capability, written, presenting, listening.
- Courtesy – manners, etiquette, business etiquette, gracious, says please and thank you, respectful.
- Flexibility – adaptability, willing to change, lifelong learner, accepts new things, adjusts, teachable.

- Integrity – honest, ethical, high morals, has personal values, does what is right.
- Interpersonal Skills – nice, personable, sense of humor, friendly, nurturing, empathetic, has self-control, patient, sociability, warmth, and social skills (p. 455).

There may also be other college instructors from the Southern Minnesota region who might be interested to review this information based on the localized nature of this study.

Hypotheses

The present study seeks to understand the non-academic skills that make newly graduated students successful in the workplace. In an attempt to specifically identify workplace readiness gaps (if any) among the workforce in Southern Minnesota, respondents will be asked to choose from a list of attributes that best represent the qualities present in the high- and low-performing employees. Therefore, if “empathy” is an attribute that is displayed most often by the top performers then it will have more than one response. It is possible that the low performers may have the same attributes as the high performers, and in addition to a pre-defined list of attributes there will be a space for respondents to add their own attributes.

1. Based on information gleaned from multiple sources, there are a number of attributes which employers value and look for in prospective employees.

While each list may have some unique attributes, there are a few attributes which are common to every list such as communication skills, organization skills, and teamwork. The first hypothesis will examine whether the top

performers actually possess the skills that are most commonly in demand by employers. This will be done using a correlation matrix which will compare each of the groups under each skill being assessed.

H1: It is hypothesized that there will be a positive correlation between the level of performance among newly hired employees and the top five in-demand skills which employers look for in new hires.

2. What sets the best performers apart from those who are merely average? All employees will display a certain mix of soft skills in varying levels of competency. This hypothesis is meant to test whether there is a difference between the skills possessed by the top performers and the average performers. This will be tested using a series of t-tests.

H2: It is hypothesized that there will be a statistically significant difference in performance among the top five soft skills between new hires who perform at above- and below-average performance levels.

3. In a study conducted by Burning Glass Technologies (2015) it was found that although all employers value soft skills, some industry sectors value certain skills more than others (p. 8). This component of the study will seek to examine how soft skills are prioritized across industry sectors and will be done using factorial anova.

H3: It is hypothesized that there will be a statistically significant difference among preferred soft skills for new hires across business sectors.

Significance of the Research

The preparedness gap has been documented over a number of years but this aggregated information may not be entirely relevant to the needs of educators in Southern Minnesota. This is because, according to Minnesota State University's Institutional Research, Planning, and Assessment website, of the graduates whose employment status is known, 83% are employed in-state (Graduate Survey, 2017).

The present study will target graduates and employers in Southern Minnesota. The resultant insights can be used, in conjunction with other ideas and insights, to enhance the learning experience of students in area universities. The insights might also be used to motivate instructors to include the development of additional soft skills in their course learning outcomes, which could eventually reduce the preparedness gap.

Delimitations and Limitations

This study will be limited to Southern Minnesota to better understand the concerns of employers in the area and to gain some insight into the preparedness gap faced by new graduates. Additionally, the research is intended to focus on newly hired employees who are fresh graduates. The intention of doing so is to determine the attributes that they possess at the time of their first performance appraisal when they have not yet had the chance to be significantly influenced by organizational culture, or by their colleagues. One of the limitations of this study is that it will attempt to identify attributes that set high performers apart from average or low performers. While it would be helpful to understand what these attributes are, it would not be possible to state with certainty whether they were acquired during the course of the students' academic journeys, whether they were a part of their family systems, or whether there were other channels by

which they were acquired. Even though students get the same inputs in a classroom, there are differences in level of comprehension due to differing methods of meaning-making, different starting points, and different personal lenses. In any situation, people's beliefs, attitudes, and behaviors are shaped by their perceptions. This is the basis of many modern theories of motivation, according to Eccles and Wigfield (2002, p. 110).

Despite these limitations, it would help to identify these attributes and integrate them into learning outcomes because a true learning journey is an endless process. Regardless of when learning inputs are provided in this process, students will learn if the right framework is provided, and they can remain lifelong learners and grow and develop long after they exit a formal academic environment. Keeping this reality in mind, the study is expected to yield a positive impact.

Definitions of Key Terms

Soft Skills: Skills that are non-technical in nature, such as the ability to communicate effectively, are soft/adaptive skills. Technical problems can be solved with a clear, linear path. Adaptive problems require a plan, but Heifetz, Grashow, and Linsky state that they also require “the freedom to deviate from the plan as new discoveries emerge, as conditions change, and as new forms of resistance arise” (p. 31). This is why there are several possible outcomes to any single problem that is adaptive in nature. While math skills are examples of technical skills, the author describes reflection and continuous learning as examples of adaptive skills (p. 105).

Global Procurement Hub: Up until the 1980s, IBM's organizational purchasing or procurement function was localized for each country, and for each region within a

country. After the company's brush with bankruptcy one of the ways in which it streamlined its operations was to redesign the procurement function because similar to lean manufacturing and just-in-time principles, efficient procurement can unlock millions of dollars in savings. From having purchasing centers across the world, the company reorganized this key function by consolidating procurement for regions like North and South America. The next wave of consolidation saw the emergence of just three global procurement hubs, which is currently the leanest and most efficient method for the company's procurement function. As much as \$46 billion in funds are channelized through the company's purchasing division, and the hub in Bangalore takes care of this function for all of North America and the Asia-Pacific region excluding Japan, and also for some of the most rapidly growing emerging markets like India and Singapore. While there is no shortage of technical skills in these emerging markets according to Gupta, Govindarajan, and Wang (2008), only time will tell whether the employees at these procurement hubs have the kind of adaptive skills needed to reap the benefits of the competitive advantages expected from global expansion.

High-Performing Employees: Every organization has its own criteria for high performance. The typical definition is applied to those who demonstrate initiative, leadership skills, collaboration, and a desire to learn. According to Smither (1998) "the manifestation of [an employee's] skills on the job in the form of outcomes constitutes performance" (p. 8). The performance of an employee is usually independent of their coworkers except when specifically stated, and performance quality is typically rated as high, medium, or low.

ITeS: Information Technology Enabled Services. This term refers to services such as Business Process Outsourcing (BPO) which includes call centers, transaction processing, and some aspects of software development like programming and testing.

Readiness Gap: Organizations have on-boarding programs, on-the-job training, and mentoring systems in place for new employees. While all these are relevant and established methods to transfer knowledge from experienced professionals to newly hired employees, there are some employees who have a steeper learning curve. This represents a gap in employment-ready skills and is referred to as the readiness gap.

Chapter II

Review of the Literature

Introduction

The purpose of this study is to examine the non-academic attributes, also known as soft skills, which make newly graduated business students successful in their careers. The amount of research on non-academic attributes (i.e., soft skills) which make newly graduated business students successful in their careers is almost as extensive as it is contradictory. For example, a study by Andrews and Higson (2008) showed that there is very little intersection between the top ten soft skills in demand in Europe (p. 412) when compared with the top ten soft skills in the United States (Robles, 2012, p. 455). Even within the United States, different regions appear to have different skills requirements. For example, when asked which skills were most important to have in employees, Moss & Tilly (2001) citing research by the Social Science Research Council noted that 84% of firms in large, diverse cities mentioned that it was important for their employees to have at least two forms of soft skills. When employers were asked to describe the most important skills in their employees, 75% of them described a soft skill (p. 59).

From this brief summary emerges a patchwork of observations of the role of soft skills in industry. Therefore, this literature review will first provide a global overview of soft skills based on findings in the available literature. It will then narrow the information down to the United States, and will finally focus on what makes the current study of particular relevance for the education of graduates bound for employment in business.

Background

The importance of acquiring a skill for a particular craft was of vital importance in the pre-industrialized world. Because skills were passed down from one generation to another they formed the basis of not just the economic system, but of the social system as well. In addition to craft skills, even the casual reader of philosophical literature will find evidence to suggest that ancient societies also valued other characteristics that were intangible in nature. In Plato's *The Republic* (2000) he described the importance of administrators in "setting aside every other business to dedicate themselves wholly to the maintenance of freedom in the State, making this their craft, and engaging in no work which does not bear on this end" (p. 66). Plato went on to urge people to only imitate those who are "suitable to their profession" and lists courage, holiness, and temperate behavior as desirable traits. He wrote about how "imitations, beginning in early youth and continuing far into life, at length grow into habits and become a second nature, affecting body, voice, and mind" (p. 67).

While the ancients were well acquainted with the "soft" aspect of administration and commerce, it still took many centuries to transition to the Industrial Revolution. Philips and Christner (2011) offered an explanation for this. They wrote that prior to the scientific revolution in Western Europe, which started in the sixteenth century, and before the industrial revolution that followed it soon after, "preindustrial organizations lacked the specialized scientific knowledge that came later along with further development of universities." (p. 43).

The Industrial Revolution changed the way in which commerce was done and capital was utilized. The focus was no longer exclusively on a certain acquired skill, but

on the utilization of a variety of resources for maximizing profit. Most of these resources such as machinery were technical in nature. Over a period of time industries emerged, expanded, and matured. This phase of maturity was due to optimum usage of technical resources and efficient manufacturing processes. Looking at industrial growth over a span of centuries it can be seen that the growth cycle had shifted from skilled craftspeople to modern machinery. Economic growth that happened in the period following the Industrial Revolution provides some evidence of the need for developing and measuring human skills for commercial purposes. The next phase of growth was, paradoxically, driven by developing people's skills yet again. This was because of a time-lag that existed between technical progress, and recognizing the need to develop the skills that people needed to keep up with the pace of industrial progress. Winthrop and McGivney (2016) citing Andreas Schleicher, Director for the Directorate of Education and Skills at the Organisation for Economic Co-operation and Development (OECD), wrote about this lag. They explained that education systems "did not evolve overnight to respond to the new needs of the workforce" (p. 11). The authors wrote that as "technological progress accelerated, education failed to keep pace, leaving vast numbers of people struggling to adapt to a rapidly changing world and contributing to widespread suffering. It took a century for public policy to respond with an effort to provide universal access to schooling" (p. 13).

However, by the 1960s the experts at the time still had not isolated the skills that were necessary for the growth phase in which the world's industries were already immersed. Instead, personality types such as introversion and extroversion were attributed to the success of employees and leaders in the workforce. Eysenck (1967)

suggested that “successful businessmen are on the whole stable introverts; they are stable regardless of what type of work they do within business, but their degree of extroversion may be related to type of work” (p. 250). Although this was an early and important example of identifying the predictors that made leaders successful, it was too general in nature. Researchers have since made important connections between Eysenck’s path breaking theory and its application. Lakshmi (2008) asserts that an awareness of the various differences in the personalities of introverts and extroverts “would help soft skills trainers and career counselors to help management students to choose their choice of subjects and undergo training to improve their skills to be successful in their jobs” (p. 65). Lakshmi noted that focused soft skills training would create a balance of skills and competencies and make students more adaptive to various kinds of work environments and situations.

While some scholars had written on the topic of soft skills prior to researchers like Eysenck, their insights were largely overlooked. Mills (1951) wrote the following:

In a society of employees, dominated by the marketing mentality, it is inevitable that a personality market should arise. For in the great shift from manual skills to the art of ‘handling,’ selling, and servicing people, personal or even intimate traits of the employees are drawn into the sphere of exchange and become of commercial relevance, become commodities in the labor market (p. 182).

Writing more than half a century ago, Mills recognized the need for employees to make a positive impression on their customers and referred to the demand for such sensitivity in workers as a *personality market*. He went on to suggest that employees could *represent*

the management and be loyal to the organizations that they worked for by “being friendly, helpful, tactful, and courteous at all times” (p. 182).

The literature indicates that Mills’ writing may have paved the way for the importance that is given to soft skills today. However, it is also clear that it took a number of years before soft skills were recognized as legitimate factors that contributed towards job success. Even today there are no easy answers to address the question of which skills are most relevant.

Socialization and Organizational Norms

Brim’s (1966) definition of organizational socialization (as cited in Louis, 1980) describes it as a process by which individuals come to appreciate the “values, abilities, expected behaviors, and social knowledge essential for assuming an organizational role and for participating as an organizational member” (p. 229-230). In a study conducted by Korte (2009) about how newcomers in an organization learn about the organization’s social norms, one of the respondents quipped that they wished that someone had taught them how to “play the political game” (p. 285). The respondent was actually referring to the unwritten rules of behavior in an organization, also known as social norms. Korte’s study not only examined how newly hired engineers internalized social norms in a manufacturing business, it also found out how these same employees acquired the skills needed for the tasks related to their jobs. One of the major themes that emerged from the study was the fact that “relationship building was the primary driver of the socialization process - not individual capability for learning” (p. 293).

This suggests that the skills employees bring with them are important and necessary for them to do their jobs, but there are also other skills that actually make them successful. Those “other skills” are the ones that help people integrate within an organization and learn unwritten codes of conduct that are vital to building networks that share or acquire knowledge and influence people. On the other hand, work groups are not as effective as they can be when employees have not been properly socialized. Ostroff and Kozlowski (1992) found that ineffective socialization is linked to a variety of unwanted organizational outcomes including higher employee turnover, lower performance, and stress (p. 854). Bowles, Gintis, and Osborne (2001) found that it was not technical, job-related knowledge or a high IQ that correlated with on-the-job success but the presence of an intangible set of skills (p. 1156). In fact, Heckman and Kautz (2012) pointed out that soft skills are the ones that contribute to the process of learning cognitive skills! The authors concluded that “personality traits predict and *cause* outcomes” (emphasis in original, p. 37).

In Search of a Higher Order of Skills

In the United States, an unusual trend was noticed in the demand for skilled labor between 1969 and 1998. Levy and Murnane (2004) noted that this change involved a “steady increase in demand for complex communication skills (i.e., the ability to elicit information and convey a particular interpretation of information) and expert thinking (i.e., the ability to structure a problem), while tasks requiring routine manual, routine cognitive, and nonroutine manual labor declined” (p. 42). This change in the composition of skills within the labor force suggested that employers were looking for employees who could think independently while working in an interdependent manner.

The International Labour Organization (ILO) seems to be the first organization to formally articulate the need for employees with skills that are not tied to a specific organization or type of job. The ILO proposed the concept of “*portability of skills*” which meant that skills “should be transferable between jobs and easily recognized by employers” (Wang, 2012, p. 21). The sectors that typically require these kinds of skills are, according to the ILO, high technology, dynamic knowledge and science based, and service sectors. Defined as “*new core skills*” by the ILO, they emphasize “learning, cognitive and personal skills such as the ability to make judgments, solve problems, and learn additional skills” (Committee on Employment and Social Policy, p. 3). The ILO went on to say that the relative importance of the various types of core skills depends on the socioeconomic context and timeframe. Because these skills are not only relevant across occupations and professions but also in great demand, they are referred to as “*highly portable.*”

The Skills Gap – A Common Theme

The McKinsey Center for Government published a report in 2013 which stated young people worldwide are three times more likely than their parents to be out of work (p. 11). The report provided some surprising facts: More than half of the young population in Greece, Spain, and South Africa is unemployed while “jobless levels of 25 percent or more are common in Europe, the Middle East, and Northern Africa” (p. 11).

Meanwhile, the United Nations Economic and Social Council estimated that around the world in 2012, 75 million young people between 18-24 years of age were unemployed (United Nations Economic and Social Council, n. d.). The paradox is there is also a shortage of skills at the same time! Mourshed et. al (2013) focused on nine countries for their employment outlook report and discovered that “only 43 percent of employers surveyed agreed that they could find enough skilled entry-level workers.” (p. 11). The authors predicted that the problem will actually get worse and estimate there will be a “global shortfall of 85 million high- and middle-skilled workers” by the year 2020. This strange paradox might be explained by the literature, which indicates that there is a disconnect between the unique combination of technical and soft skills needed by the industry, and the skills that are actually being prioritized by educational institutions. It also appears that education does not always keep up with rapidly-changing industry trends.

The paradox described above might additionally be explained as we look at even more future scenarios as reported by experts. Based on predictions by the World Economic Forum on the future of jobs, by 2020 “more than a third of the desired core skill sets of most occupations will be comprised of skills that are not yet considered

crucial to the job today” (2016, p. 3). The report goes on to indicate that according to the survey respondents “social skills such as persuasion, emotional intelligence and teaching others will be in higher demand across industries than narrow technical skills, such as programming or equipment operation and control. In essence, technical skills will need to be supplemented with strong social and collaboration skills” (p. 3). This outlook merely states the kind of skills that are expected to be in demand just three years from now. With all the gaps that we know exist between demand and supply, and with what we know about future skills, it would appear that all that is needed is to produce more graduates to fulfill the demand from the industry. However, none of these predictions assume that educational institutions, and business schools in particular, equip students with the soft skills necessary to be successful when they emerge from academic programs. Neither do they imply that businesses get new graduates with the technical skills and the soft skills that they need to perform well on the job.

Hodges and Burchell (2003) found that graduates tend to “expect too much too quickly and become dissatisfied and negative when they are not given rapid advancement” (p. 19). They found that when people with the right attitude are employed, they can fully develop their theory skills in practice, a process that usually takes 6-12 months. This also closes the skills gap.

Henry Mintzberg (2005) famously wrote that instead of “*teaching* the soft skills, the business schools have tended to ‘cover’ them, in the two meanings of the word: review them and obscure them” (emphasis in original, p. 41). What does this mean for businesses that rely on educational institutions that supply them with human capital? After all, as Muff (2012) wrote, “Every serious business school seeks to prepare future

leaders to deal with the complex and far-reaching decisions that businesses face” (p. 648). Mintzberg is a respected management expert who has worked with dozens of companies in many countries across the world (p. 463). Could his view of business schools be applicable only to Canada, his country of origin? This question required an in-depth scrutiny of the literature to assess the level of soft skills possessed by college graduates in general, and business school graduates in particular, in various geographic locations.

From Optional to Essential: The Evolution of Soft Skills

The human capital required by industry is supplied by institutions of higher education. This is why universities have a symbiotic relationship with industry. Elmuti, Abebe, and Nicolosi (2005) explained this relationship concisely. They wrote that:

The academic community, among other things, is interested in the significant research funding, the practical learning opportunities for their students, and the real-world experience gained through these strategic alliances. On the other hand, corporations value lower R&D costs and the cutting-edge knowledge and technology transfer opportunities that directly affect their competitiveness in the market. (p. 126-127)

It can be safely assumed that prospective employers would like to see a certain minimum level of capability in their human capital, especially among recent graduates. In a study in the United Kingdom that examined the skills recruiters expected to see in new graduates, Raybould and Sheedy (2005) discovered that “nearly two-thirds (64 per cent) of vacancies on offer are open to graduates from any discipline” (p. 259). The

authors found that this indicated that employers are looking for vital soft skills in graduates which are obtained during study and periods of work experience, rather than degree-specific knowledge (p. 259). Andrews and Higson (2008) discovered the exact same thing when doing a similar study which included employers in Romania (p. 417). Jackson (2009) wrote that in Australia, universities are trying to enhance the employability of students by “producing more rounded graduates” (p. 31). Mullen (as cited by Robinson, Garton and Vaughn, 2007) stated that in the United States, “hard” technical skills are job specific and best suited to be taught by industry professionals on the job. However, “soft” skill development is needed by all college graduates (p. 19). Regardless of the geographic region, the common theme that has emerged from the literature is that for new graduates, soft skills are more important than their program of study.

Other facts that have emerged involve the difficulty of having a standardized agreed-upon level of skills, the specific skills that are commonly important, and the assessment of these skills. Because soft skills are intangible they are often hard to articulate, measure, and compare. Based on these unique attributes it should come as no surprise that no common standards for soft skills exist. Even different kinds of jobs require and value various sets of skills. Matteson, Anderson, and Boyden (2016) note that “academic librarianship centers on developing relationships with faculty, students, and administration; endeavors that require high levels of interpersonal skills” (p. 72). In a study of managers of hospitality staff in a hotel, Hurrell, Scholarios, and Thompson (2012) found that “managers responsible for customer-facing staff were looking for those who could display a polite and professional air and were ‘presentable’, ‘bright’ and

‘articulate’” (p. 169). What about accounting and finance professionals, who need a comprehensive set of technical skills to advance their careers? Kermis and Kermis (2010) wrote that, among other technical skills, they need general accounting and financial reporting knowledge, and SEC reporting expertise for public companies. They also require internal audit and financial analysis skills, knowledge of software systems and competencies in tax planning and code compliance (p. 4). Despite the fact that accountants and financial professionals are required to have specialized skills, even they are now expected to have soft skills.

As far back as 2001, Kirch, Tucker & Kirch were among the first to explore the need for accountants to have soft skills. They found that even in this field that requires professional certifications such as CPA, 80% of career success was attributed to the ability to understand oneself and interact with other people and recruiters value interpersonal skills and communication skills (p. 60). Even software developers, long considered independent of other organizational functions and able to function in an insular manner, were considered for a similar study that examined what recruiters look for when hiring people with software skills. Begel and Simon (2008) looked at new college graduates starting their first software development jobs and found that “many of the problems they have typically have a root cause in poor communication skills and social naïveté” (p. 13). The trend indicator is clear – regardless of the industry, the job type, or the nature of skills required, soft skills are an essential part of employees’ skill sets.

An Inventory of Key Soft Skills

The literature points to an alarming truth. Not only are many business schools unable to supply industry with graduates who can meet workplace demands fresh out of school, but there is also the problem of students overestimating their skills. In 2015, Hart Research Associates evaluated student readiness for taking on real-world responsibilities. Students were asked to rate their own skills when they entered the workforce and employers assessed their skills at the same time. There was a significant gap between the assessment of skill levels between the two groups. The study showed that students do not have realistic expectations of their levels of workforce preparedness. Employers assessed the skills of the students at least half the level of the students' estimates of their own skills in vital areas such as critical thinking, being creative, and applying knowledge or skills to the real world (p. 12). It would be safe to say that every employer wants to ensure that they have the most competent employees for any given job. But how does one define competence? For workplace contexts, Hodges and Burchell (2003) offer a definition. They define competency as "a combination of cognitive skills (technical knowledge, expertise & abilities), and personal or behavioral characteristics (principles, attitudes, values & motives), which are a function of an individual's personality" (p. 17). The authors believe that while successful performance also includes and is dependent on a number of other factors, it will require the presence of both these components (p. 17). There is no shortage of lists that provide specific attributes that are demanded by employers.

In fact, many of the attributes are developed based on what has historically been valuable. Gardner (2006) provided a valuable insight on this when he wrote that "current

formal education still prepares students primarily for the world of the past, rather than for the possible world of the future” (p. 17). He went on to write that the “minds for the future” would possess the following attributes: discipline, synthesis, creativity, respect, and ethics (p. 3).

However, it could be said that a true vision for the future of America’s workforce first came from the Secretary's Commission on Achieving Necessary Skills (SCANS, 1991). The SCANS report provided a glimpse of the skills that would be needed in the year 2000 and beyond. The report examined how schools prepared students for work, and identified the competencies that would be needed for students to succeed in the workplace of the future. The SCANS report differentiated between technical and soft skills, and stated that competent workers were those who:

Demonstrated skills in managing or using resources (scheduling time, budgeting funds, arranging space, or assigning staff), interpersonal skills (serving clients directly and persuading co-workers either individually or in groups, negotiating with others to solve problems or reach decisions, working comfortably with colleagues from diverse backgrounds, and challenging others responsibly), information (identifying, assimilating, and integrating information from diverse sources, preparing, maintaining, and interpreting quantitative and qualitative records, and conveying information orally and in writing), systems (understanding their own work in the context of the work of those around them, understanding how parts of systems are connected, anticipating consequences, monitoring and correcting their own performance, and identifying trends and anomalies in system performance), and finally technology (selecting and using appropriate technology,

visualizing operations, using technology to monitor tasks, and maintaining and troubleshooting complex equipment). (p. 11)

The SCANS report was a comprehensive, forward-looking skills roadmap that was prepared by the U. S. Department of Labor and it was well accepted. At the same time, there were some areas for improvement not just in the inventory of skills outlined in the report, but also in the way the report was being interpreted at the time. Meadows (2008) explained that a system consists of “an interconnected set of elements that is coherently organized in a way that achieves something” (p. 11). The author clarified that a system exists because it is set up intentionally and has a specific purpose which is achieved by the elements of the system and the way in which they are interconnected. Education at all levels is just one of many examples of a system. When trying to improve educational outcomes, the process of education must first be understood as a system. This would require considering the seemingly endless variables within the system of education which include available resources, both internal and external, that work together to provide education to students. Considering it as a system would also include creating a feedback loop by understanding what the “consumers” of college graduates, namely the employers of college students, want to see in the form of education outcome (knowledge and skills).

As executive director of the Secretary's Commission on Achieving Necessary Skills, Arnold H. Packer was one of the original authors of the SCANS report. In a strong endorsement of the need to look at the challenges found in education from a systems approach, Packer (1992) suggested that communities that want to see schools fulfill their role of making sure that young people are ready for the work world should

“forge a strong link between their schools and employers” (p. 28). He went on to say that many American communities are not connected closely enough with employers. His assessment of the role educators play in the lives of students provides yet another valuable insight into the need for strong connections with employers. He states that although “most high school teachers are quite familiar with the entrance requirements for college, few know what is needed to succeed at work” (p. 28).

Huitt (1999) took the concept of systems thinking even further by reminding educators of the global nature of the United States workforce, and the fierce competition associated with having such a wide playing field. He suggested that one of the reasons the United States has experienced a growing economy is “because we have been able to utilize some of the best-trained workers from other countries.” Huitt believed that the United States’ ability to attract the best talent from all over the world “puts an additional burden on our workers to be able to compete at world-class standards and on the social institutions responsible for child and youth development to train them to do so.”

The school-to-work transition, therefore, is a problem that needs to be examined within the context of the larger system of education. Neumark (2007) wrote that “the identification of the school-to-work transition as a major ‘problem’ to be addressed by policy did not arise until the latter part of the twentieth century” (p. 2).

The SCANS report provided a foundation on which a culture of preparing students for relevant workforce skills was built. It was the first comprehensive report that became a benchmark for identifying skills in prospective employees. Subsequent authors have attempted to fine-tune the already excellent inventory of skills provided in the SCANS report.

Maes, Weldy, and Icenogle (1997) considered problem-solving skills, self-motivation and decision-making to be “among the top criteria desired by employers” (p. 76). In the same year, Stasz also suggested that employers consider problem-solving, teamwork, communication skills, and personal qualities as the most important competencies. The author provided a valuable insight by suggesting that the workplace context would determine the relative importance of these skills (p. 218).

In a survey of prospective employers and of university faculty, Tanyel, McAlum, and Mitchell (1999) sought to determine perceptions on the skills and abilities that business school graduates needed to be successful. This study was done prior to the turn of the century, at a time when the so-called “Y2K” concerns were at their highest. The study revealed that the skill/ability most desired by prospective employers at the time was responsibility and accountability. The authors expressed surprise to discover that the skill/ability least desired by prospective employers was global awareness. They attempted to explain this finding by considering that “prospective employers may not believe that global awareness is important for the entry level business school graduate but that it would become more important as he or she progresses to greater levels of responsibility” (p. 36-37).

With the proliferation of the internet came sweeping changes in the workplace environment. The internet was not just another new and exciting technology because it changed the way in which people conduct business. Wallace (2004) wrote that the internet “changed the business landscape, making it far more competitive and the workplace considerably more fast-moving” (p. 3). The author noted that the idea of balancing one’s work-life responsibilities took on a new dimension in a world that was

“highly competitive and net centric,” and in which “each worker is accessible any time, any place, and employees can access their colleagues, documents, and data from just about anywhere” (p. 3). Depending on how a person may choose to balance their life, this is an attribute of the internet that can be an advantage or a disadvantage.

Among the many changes brought about by the internet was the way in which jobs were advertised, and talent was identified. Reicher (2013) wrote that the time to do a background check on prospective employees dropped and generally, though not always, became more thorough (p. 118). This change in how hiring was done prompted researchers to identify some of the most common workplace skills that employers wanted to see in prospective employees by examining online job postings. Gallivan, Truex, and Kvasny (2004) identified six soft skills that were most commonly sought by employers in the United States. The skills they identified were communication, interpersonal, leadership, organization, self-motivation and creativity (p. 78). The authors estimated that these attributes accounted for “approximately 26% of the skills mentioned in online job advertisements.”

The Conference Board is an organization which provides market intelligence for a number of different areas including education. In a major survey of employers done in 2006, they identified “professionalism/ work ethic,” “oral and written communications,” and “teamwork/collaboration” as the “most important skills cited by employers” for job success. These skills were important for new workforce entrants at all three education levels: high school graduates, two-year college graduates, and four-year college graduates (p. 9).

Earlier research has sought to create a list of relevant soft skills for the workforce. An in-depth examination of these various lists reveals that employers' expectations change over a period of time. The skills listed in the SCANS report, published in 1991, would be helpful to guide employers and educators in a general direction of what is needed in graduates. But the SCANS report would probably not be able to guide the educational strategies for every single state in the United States. This is simply because, as noted by Stasz (1997), workplace context determines the relevant importance of skills needed by employers (p. 218). The workplace context also appears to place more or less importance on certain skills and these skills change over a period of time.

The dynamism of the kind of skills needed by businesses is summarized by Muff (2012) who argued that technical skills are considered less important than people skills and personal attitude in the workplace. They wrote that "more emphasis needs to be given to teamwork and practice than to theory, using less buzz words and ready-made solutions," simply because businesses are now keen to hire those who are "dedicated to professional management skills" (p. 653).

Soft Skills in the State of Minnesota

Although there is no information that provides a list of soft skills that are specifically demanded by employers in Minnesota, there have been studies that seek to compile such lists for other states or regional locations. The University of Nevada Las Vegas School-to-Careers Professional Development Center (STCPDC) which sought to identify the workplace skills needed by businesses in Southern Nevada. Richens (1999) who conducted the study found that "approximately 80 percent of responding firms

considered SCANS skills and competencies among their entry-level employees as very important-to-necessary to both their firm's productivity and profitability" (p. 5).

The fact that graduates are under-employed could be due to a variety of factors including lack of information about available skills in the human capital market, and an inefficient job-matching mechanism. One of the existing information gaps in Minnesota is the fact that only 42% of employed graduates managed to find a fulltime job and keep it for the whole year (Minnesota Department of Employment and Economic Development, n.d.). According to the Minnesota Department of Employment and Economic Development, which published this information, this is evidence of under-employment and/or under-utilization of skills in the local economy.

Standardizing Soft Skills - Limitations Posed by Social and Other Factors

The importance of soft skills has come to the foreground over a period of time and various lists have been created to define the characteristics that employees should ideally have. Under normal conditions, the employees who possess these skills should have acceptable or superior job performance. Boyatzis (1982) argues that this notion is "based on the premise that competencies are causally linked to individual performance outcomes" (p. 8). In other words, experts caution against using soft skills as a one size fits all solution simply because in a complex system there can never be just one formula for success.

For example, at the time of joining an organization the value of orientation for new employees is critical. In a study that examined how well new employees adjusted to their first job Murphy, Blustein, Bohlig, and Platt (2010) found that proper adjustment for

new employees was characterized by “initial orientation and training modules” (p. 179). A lack of training caused participants to feel less adapted to their jobs. Therefore, even employees with the best combination of soft skills may not be used to their full potential if simple organizational procedures such as formal orientation are not in place.

Another example of a limiting factor within the market is related to how information is shared about jobs. One of the primary concerns of businesses has been a persistent skills gap. This is different from the disconnect in expectations that employers have in the skill levels of new employees, and the actual skills that they possess. Research conducted by the McKinsey Global Institute has found that by 2018, the United States alone could face a shortage of up to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use big data to make effective decisions (p. 19). The report suggested that this may be due to the fact that there is a lack of transparency regarding the existence of available jobs. Could it also be inferred that the human resources function does not harness the power of digital technology as efficiently as other functions like finance and sales?

Manyika et al. (2015) pointed out that for decades, business leaders considered the human resource function to be nothing more than “departments in terms of compliance, record keeping, and support. In the absence of a solid business case for investing in talent, they put limited resources into HR technology capabilities, even as functions such as sales and marketing, operations, and supply chain management were heavily digitized” (p. 57).

Cecere (2014) suggested that resources are allocated towards the human resources function in an inefficient manner by stating that “only 14% of companies feel they

manage the human resources of the supply chain team well, and only 40% of companies have a human resources team focused on building talent” (“Seven characteristics of supply chains to admire,” 2014).

Manyika et al. (2015) believe that one of the important benefits of the process for posting and applying for jobs online is the ability of online talent platforms to improve the skill mix of the economy by creating an even larger pool of talent. The authors wrote that even though there are a number of gaps between the skills that employers demand and those that the workforce offers, “online talent platforms are becoming repositories of vast data sets that can be analyzed to understand these trends, giving policy makers, educational institutions, and companies a far more detailed and real-time view of labor market needs” (p. 54). This means that students, those who are in the early phases of their careers, and even established professionals looking to make mid-career changes can use these labor market trends to make informed choices about future education options and career and training paths. Eventually, this will balance out the mix of skills in the job market and allow employers to manage their human capital more effectively which, in the long run, will enhance productivity.

Another limitation is the perception of soft skills themselves. Pennington (2015) wrote that soft skills are considered to be “nice to have but of no real significance” (p. 55). This can be a real hurdle in employers and employees alike embracing the importance of soft skills in the context of business productivity.

It is important for business leaders, new employees, and established career professionals to remember the dynamic nature of the world in which we live. Butler (1999) reminded us that the pace of progress is such that we live in a world where “the

focus is shifting to the continual production of knowledge as a commodity, positioning workers as human capital, virtually immune to obsolescence” (p. 136).

Manyika et al. (2015) echoed this exact same sentiment and confirmed that the speed of doing business will continue to increase as technology evolves, and “companies in knowledge-intensive industries need mechanisms that support not just onetime training but ongoing self-directed virtual learning” (p. 61). Human resources can only create an environment that values knowledge if more resources are tasked towards building and developing talent and promoting the kind of organic learning that systematically sustains the long-term growth of people through retention, promotion, and developmental mechanisms.

Chapter III

Method

This is a quantitative study that intends to answer the research question, “What are the soft skills that make newly graduated students successful in the workplace?”

It is hypothesized that there will be a positive correlation between the level of performance among newly hired employees and the top five in-demand skills which employers look for in new hires.

Subjects

The study will begin by creating a list of employers who have hired business graduates in the Southern Minnesota area. Since the researcher is a doctoral student at Minnesota State University, Mankato, it was decided to leverage the connections available through the Career Development Center (CDC) on campus. The CDC has provided the most recent list of graduates from the 2014-2015 academic years, along with the names of the hiring organizations, to the researcher.

These hiring organizations will be filtered to only include Minnesota-based organizations. The CDC will then provide the researcher with the human resources contact associated with each shortlisted organization. The subjects (potentially 154 in number) will consequently be recruited from 154 organizations across the state of Minnesota that have hired business graduates from Minnesota State University, Mankato during the 2014-2015 academic year.

After obtaining the data from the Career Development Center at MSU, it was found that it consisted of a list of 179 companies that had hired students from the College of Business in 2014-15. However, the CDC had usable email addresses for only 60

contacts and when the survey was administered to them the response rate was less than 5%. A list of email contacts was subsequently purchased from Book Your Data (www.bookyourdata.com) to provide access to a larger potential sample of subjects.

In order to match the professional profile of respondents that had been obtained from the CDC, and for which the survey instrument had been designed, the criteria for the contact list respondents purchased online was that they had to be HR/operations professionals who did not have managerial responsibilities, and who were in the state of Minnesota. The following filters were selected to include professionals from the same industries as the list from the CDC:

Accounting/Bookkeeping	Advertising/Marketing	Automotive
Banking	Consumer Services	Financial Services
Insurance	IT & Services	IT Hardware
IT Networks	IT Security	IT Software
Local Business	Retail	Supermarkets

Table 1: List of industries contacted for the study

These filters produced a list of 961 HR contacts in Minnesota who were in HR, HR training, HR personnel, and HR administration. HR payroll professionals were not included because they would not have visibility to new employees and their performance on the job.

Measures

Mone, Eisinger, Guggenheim, Price, and Stine (2011) wrote “it appears that performance management can be used to increase levels of employee engagement” (p. 205). Employee performance is assessed for a variety of reasons. According to Mone et

al., (2011) it is used to set performance and development goals, provide ongoing feedback and recognition, manage employee development, conduct appraisals, and build a climate of trust and empowerment (p. 206).

Although there are no standardized methods to assess employee performance, Smith, Hornsby, and Shirmeyer (1996) noted that 56% of organizations used graphic rating scales to measure employees against each other in a workgroup, 74% used Management-by-Objectives [a performance management technique that links outcomes with predetermined objectives, or MBO], and 79% used narrative essays. A combination of all three methods was used by 24% of the respondents (p. 11).

For the purpose of this study, an assessment rating scale will be used to determine high and low performers in each organization based on the rating scale used in the MBO method. Thomas and Bretz (1994) provide definitions for rating employees at each of the levels in the MBO method as follows:

1. Far exceeds objectives
2. Exceeds objectives
3. Fully meets objectives
4. Partially meets objectives
5. Unsatisfactory (p. 33).

Part A of the electronic questionnaire will consist of attributes for employees who are at a rating of “3” (fully meets objectives) or above. Part B of the questionnaire will consist of an identical list of attributes for employees, but who are below “3,” and whose performance has not been satisfactory. Part A and Part B must both be completed and

will be clearly defined and demarcated to ensure maximum clarity. There will be an option for respondents to skip Part B if they do not have employees whose performance has been unsatisfactory.

Attributes Contained in the Questionnaire

The attributes listed in the questionnaire are contained in the SCANS report (p. 10). For ease of comprehension, each attribute has been condensed into a few words and the associated definitions are brief. This is to keep the survey duration short.

1. Organization skills - working individually (Skills include timeliness, and ability to track and maintain financial and other records).
2. Collaboration skills - working with others (Skills include works with teams, contributes actively, mentors others, learns quickly, works well with diverse people and situations).
3. Comprehending complex information (Ability to identify strategically important information, and interpret and communicate it effectively to colleagues).
4. Systems skills - working with complex interrelationships (Skills include social and organizational competencies, and the ability to suggest process improvements).
5. Information technology skills (Familiarity with technology related to the current job).

The respondents will be able to assess the attributes on a 5-point Likert scale. The lowest score, 1, will represent “Unsatisfactory” while a score of 5 will represent “far exceeds objectives.” A similar scale was used by Porterfield (1999) in a study to identify skills and competencies that HR managers believed entry-level, four-year degree

employees should possess in order to succeed in the business workplace in the 21st century (p. 161).

In addition to the above five SCANS attributes, there will be blank fields for respondents to input attributes which they can then rank on the Likert scale. The blank fields are intended to capture other attributes that may not be covered in the SCANS report.

Procedure for Data Collection

After approval has been obtained from the Institutional Review Board an informational email and a request to participate will be sent to the human resources personnel identified from the CDC list. Those who respond in the affirmative will be sent a recruitment email introducing the opportunity to participate in the study and a link directing them to the online survey hosted by Qualtrics. Upon clicking on the link, potential subjects will be presented with an informed consent form statement that allows them to opt out or continue by clicking the right-arrow button. Doing so will take subjects into the survey. All data will be collected anonymously.

Procedure for Data Analysis

Responses to the items regarding each of five soft skills among recent business hires will be bifurcated based on whether those hires were identified as high or mediocre performing employees. JASP (www.jasp-stats.org) will be utilized to conduct a t-test on each soft skill between these two groups to identify whether there exists a statistically significant difference on that skill relative to employee performance.

Chapter IV

Results

The purpose of this study is to examine the non-academic attributes or soft skills exhibited by newly graduated students in the workforce within a 2-year period of graduating from college. Although the literature review provided an exhaustive list of attributes that are valued by employers globally and across the United States, the scope of this study is limited to employer preferences in the state of Minnesota. The study identified the attributes displayed by those employees who have been rated above average in their first performance review, thereby placing them in the category of high-performing employees. For the purpose of comparison, it also identified the attributes displayed by those who are ranked below average. The study determined the kind of soft skills that correlate with success among graduates, as defined by a high performance rating.

There was no established standard among employers for skills and competencies in the United States until the Secretary's Commission on Achieving Necessary Skills published the SCANS report in 1991. The report provided a detailed inventory of skills that employers in the United States would need to remain competitive in the new millennium, and ensure the country's continued success well beyond. Published by the Department of Labor, the key skills of the SCANS report were used as a basis of the questionnaire that was designed for this study.

Demographic Characteristics

While the study was designed to cover 15 different industry types, the survey results showed representation by 8 different industries. Organizations that were a part of this study varied in size from family-owned businesses to global multinational corporations. The pie chart below shows the responses that were received based on organizational size.

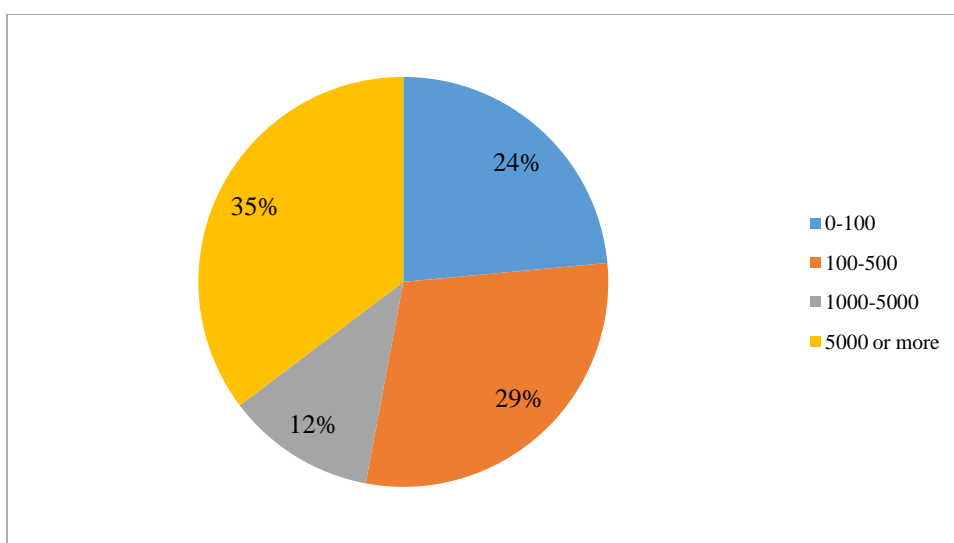


Fig. 1: Organizational size

Most of the respondents came from organizations that had 5000 or more employees, and which had offices in multiple locations across the world. The email contact list that had been purchased from bookyourdata.com was rated by the vendor as having around 95% valid email IDs. In other words, the vendor expected only around 5% of the emails to be undelivered. However, after the survey was administered it was discovered that 14.25% of the emails were undelivered. Based on information which was recovered from out-of-office email messages, the following additional details were

revealed about the contacts which should have only included HR professionals in Minnesota. This suggests that the quality of the email contacts may not have been as good as the vendor claimed they would be on its website.

Status of recipient	Count
Email domain in the UK	1
Retired	4
Non-HR roles	5
Extended leave	4

Table 2: Examples of mismatched target audience

The email contact list was analyzed in greater detail for the purpose of interpreting the results. Details of this analysis have been provided in Chapter V.

Emerging Themes

Each of the three hypotheses can be used to interpret the results of the study. The literature review examined a variety of sources which indicated that there are a number of attributes which employers value and look for in prospective employees. Although employers value different sets of attributes, there were a few universal ones such as communication skills and teamwork. The first hypothesis examined whether top performers actually possessed the skills most commonly in demand by employers.

H1: It is hypothesized that there will be a positive correlation between the level of performance among newly hired employees and the top five in-demand skills which employers look for in new hires.

The survey instrument measured the level of each respondent's assessment of their top performing employee as well as their average performers, starting with self

organization skills. This skill was briefly described in the survey instrument as the ability to maintain project timelines, and track and maintain records. The comparison of this skill between the two sets of employees shows that there are 6 employees who are rated as top performers, and who have very good self organization skills.

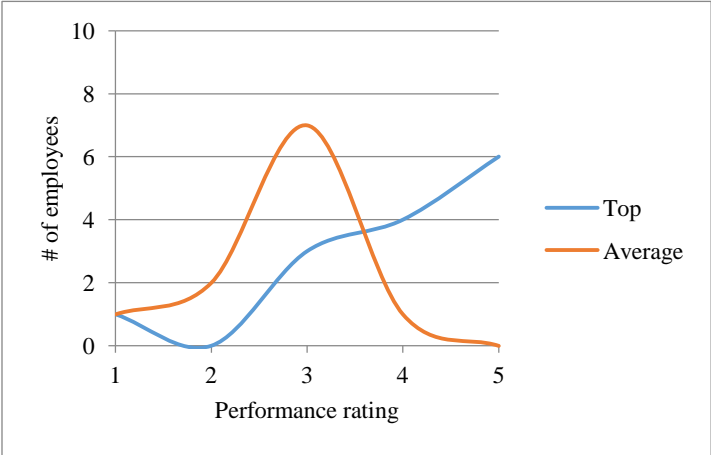


Fig. 2: Self Organization Skills

The survey instrument defined collaboration as the ability to work with teams, learn from and teach others, and work well under a variety of situations.

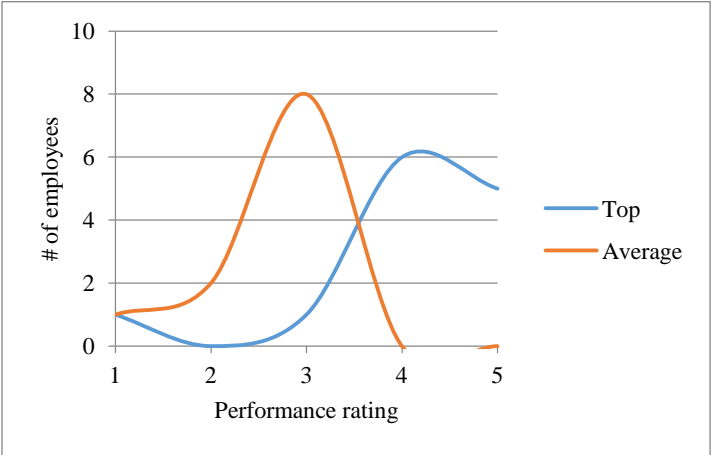


Fig. 3: Collaboration Skills

The graph comparing the two sets of employees for this skill shows that average performers were rated low on this skill. In fact, most of them were clustered around the middle of the rating scale for this skill.

The third SCANS skill measures the ability of employees to identify strategically important information, and interpret and communicate it effectively to colleagues. This comparative graph shows that an equal number of employees from each of the two groups were assessed at two successive levels of rating, with the average performers trailing the top performers by one level.

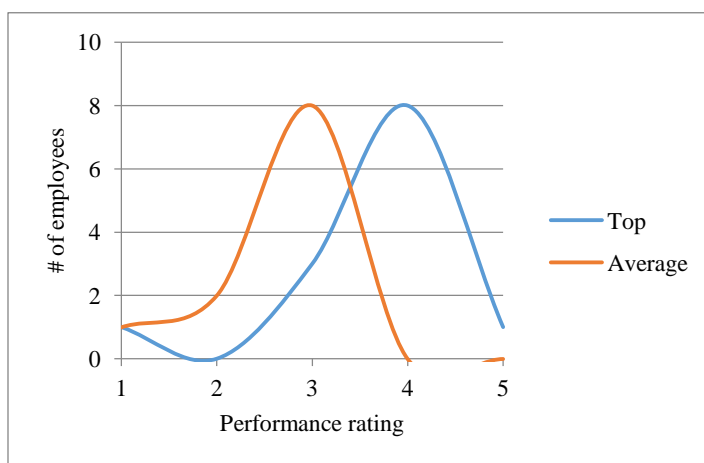


Fig. 4: Comprehends & Communicates Complex Information

Systems skills were defined as the ability to understand inter-relationships with people and tasks, think in a systematic manner, and suggest process improvements. Also defined as "big picture thinking," this is a complex skill which is highly desirable. It was observed that most of the top performing employees were assessed as "Strong" (rating of 4) in this skill. The comparative graph below shows just one of the average performers has been assessed with a "Strong" rating.

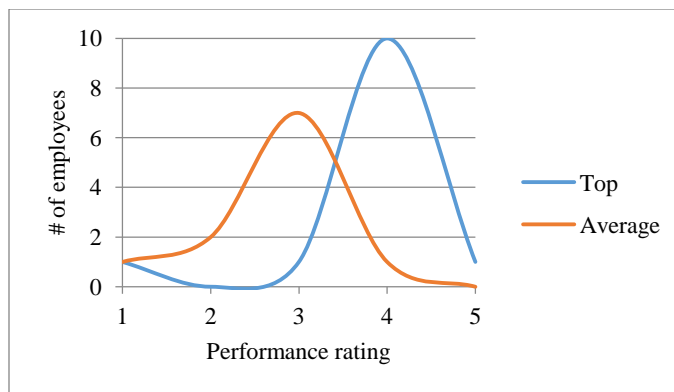


Fig. 5: Systems Skills

The final skill was technology skills. Respondents were asked if the employees they were assessing possessed technology skills related to their current jobs, and whether they showed initiative to learn additional skills. This skill possesses the qualities of a technical as well as a soft skill mainly because of the way in which it is defined by the SCANS report – taking the initiative to learn what may not even be necessary for the current job. Even though technology skills may be possessed by those who do not have well-developed traditional soft skills such as collaboration or organization, there was still a noticeable difference between the top performers and the average performers, which can be observed in the graph below.

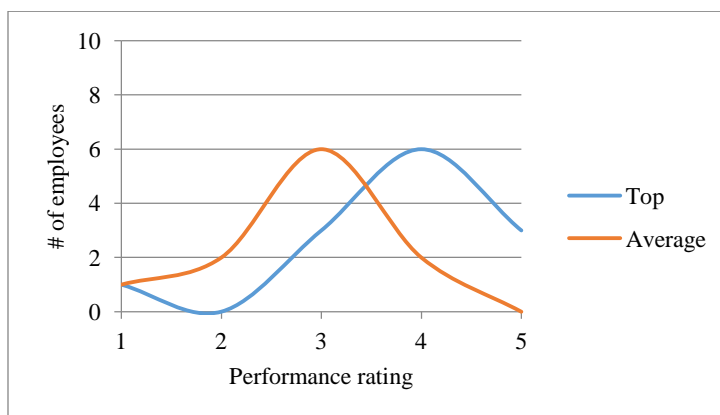


Fig. 6: Technology Skills

The second hypothesis examines what sets the best performers apart from those who are merely average. All employees tend to display a certain mix of soft skills in varying levels of ability. This hypothesis tests whether there is a statistically significant difference between the skills possessed by the top performers and the average performers, as assessed by those who have been able to observe them since the time they were hired.

H2: It is hypothesized that there will be a statistically significant difference in performance among the top five soft skills between new hires who perform at above- and below-average performance levels.

Even after mapping the performance of the two groups of employees for a side-by-side comparison, the variation of performance between the groups cannot be determined without doing a statistical analysis of their performance ratings. Therefore, a t-test was used to measure the difference between the top performers and the average performers. The result of the test is a probability which indicates the extent to which the resultant data values occurred by chance. This is expressed as a “p-value” and will be discussed in detail in Chapter V. Briefly, the low p-values are a good sign because they indicate that the differences between the groups could not have been coincidental, and based on the design of this study we know that the differentiating factor was the level of performance.

Skill Assessed	p-value
Self Organization	0.002
Collaboration	0.001
Complex Comprehension	0.008
Systems	0.007
Technology	0.027

Table 3: p-values from t-tests

A study conducted by Burning Glass Technologies (2015) found that although all employers value soft skills, some industry sectors value certain skills more than others (p. 8). This component of the study sought to examine how soft skills are prioritized across industry sectors.

H3: It is hypothesized that there will be a statistically significant difference among preferred soft skills for new hires across business sectors.

In order to conduct the analysis described above, it would be necessary to have a number of responses from various industry sectors. Unfortunately, there were only singular representations for many of the industries with the largest cluster of respondents coming from the financial services industry. This is shown in the industry sector table below.

Industry sector	# of responses
Banking	1
Financial Services (Includes insurance)	4
Supermarket	1
Pharma	1
Logistics/Transportation	1
Higher education	1
Marketing	1
Advertising	1

Table 4: List of industries that responded to the survey

Additional analysis has been done on the data purchased from bookyourdata.com with reference to industry representation. This has been discussed in Chapter V.

Qualitative Indicators

A qualitative component was included in the questionnaire for each level of performance. This open-ended question allowed respondents to input their own thoughts about the kinds of behaviors they wanted to recognize in their top performing employees, and which may not be adequately captured by the survey instrument. For the average performers, the respondents were asked to list behaviors that they wished to see eliminated, or developed further. The word clouds below provide a snapshot of the assessment for each group of employees.



Fig. 7: Word cloud for top performers (Traits already possessed)

Respondents' qualitative inputs seemed to complete the narrative contained in the graphical comparisons of each of the soft skills. The top performers were described as being creative and passionate, with a practical approach to their jobs.

On the other hand, the responses for average performers showed that they lacked most of the skills that the top performers already possessed. The word cloud below shows skills that this group of employees needs to develop. Based on the detailed inputs provided by respondents, the trait that appeared to need development in this group was paraphrased as “Engagement.”

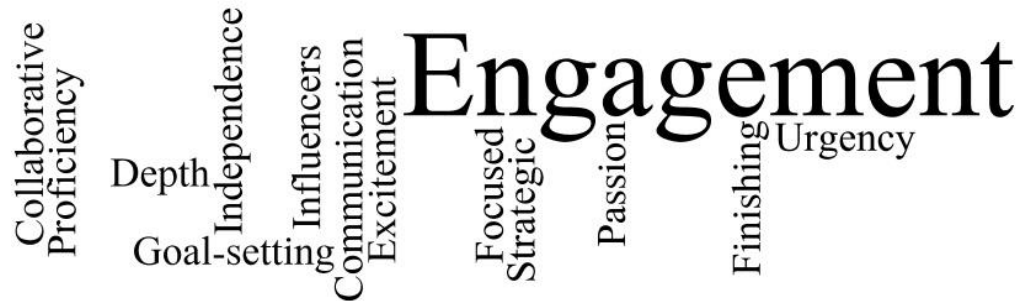


Fig. 8: Word cloud for average performers (Traits most desired but absent)

Chapter V

Summary of Findings

The present study was conducted to gain an understanding of the non-academic attributes or soft skills exhibited by newly graduated business students in the workforce. After students graduate and start working they acquire new skills on the job. They also acquire new behavioral traits which they pick up from their coworkers. For example, Ostroff and Kozlowski (1992) described how new organizational members are “believed to experience changes in the development of work skills and abilities, changes in the acquisition of appropriate role behaviors, and changes related to adjustment to the group’s norms and values.” (p. 850). The present study was designed to assess the level of soft skills possessed by new business graduates who had been employed no longer than two years.

Hodges and Burchell (2003) found that graduates tend to “expect too much too quickly and become dissatisfied and negative when they are not given rapid advancement” (p. 19). They found that when people with the right attitude are employed, they can fully develop their theory skills in practice, a process that usually takes 6-12 months. The two-year period was chosen in the present study as a cutoff point to eliminate any long-term effects that the organization culture or other employees would have on these individuals, while examining the skills with which they were equipped shortly after graduating from college.

Demographic Characteristics

The literature review indicated that even the definitions of soft skills varied by industry, by organizational function, and by the evaluator. Therefore, the study was conducted within the state of Minnesota to ensure that at least one variable, the location, was standardized. Survey respondents consisted of Human Resources managers within the state of Minnesota from a wide variety of industries in small, medium, and large organizations. Fifteen different industry types were represented in the present study, which was administered to more than 1000 respondents in over 50 different organizations.

Emergent Themes – Between-group Comparisons

Gardner (2006) wrote that “current formal education still prepares students primarily for the world of the past, rather than for the possible world of the future” (p. 17). He went on to write that the “minds for the future” would possess the following attributes: discipline, synthesis, creativity, respect, and ethics (p. 3). It was interesting to note that the problem of labeling different skills, identified in the literature, did not pose to be a problem after all. Gardner identified discipline as an important attribute, which seems to correspond to “self organization” in the SCANS report. This was the very first soft skill that respondents were asked to evaluate and the results showed a stark contrast between the high performers and the average performers. The skills graph for the former set of employees trended upwards, showing that they displayed strong self organization skills. On the other hand, the graph for the low performers trended downwards, and this shows that they lack discipline. This suggests that discipline, one of the key soft skills, is

a strong predictor of success on the job, and it appears that those who possess this skill or trait will outperform those who do not have it.

A major survey of employers done by Casner-Lotto and Benner (2006) revealed that “teamwork/collaboration” was one of the “most important skills cited by employers” for job success. These skills were important for new entrants into the workforce at all three education levels: high school graduates, two-year college graduates, and four-year college graduates (p. 9). Collaboration was the second SCANS skill in this study. This skill was rated as “Strong” or “Very Strong” for the top performers, with only one individual in this group at the “Average” level. In sharp contrast, none of the average performers were assessed at a level better than “Average” for collaboration skills. The World Economic Forum predicts that by 2020 “technical skills will need to be supplemented with strong social and collaboration skills” (p. 3). Based on the results of this study, it is possible to infer that those students who collaborate with their peers, and who work well in teams are likely to receive a higher performance rating than their peers who do not work well in teams after they enter the workforce.

The third SCANS skill to be assessed was “comprehends and communicates complex information.” This refers to the ability of employees to identify strategically important information, and interpret and communicate it effectively to colleagues. This includes oral and written communication skills. The comparative graphs for the two groups of employees showed similar peaks or modes, but at different points along the performance rating scale. The curve for top performing employees was positioned at a higher value of the rating scale. Once again, this shows that one of the many predictors of job success is good communication skills.

Systems skills or the ability to think strategically when working with people or on a task showed an interesting graphical trend. The modes for the two groups were not only at different points on the rating scale, they were also dissimilar. The majority of top performers had systems skills that were assessed by HR personnel as “Strong.” Korte (2009) conducted a study about how newcomers in an organization learn about the organization’s social norms or unwritten rules of behavior. One of the findings that emerged from the study was the fact that “relationship building was the primary driver of the socialization process - not individual capability for learning” (p. 293). This study showed the value of understanding how the social and political organization impacted each individual, and those employees who recognized this fact learnt faster than those who did not. Because of the strategic nature of systems thinking, it is very likely that the employees whose systems skills were strong were also the ones who possessed good collaboration skills and teamwork.

The final skill, technology, showed some interesting trends in the comparative graphs. Once again, the two graphs had similar peaks which were located at different points on the rating scale: Strong and Average for the top and average performers, respectively. But the most striking observation was the fact that two employees were rated “Strong” in technology skills even though their overall performance was rated average. This could only be interpreted in the context of what the published literature had to say in a similar situation. Begel and Simon (2008) did a study of new college graduates who were starting their first software development jobs and found that “many of the problems they have typically have a root cause in poor communication skills and social naïveté” (p. 13). Therefore, a possible interpretation of the two average

performing employees who were assessed with strong technology skills could be that although they have sound technical skills in one area, their other soft skills such as communication and collaboration were lacking. Due to this, it is very likely that these employees, who are good in the technical nature of their jobs, were not able to achieve their full potential because they could not interact effectively with their peers and with other persons in their respective organizations.

Statistical Differences between Top and Average Performers

A t-test was conducted for each of the skills, comparing the top and average performers.

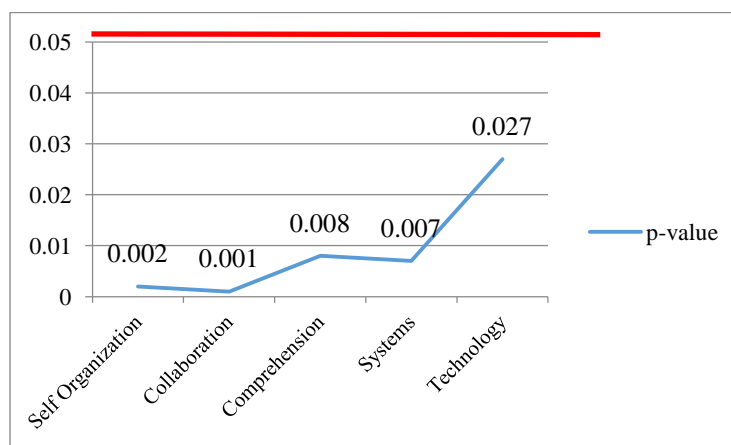


Fig. 9: p-values for each of the SCANS skills

The red line indicates the threshold beyond which the differences between the two groups occurred by chance. As can be seen from the graph, each of the attributes has a very low p-value. Because the design of the study categorized the two groups on the basis of their performance ratings and because these ratings appear to be linked to the

presence or absence of certain soft skills, the data suggest that the difference between the two groups is not by chance. Even though the p-value for technology skills showed a spike in comparison to the other p-values, it was still below the threshold of 0.05.

Technology skills are not soft skills at all; they are ordinarily categorized as technical skills. However, the survey asked respondents not only about the level of technological expertise of their employees, it also asked whether they show initiative to learn additional skills. The inclusion of the attribute “initiative” made this question the only hybrid one in the survey. It is very likely that the possession of strong technology skills leveled out the playing field a little for the top and average performers. However, on closer inspection of the results it appears that no single skill is sufficient to differentiate any one individual from another. What seems to make a tangible difference in performance is a combination of soft skills, most of which are social in nature.

Soft Skills Demanded by Different Business Sectors

The study sought to determine if there were different combinations of soft skills that were more prominent in certain business sectors. However, the number of responses came primarily from businesses in the financial services industry. Although there were respondents from six other industries, there was just one response from each of those industries. The low numbers made it impossible to do a comparison across industries.

Qualitative Indicators

The results of this study were further enhanced by the inclusion of a section in the survey instrument that allowed respondents to input qualitative feedback. It was found that these inputs correlate strongly with the results of the data analysis and show that the top performers possess attributes such as creativity, innovation, and emotional intelligence. When respondents were asked to list the attributes that they wished to see in their average performers, they either listed the attributes that they saw in their best employees, or they listed undesirable behavior which they wanted eliminated. An example of the latter was surfing the web or texting while at work.

Strengths and Weaknesses of the Study

Human capital is indeed an organization's most valuable resource and this study was conceptualized based on my experiences hiring, training, and managing employees in four different countries. After years of planning, the final results provided a mixed bag of results which are summarized below, beginning with the strengths.

Novel Approach: The categorization of groups into high and low performers, using each of the SCANS soft skills as a common element for the two groups, was unusual. The importance of keeping the survey instrument simple and easy to understand was paramount because the first part of the survey was for human resources professionals to assess the top performers while the second part of the survey was for them to assess average performers.

Local in Nature: Many studies have covered soft skills but they were at a national scale, or they covered a number of different countries. This study covered the state of

Minnesota. For decades, multinational corporations have been following the motto “Think globally, act locally,” a phrase borrowed from environmental planning organizations. This study was localized with the purpose of gaining an understanding of the perceptions that businesses within Minnesota have of college graduates.

Alignment with the Literature: The findings of the study aligned strongly with those of other studies despite the small number of respondents. This suggests that the soft skills which many students and managers perceive to be optional are in fact critical to the success of individual, group, and organizational performance.

Some of the limitations of the study were only evident after the survey was ended on March 24, 2018. These are listed below in the perceived order of importance.

Quality of the Data: The bulk of the email contact list was purchased from an online data firm. After administering the survey I noticed a large number of undelivered emails. The vendor had promised that only around 5% of the emails would be undeliverable, but I calculated a much higher rate of 15%. That was when I decided to see if I could categorize the organizations in the contact list which I purchased to see how well various industries were represented.

Organization	Count	% of total
Stearns Bank	9	0.94%
OneBeacon Insurance	11	1.14%
Agribank	11	1.14%
Medica Insurance	12	1.25%
Insurance Brokers of Minn	14	1.46%
Allianz Life Insurance	21	2.19%
CliftonLarsonAllen	37	3.85%
Ameriprise Financial	42	4.37%
US Bank	143	14.88%
Cumulative % of total		31.22%

Table 5: Partial representation of financial organizations in the email list

Almost 50% of the responses to the survey were from the financial services industry. After doing a search for organizations in the contact list that had emails for 9 or more individuals, I discovered that 31.22% of the email addresses in the contact list were from financial service organizations. The only other industry sector that formed a comparatively sizable chunk of the list was retail (Target) which accounted for 7.18% of the email contacts. This clustering of industries shows that the survey was not administered to a population that adequately represented a cross-section of various industries.

Number of Responses: Only 13 respondents had actually finished the survey. The low number of respondents means that these results cannot be generalized for a larger population. Furthermore, it means that all statistical analyses remain suspect and can only be used to infer possible trends.

Time Investment of the Respondents: This study was very relevant because of the importance that has been given to soft skills – by educators, by corporations, and by students. Thirteen usable responses work out to a response rate of just 1.58% which is surprisingly low considering the potential value of this study, and others like it. The benefits of insights gleaned from this study will eventually flow back to the very same persons who were targeted for the study. One of the concerns about expressed by respondents about low performing employees was their lack of engagement. The response rate of this study begs the question: Do newly graduated students have suitable role models who exhibit the kind of characteristics that inspire them to do more with the soft skills that they have, and acquire new ones?

Potential for Future Research

This study can be refined in many ways. It can even be repeated for a larger audience to get a higher number of responses across different business sectors. One of the questions that this study did not seek to address is, can soft skills really be taught? In a study that spanned four European countries (UK, Austria, Slovenia and Romania) done by Andrews and Higson (2008) it was found that a high level of business knowledge by itself is insufficient. Excellent verbal communication skills are also necessary for graduates to “feel confident in their abilities to communicate such knowledge.” (p. 419). This view was supported by the literature review which indicated that managers in corporations believe students need to learn presentation skills. In addition to this, soft skills can be taught intentionally in different methods, one of which has been adopted by Reinhardt University in Georgia. The university’s pilot program is “aimed at cultivating students’ soft skills and giving them an edge over their peers in the job market.” (“Teaching students soft skills,” 2017). Instead of testing students on the skills learnt, they are encouraged to “write and reflect on what they learned and how they could realistically communicate that to an employer.”

Additional research could also focus on how higher education institutions and corporations can work together collaboratively to provide opportunities for students to acquire the kind of soft skills during their academic years that would make them even better employees once they graduate. Specifically, faculty engagement with their students could also be an area of potential research. Modeling the engaged behavior that faculty wish to see in their students, and that industry demands, could meaningfully

impact the success of students in the workplace above and beyond the demonstration of academic skills.

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Appendix A

Survey Instrument

Please answer two quick questions about your organization

In which industry does your organization operate?

- Automotive
 - Banking
 - Financial Services (Includes Accounting, Audit, Insurance, etc.)
 - Food and Food Services
 - Healthcare
 - Retail - Clothing
 - Retail - Other
 - Supermarket
 - Technology
 - Other, please specify:
-

What is the size of your organization? (Total number of employees across all locations).

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0-100 | 100-500 | 500-1000 | 1000-5000 | 5000 or more |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Top-performing employees hired in the past two years.

Please think of any employee who has been with your organization for around two years, and whose performance rating has been very good. Evaluate them for the five skills listed below.

SELF ORGANIZATION SKILLS (Ability to maintain project timelines, track and maintain records, etc.)

Very poor Poor Average Strong Very strong

COLLABORATION SKILLS (works with teams, learns from and teaches others, and works well under a variety of situations).

Very poor Poor Average Strong Very strong

COMPREHENDS AND COMMUNICATES COMPLEX INFORMATION (identifies strategically important information, and interprets and communicates it effectively to colleagues).

Very poor Poor Average Strong Very strong

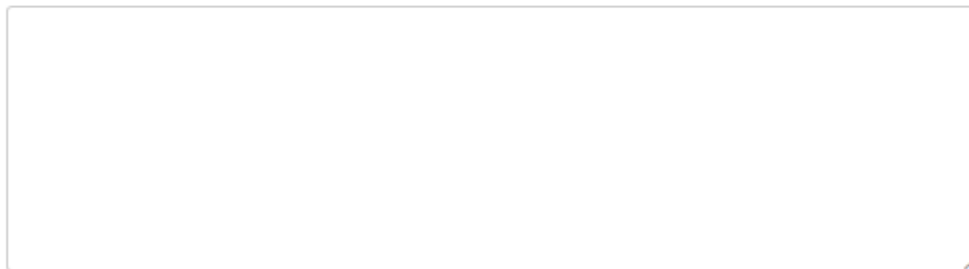
PROCESS AND SYSTEM SKILLS (Ability to understand inter-relationships with people and tasks, thinks in a systematic manner, and can suggest process improvements).

Very poor Poor Average Strong Very strong

TECHNOLOGY SKILLS (Possesses technology skills related to the current job, and shows initiative to learn additional skills).

Very poor Poor Average Strong Very strong

Many top-performing employees demonstrate unique characteristics or skills which may not have been listed in the survey above. Please write down some of those characteristics which you would like to appreciate.

A large, empty rectangular box with a thin black border, intended for the respondent to write down characteristics they would like to appreciate. The box is currently blank.

Mediocre-performing employees hired in the past two years.

Not all newly hired graduates are stars. Please think of any employee who has been with your organization for around two years, and who has shown opportunities for improvement. Evaluate them for the skills listed below.

SELF ORGANIZATION SKILLS (Ability to maintain project timelines, track and maintain records, etc.)

Very poor Poor Average Strong Very strong

COLLABORATION SKILLS (works with teams, learns from and teaches others, and works well under a variety of situations).

Very poor Poor Average Strong Very strong

COMPREHENDS AND COMMUNICATES COMPLEX INFORMATION (identifies strategically important information, and interprets and communicates it effectively to colleagues).

Very poor Poor Average Strong Very strong

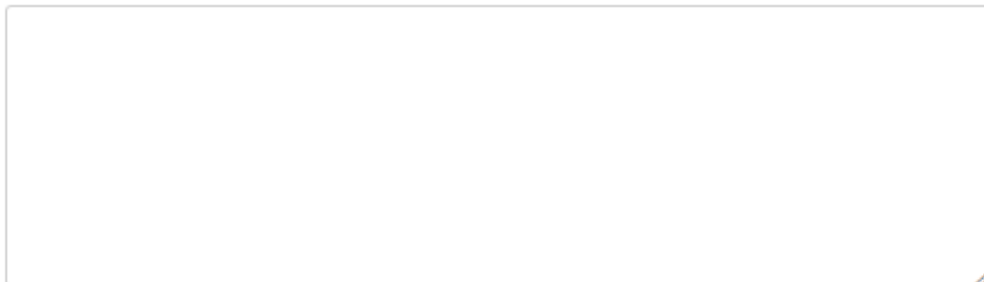
PROCESS AND SYSTEM SKILLS (Ability to understand inter-relationships with people and tasks, thinks in a systematic manner, and can suggest process improvements).

Very poor Poor Average Strong Very strong

TECHNOLOGY SKILLS (Possesses technology skills related to the current job, and shows initiative to learn additional skills).

Very poor Poor Average Strong Very strong

Please write down some of the characteristics or skills which you think some of the average performers need to develop, or stop doing.

A large, empty rectangular box with a thin black border, intended for the user to write their response to the prompt above. The box is currently blank.