A Correlation Study of Education and Pharmaceutical Sales

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Abstract

A quantitative, comparative, descriptive design was used to determine whether mixed online, on-ground educated graduates or on-ground educated graduates perform better as pharmaceutical sales representatives in the pharmaceutical sales industry. The number of students attending mixed online, on-ground institutions of higher learning has steadily increased upon the onset of online education in 1989. The specific problem addressed by this researcher was whether students from mixed online, on-ground colleges were as effective in the workplace as their counterparts at on-ground schools. The purpose for this quantitative, comparative, descriptive questionnaire design was to compare what is in the literature as it relates to the quality of education from mixed online, on-ground educated graduates versus on-ground educated graduates with actual sales results from pharmaceutical sales representatives. The participants included pharmaceutical sales representatives throughout the United States. Survey response data were analyzed using a one-way, between groups analysis of variance method. For research question one (RQ1), the difference between groups of school types were not statistically significant. For research question two (RQ2), the difference between groups based on school type was non-significant. For research question three (RQ3), the difference between groups was non-significant. For research question four (RQ4), the difference between the groups was non-significant. Based on the results of this study, employers should hire a greater number of employees who have participated in a mixed or all online education program to find out if the trend demonstrated in this study is replicated in practice. In addition, employers should encourage their sales employees to use technology to keep accurate

sales records and to collaborate with other members of the sales organization to increase sales.

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Chapter 1: Introduction

The number of students attending mixed online, on-ground as well as online institutions of higher learning has steadily increased upon the onset of online education in 1989 (Kentnor, 2015). Fogle and Elliott (2013) have revealed that distance education offerings are perceived as being less effective than traditional education settings in preparing students for future employment. According to Kentnor (2015), online education is now the only form of distance education due to the fact that students no longer participate in this type of education through parcel post, radio, and television, which were all part of the evolutionary process that has taken place. Due to the use of online education for teaching, particularly at four-year, for-profit institutions of higher learning, online and mixed online, on-ground colleges and universities have increased enrollment significantly faster on a percentage basis than all on-ground universities (Gilpin, Saunders, & Stoddard, 2015). In addition to offering online degrees, many institutions have a non-selective, open enrollment policy, which has contributed to increased overall student enrollment as well (Simmons, 2013).

Employer hiring practices are influenced by the non-selective, open enrollment policy and, based on this fact, they have determined that online and mixed online, on-ground institutions of higher learning do not offer the rigor and flexibility of all on-ground education settings (Fogle & Elliott, 2013). The influence of this trend on decisions of employment does not appear to be based on the actual level of effectiveness of online educated graduates in the workplace versus their on-ground educated counterparts, but rather on perception (Darolia et al., 2015). This appears to be particularly true of for-profit, online educated graduates, as the majority of students still

participate in a traditional education environment. Kentnor (2015) stated that, of the 20.6 million students enrolled in higher education, only 6.7 million are enrolled in online coursework. Non-profit traditional students make up 8.7% of all students involved in all-online degrees as of 2013 (National Center of Education Statistics, 2016). This is in comparison to private non-profit schools of which 13.1% of students are involved in all-online degrees as of 2013 (National Center for Education Statistics, 2016). Also, the school type with highest percentage of students taking all online classes is the for-profit educational system (Allen & Seaman, 2011). Strayer University, for example, has documented that while it has ground campuses throughout the Eastern part of the United States, 40,000 of its 42,750 students attend classes online (strayer.edu, 2015). Many other large for-profit universities are similar in their configuration of online versus on-ground educated students despite having small campuses throughout the U.S. The number of students educated at for-profit, online programs is substantial. The similarity between for-profit and non-profit schools is the fact that traditional schools do offer limited all-online courses of study, as 8.7% of public; non-profit student are involved in all-online degrees and; 13.1% of private non-profit students are involved in these degree programs.

There are differences between the types of schools described above. Traditional schools use proctors to administer online tests to students (Kent State University, 2016; National Center for Education Statistics, 2016). Traditional online schools also ensure "the same rigor" as the classroom by not allowing students to use study materials during tests (Kent State University, 2016). Traditional universities accomplish this through the use of human proctors that observe students while taking tests through the use of a

webcam or through motion detectors given to students to use during tests to detect movements that may indicate attempts to "cheat" (Cluskey, Ehlen, & Raiborn, 2011).

In contrast, for-profit, online schools do not use proctors or motion detectors to observe students during test taking (Pope, 2007). Obtaining a degree through a traditional university is based on the ability to memorize rather than apply knowledge, and that is the motivation for not allowing the use of study materials during tests, according to one school's web site (Kent State University, 2016). For this reason, it appears that an online degree from a traditional university is a traditional classroom degree administered through the use of a computer in order to obtain the same study materials and through the use of the same tests given in the classroom setting rather than a true online degree. Cluskey et al., (2011) and Sutton (2014) reiterated the fact that proctors are utilized in the online environment at traditional schools and that the same tests are administered in the online setting that are administered in the classroom. This is the case rather than taking an application oriented approach to learning and test taking in the online environment in order to maintain accreditation (Sutton, 2014; Cluskey et al., 2011). Al-Hilawani (2016) also linked comprehension with memorization and states that memorization is the goal of traditional universities with regard to achievement by students regardless of whether they are taking online courses through an on-ground college or university. In contrast, for-profit, online schools do not use proctors and motion detectors and do not rely on memorization for students to learn (Pope, 2007, Sutton, 2014). For-profit, online schools instead focus on application of information for the learning process, and that was the justification for the study assessing associated performance in the workplace in the field of sales based on two fundamentally different

types of degrees due to the style of learning differences (Sutton, 2014). For-profit, online schools also use primarily written assignments in a project-based environment for the assessment of students versus tests used for assessment of student in the online environment of traditional schools (Pope, 2007). The written assignments appear to be part of the competitive advantage of for-profit, online schools in attracting adult students who prefer this method of learning and assessment (Pope, 2007).

Background

This research topic was chosen due to the increasing number of graduates from mixed online, on-ground colleges and universities who must search for employment in a highly competitive labor market. Simmons (2013) suggests that for-profit mixed online, on-ground and online colleges and universities, in particular, are less effective in preparing graduates for the current labor market than graduates from traditional, non-profit institutions of higher learning. For-profit schools which offer online and mixed online, on-ground degrees have specific representation in some industries, and Gilpin, Saunders, and Stoddard (2015) reported that for-profit colleges awarded 31% of all degrees in health fields, 25% of all business degrees, and 9% of all degrees awarded in the computer information sciences field. Auster (2011) posited that this large cohort of graduates would be more likely to be unemployed after graduation than their counterparts from traditional public and private non-profit colleges and universities. This lack of employment opportunities has serious social consequences for graduates of for-profit institutions of higher learning due to the financial and emotional impact on students and the outlay of funds by the federal government to educate these students. The federal government has provided more than $1 trillion in student loans to allow students to attend

the college or university of their choice (Goodell, 2016). Thirty two billion dollars in federal grants and loans went to the for-profit education system (National Conference of State Legislatures, 2013).

This study was also of interest due to the debate over the effect that GPA has on employee performance in the workplace, as this study investigated the relationship between GPA and workplace performance based on the type of school attended by study participants (Waldman & Korbar, 2004). Waldman and Korbar (2004) stated a positive relationship existed between GPA and career success, but they interpret success as a high starting salary, job satisfaction, and promotions rather than actual employee performance in the workplace. There does not appear to be any studies that specifically focus on actual employee performance in the workplace and the connection with GPA.

Statement of the Problem

The issue investigated in this study was without, documented substantiation, whether students from colleges that offer online coursework were as effective in the workplace as their counterparts at traditional schools. This assumption was based on the type of education and the belief that degrees from online educational environments that made it more difficult for these individuals to find suitable employment based on their education choices with potential standing perceptions ("Forgive and Forget," 2015). Liu and Belfield (2014) reported that online educated students have a more difficult time locating employment, although there appears to be a gap in the literature that formally evaluates online versus traditional non-profit educated employees' actual differences in employment performance. Fogle and Elliot (2013) attempted to understand the motivations and perceptions of employers with regard to hiring baccalaureate graduates

of online institutions of higher learning. Companies may lack crucial information about the performance levels of online, mixed online, on-ground versus traditionally educated individuals in the workplace based on level of education.

According to Mazzucato and Parris (2015), high growth firms hire based on educational diversity as a form of creating a competitive advantage. This is due to the fact that this type of diversity allows these organizations to pay a lower rate of pay to applicants with alternative types of degrees from online institutions of higher learning that have a more difficult time locating employment, in many cases (Mazzucato & Parris, 2015). Educational diversity refers to the hiring of both for-profit educated and non-profit educated graduates. The study, therefore, focused on this industry with the idea that online and traditionally educated graduates were part of the workforce.

Deming, Goldin, and Katz (2013) stated that lower skill levels in baccalaureate graduates from online schools are the reason that employers view these graduates less favorably. Chung (2012) cited lower SAT scores as the reason for this conclusion, even though the majority of students at for-profit primarily online institutions in particular who are 25 and older probably never took the SAT exam. It was determined that directly measuring actual workforce performance of graduates of for-profit schools versus not-for-profit schools would increase understanding of whether they would actually perform less well than non-profit graduates.

Purpose of the Study

The purpose for this quantitative, comparative, descriptive questionnaire design was to compare what is in the literature as it relates to the quality of mixed online, on-ground educated graduates versus traditionally educated graduates with actual sales

results from pharmaceutical sales representatives. This was based on the dependent variable, actual sales performance, and on the independent variables: level of education (bachelor's or master's); school type (on-ground/mixed online, on-ground); and grade point average (GPA), as well as years of service in the pharmaceutical sales industry. This is an industry with both traditional and high growth employers. All employers in the pharmaceutical sales industry likely have a plan in place to hire some student graduates from diverse educational backgrounds. For this reason, pharmaceutical sales representatives throughout the industry from throughout the United States were asked to participate in this study. To fulfill this purpose, data using a questionnaire were collected from pharmaceutical sales representatives via a self-developed questionnaire through two online survey websites (Survey Monkey and Qualtrics) to determine whether there was a difference in the literature versus actual sales performance of traditionally educated graduates versus mixed online, on-ground educated graduate employees. This study was also distributed in-person to a small number of study participants outside of medical buildings in the Cleveland, Ohio marketplace. The statistical test that was used to analyze the data was a one-way analysis of variance. The purpose of using a one-way analysis of variance to analyze each of the four independent variables was that the sample size was insufficient to do a four-way analysis of variance and a causal relationship between all of the independent variables was not established.

Nature of the Study

A quantitative, comparative descriptive questionnaire design was appropriate for investigating whether there was a difference in actual sales performance in the workplace between mixed online, on-ground educated graduates versus their traditionally educated

counterparts in the pharmaceutical sales field. In this design, the independent variables were school type and level of education as well as student GPA and years of service in the pharmaceutical sales industry. The dependent variable was actual sales performance in the pharmaceutical sales industry. The plan was also to conduct the study at one point in time using a survey questionnaire. For this reason the research was both descriptive and cross-sectional in nature, and the plan was to use both traditional and mixed online, on-ground educated graduates.

For data collection, a self-developed questionnaire design was used. The instrument was not validated due to the fact that it was strictly demographic in nature, and, therefore, did not require validation as per the IRB. The questionnaire was administered to members of the pharmaceutical sales field through an online website. The results were analyzed for differences between mixed online, on-ground educated graduates versus their traditionally educated counterparts in terms of whether participants in the study had a bachelor's, or master's degree. The data also were analyzed based on GPA in the pharmaceutical sales industry and based on years of service in the pharmaceutical sales industry. A one-way analysis of variance was used to analyze each of the four independent variables.

Research Questions

The study was designed to investigate the interaction among each of the independent variables separately and the dependent variable through a between groups one-way analysis of variance. The intent was to statistically test whether sales performance indicated that mixed online, on-ground educated graduates were as effective

in the workplace as their all on-ground educated counterparts. This study had four research questions as follows:

Q1. To what extent does school type (graduation from a mixed online, on-ground versus graduation from an all on-ground education program) affect actual sales performance in the pharmaceutical sales industry?

Q2. To what extent does education level of graduates affect actual sales performance in the pharmaceutical sales industry?

Q3. To what extent does GPA of graduates affect actual sales performance in the pharmaceutical sales industry?

Q4. To what extent do years of service of graduates affect actual sales performance in the pharmaceutical sales industry?

Hypotheses

$H1_0$. School type (graduation from a mixed online, on-ground education program versus graduation from an all on-ground education program) does not have a statistically significant effect on sales performance

$H1_a$. School type (graduation from a mixed on-ground, online education program versus graduation from an all on-ground education program) has a statistically significant effect on sales performance.

$H2_0$. Education level does not have a statistically significant effect on sales performance.

$H2_a$. Education level has a statistically significant effect on sales performance.

$H3_0$. GPA does not have a statistically significant effect on sales performance.

$H3_a$. GPA has a statistically significant effect on sales performance.

$H4_0$. Years of service does not have a statistically significant effect on sales performance.

$H4_a$. Years of service has a statistically significant effect on sales performance.

Significance of the Study

This study was deemed significant from the standpoint that it focused on a serious problem with regard to online educated graduates who are having a more difficult time locating employment due to the literature that stated that this form of education was inferior to that received by traditionally educated graduates. Although many authors have written about this topic, none were found to have specifically studied whether there is a difference in performance between mixed online, on-ground and on-ground educated graduates in the workplace. Due to this fact, leadership and administration have been lacking in crucial information that would allow pharmaceutical companies to make better informed decisions about whom to hire. The findings of this study may or may not have refuted the current sentiment that mixed online, on-ground educated graduates are inferior to their traditionally educated counterparts as well as the premise that states that these graduates will not be employable upon graduation. However, if the study were not executed, employers would not know whether there was a difference based on the school type that a candidate attended in the higher education environment in actual workplace performance in the pharmaceutical sales industry.

Definition of Key Terms

For-profit colleges and universities. This term means that these colleges and universities are businesses that are owned by individuals or a governing body in the form of a board—many of these organizations also issue stock (Chung, 2012).

Non-profit colleges and universities. This term means that these colleges and universities are either state controlled or chartered institutions of higher learning that were designed to serve the public good (Garrity, 2015).

Online. This term means that the student takes 100% of his courses online at a degree-granting institution of learning (National Center for Education Statistics, 2016).

On-ground. This term means that the student takes no coursework online as part of their course of study at a degree-granting institution of learning (National Center for Education Statistics, 2016).

Mixed online, on-ground. This term means that the student takes some of his courses online at a degree-granting institution of learning (National Center for Education Statistics, 2016).

Summary

In summary, this study involved the researcher obtaining data directly from sales representatives in the pharmaceutical sales industry related to the actual performance of mixed online, on-ground versus their traditionally educated counterparts based on actual sales results. The idea that non-profit educated graduates receive an education that is superior to that of for-profit educated graduates is well documented in the literature. It is also well documented that online educated graduates have a more difficult time locating employment than traditionally educated graduates. This is particularly true of business graduates (Gilpin, Saunders & Stoddard, 2015). This fact was also reiterated by Auster (2011).

Fogle and Elliott (2013) found that online educated graduates have a more difficult time finding employment as well. This fact is significant considering that the

number of students taking online courses has increased steadily since the onset of this form of education in 1989 (Kentnor, 2015). This was significant as well when considering the fact that both for- and non-profit educated students are participating in online education and the number of courses being taught in this manner has also steadily increased (Kentnor, 2015). A total of 8.7% of all public, non-profit students are involved in all-online degrees and 13.1% of all non-profit, private university students are involved in all-online degrees as of 2013 (National Center for Education Statistics, 2016). This is in comparison to 51.7% of all for-profit students being involved in all-online degrees as of 2013 (National Center for Education Statistics, 2016). In addition, Fogle and Elliott (2013) stated that the reason online education is not being accepted as readily as all on-ground education by employers is that the rigor and flexibility are not the same.

The purpose of this quantitative, comparative, descriptive study was to determine whether there was a difference in the level of actual sales performance in the workplace between mixed online, on-ground educated graduates and all on-ground educated graduates. This study included pharmaceutical sales representatives throughout the United States. The objective also was to determine whether the perceptions were equal to the actual performance of mixed online, on-ground versus all on-ground educated graduates in the workplace. The data that were obtained were cross-sectional in nature as it was obtained at one point in time. Furthermore, a questionnaire was the only tool necessary to obtain the data. In addition, the Statistical Package for the Social Sciences (SPSS) was necessary to analyze the data.

Chapter 2: Literature Review

The purpose of this quantitative, comparative, descriptive study was to determine whether the perception of mixed online, on-ground educated graduates was associated with a lower level of performance in the workplace than their all on-ground graduate counterparts in the pharmaceutical sales industry based on level of education. Research indicated that employers would benefit from being able to determine whether there were differences in the workplace in performance of mixed on-ground, online versus all on-ground educated employees (Darolia et al., 2015). The reason for this conclusion was it had been determined that online educated graduates had a more difficult time locating employment after graduation due to the literature which stated that they were less well prepared for the workplace than their on-ground educated counterparts (Dundon, 2015). The literature review was focused on this fact and presents an overview of the problems faced by students who attend online colleges and universities and how they may potentially benefit from this study. The literature review begins with an explanation of the differences between for-profit primarily online and non-profit primarily on-ground colleges and universities. The review follows with a discussion of the theories that do not favor online schools. Ways that for-profit primarily online educated and non-profit educated primarily on-ground graduates are alike as well as different is also discussed as well as how a high GPA and technology skills can make graduates more marketable to employers. In addition, ways that mixed online, on-ground educated graduates may be able to benefit from the current job market based on their education is covered as are skill gaps that affect nearly all college graduates. Finally, advancement potential of for-profit, primarily online educated graduates is explored as well as the types of organizations

graduates of non-traditional colleges and universities should target and the employment outlook for pharmaceutical salespeople. In conclusion, a summary of the chapter is provided.

Documentation

The research strategy for this literature review consisted of searches that included Google Scholar, the Northcentral University Library, and searches using the Google search engine. Keyword/term searches included *college graduate employment, for-profit colleges and universities, online education, sales, sales performance, employment skills, sales skills, sales training, marketing employment,* and *GPA and workplace performance*. With the exception of several historical articles on the topic of sales/hiring practices, the sources that were used were used were from 2010 – 2016.

The Difference Between For-profit and Non-profit Universities

The major differences between for-profit and non-profit universities are in the way these schools are funded (Appel & Taylor, 2014). Non-profit schools, that are also public, are funded by the federal and state governments in the United States through subsidies (Chung, 2012). These schools are also funded through endowments as well as through tuition from students (Chung, 2012). Private non-profit colleges and universities are funded through tuition as well as through endowments (Simmons, 2013). For-profit colleges and universities, on the other hand, are funded through the sale or private ownership of stock as well as through tuition paid by students, depending on whether they are publicly or privately owned respectively (Chung, 2012).

While many non-profit universities and colleges had open enrollment in the past, this has changed during the past decade and these institutions have attempted to shift

many students in need of remedial coursework toward community colleges (Deming, Goldin, & Katz, 2013). Community colleges cannot support the demand for education by many of these students so many students have turned to for-profit and online private institutions of higher learning (Appel & Taylor, 2015). Many of these institutions deliver education solely through online learning. Most of the schools do not offer remedial education (Simmons, 2013).

Personality Characteristics of Online versus Traditionally Educated Salespeople

Many students begin their four-year degree at a two-year community college. Theory states that two-year community colleges may provide an equal or better education at a lower cost than for-profit colleges (Deming, Goldin, & Katz, 2013). Theory also states that, although many for-profit schools provide educational opportunities solely through online learning, employers perceive a traditional environment as being superior to an online environment for the delivering of the educational experience (Fogle & Elliott, 2013). Despite the conclusion of these theories, many of these schools that are for-profit, online colleges and universities also focus on project-based learning, which benefits students as well as their employers (Sutton, 2014).

Also, students in the primarily online environment have their own set of personality characteristics, which may be different from those characteristics typically found in students in a traditional environment (Harrington & Loffredo, 2010). These characteristics include conscientiousness, which is very strong in the online environment (Keller & Karau, 2013). There is also a strong tendency to enjoy using a computer as well as a high level of innovativeness found in online educated students (Harrington & Loffredo, 2010). These characteristics were found in 98.8% of students in a study

involving 166 participants in an online education program at the post-secondary level (Harrington & Loffredo, 2010).

Employers, particularly those in the market for outside sales employees who can effectively use technology in the workplace, will find these traits attractive. Many outside salespeople suffer from technostress and, therefore, cannot use technology effectively in the workplace (Tarafdar, Pullins, & Ragu Nathan, 2014). It was found that heavy and occasional users of customer relationship management software in the workplace in a sales capacity performed better than those salespeople that did not use the technology effectively (Tarafdar, Pullins, & Ragu Nathan, 2014). What this means is that salespeople who were more successful found time to use the technology for blocks of time that did not interfere with their performance during the workday.

Those salespeople, however, may be considered lone wolves, due to their heavy reliance on technology to collaborate in the workplace (Mulki, Jaramillo, & Marshall, 2007). These are salespeople who are also more likely to be introverts who are heavily invested in their jobs (Mulki et al., 2007). In addition, they don't tend to rely as heavily on teamwork as is the case with more politically oriented salespeople (Mulki et al., 2007). Thirty percent of salespeople in the pharmaceutical sales industry fall into this category (Mulki et al., 2007). Bolander, Saturnino, Hughes, and Farris (2015) also posited that salespeople are either individuals who exercise relational centrality or positional centrality. Those salespeople who use relational centrality are more politically oriented and rely heavily on this strategy in order to perform well in the workplace (Bolander et al., 2015). In contrast, those individuals in a sales capacity who use positional centrality are innovative and more reliant on informational resources received

through less formal connections with others to enhance their performance in the workplace (Bolander et al., 2015). These individuals may be some of the same persons that were educated in an online environment, as they are innovative and they successfully use technology.

The reason that this information is significant is that the workplace is shifting toward less face-to-face communication, and more of the collaboration is taking place through customer relationship management software and through the use of technology in general. Those individuals who can navigate this technology effectively are gaining greater power and are likely becoming increasingly sought after in the workplace. This fact favors employees who exercise positional centrality as they are able to use technology to collaborate with powerful and influential members of their organization in order to improve their performance (Bolander et al., 2015).

This process often requires time beyond that available in a 40-hour work week. The pharmaceutical salespeople at Novartis Pharmaceuticals organized a class action lawsuit for a lack of compensation for overtime necessary to conduct administrative tasks and sales activities outside of the normal work week (Lavin & DiMichele, 2012). What this likely meant is that salespeople were placed in an environment in which the current political network no longer functioned in the same regard at this organization. This was also likely the case unless salespeople used the customer relationship management technology outside of the normal work day (Lavin & DiMichele, 2012). Salespeople also expected to receive extra compensation since using the technology was the primary method of staying politically connected to the organization (Lavin & DiMichele, 2012).

What some employers may also fail to consider is the idea that students in an online environment, which is typical in for-profit schools, tend to receive an education that focuses on applied learning rather than on memorization (Sutton, 2014). This style of education can also enable potential employees to apply what they have learned in the workplace (Sutton, 2014). In addition, online students must be able to motivate themselves and to work independently to a higher degree than classroom educated students (Sutton, 2014).

Online Schools provide Opportunities for Students of all Backgrounds

Six years after enrolling in online institution of higher learning, unemployment is higher and earnings are lower than they are for students who graduated from a traditional public or private college or university ("Forgive and Forget," 2015). Some employers have favorable views of the online colleges and universities that they do know about (The Kresge Foundation, 2014). In addition, the actual for-profit student, who typically attends school through online learning, is not necessarily part of a vulnerable population. According to Franklin University (2015), the typical online student is female (70%), 33 years old and working in a professional position with a salary of $65,000 per year. The student is also studying in the field of business (34%) as well as attending a for-profit college (35%) or a non-profit college or university (65%) (Franklin University, 2015). Clinefelter and Aslanian (2014) discovered similar results in their survey and stated that 28% of online students are studying in the field of business overall.

Non-profit, online/mixed online, on-ground/on-ground schools that are feeling the effects of the global economic crisis blame funding given to for-profit institutions of higher learning for the problems they are experiencing (Besana & Esposito, 2014). They

therefore focus on the idea that for-profit institutions prey upon vulnerable populations (Simmons, 2013). Instead, these institutions provide opportunities for students from all backgrounds.

Characteristics of For-profit, Online/Mixed Online, On-ground/ On-ground Schools

For-profit four-year schools are responsible for 10% of the total enrollment in colleges and universities with total enrollment of 942,306 students (Garrity, 2012). This is in comparison to the number of students taking at least one course online, which totals 2.6 million students (Clinefelter & Aslanian, 2014). The breakdown of degrees awarded at for-profit schools is 31% of all degrees awarded in the health fields, 25% of all degrees in the field of business, and 9% of all degrees in the computer and information sciences field (Gilpin, Saunders, & Stoddard, 2015). This is in comparison to public universities, which have a 60 percent market share in the four-year school marketplace (Garrity, 2012).

One of the reasons for the emphasis on scrutinizing four-year, for-profit schools is likely due to the fact that business student enrollment is the most popular field of study in the United States, with 16% of students enrolling in business in the 2007 – 2008 school year (Garrity, 2012). For-profit colleges and universities, again, awarded 25% of all degrees in the field of business (Gilpin et al., 2015). What this means is that for-profit online schools are taking away students in the most popular field of study that could potentially enroll at traditional non-profit public and private colleges and universities. They are also taking funds that critics claim could be used to subsidize non-profit universities to a higher degree (Simmons, 2013).

For-profit schools have shown an 850% increase in business students since 1996 (Garrity, 2012). During the same time period, public and not-for-profit, private institutions had increases of 40% and 33%, respectively, for business student enrollment (Garrity, 2012). Overall, for-profit, two-year colleges doubled enrollment of associate degree students, which was a rate that was three times that of public community colleges (Gilpin et al., 2015).

The problem is that demand for college overall has increased, and two-year community colleges, in particular, have not kept pace with the demand (Auster, 2011). For this reason, as well as the flexibility of many for-profit schools due to online classes, students are increasingly choosing to attend for-profit colleges and universities (Appel & Taylor, 2014). This has caused a great deal of concern, particularly for the public, non-profit sector (Dundon, 2015). This is the case despite the fact that some of these schools do not have the capacity to add students at this time (Appel & Taylor, 2014). This is also the case unless these schools increase their online offerings in order to compete more effectively, and these schools are not doing this either due to the fact that they feel online education is a sub-standard product or their faculty members are not equipped to provide these types of services at this time (Clinefelter & Aslanian, 2014). Only 8.7% of non-profit, public and 13.1% of non-profit, private students are involved in all-online degrees compared with 51.7% of for-profit, private university students as of 2013 (National Center for Education Statistics, 2016).

What this also means is that for-profit schools are putting pressure on traditional, non-profit colleges and universities to go outside of their comfort zone in order to compete for students (Christensen & Eyring, 2012). The administrators of traditional

colleges and universities also probably believe that, since employers are not 100% comfortable with online degrees, they should not offer these types of courses of study at this time (Clinefelter & Aslanian, 2014). This is also the case despite intense pressure from students for increased online offerings (Christensen & Eyring, 2012).

Preparation of For-profit and Online Students for the College Labor Market

Theory states that for-profit and online colleges and universities are potentially educating students who are not needed by the college labor market and who cannot effectively compete in a shrinking demand for college educated persons (Fogg & Harrington, 2011). This argument can be attributed to many mid-level career opportunities being transferred off-shore, and it is believed that students from for-profit and online schools do not possess the skills to compete for high-level jobs that require a college degree (Gilpin, Saunders, & Stoddard, 2015). In addition, there does not appear to be a study that definitively indicates that for-profit and online educated graduates are less well prepared for today's college labor market. Also, in any position, college has shown to enhance labor productivity, and proponents of increasing the number of college graduates are betting on an improved labor market and the need for additional college graduates (Vedder, Denhart, & Robe, 2013). Some critics argue that it would have been better for many of these individuals not to have pursued a degree at all (Fogg & Harrington, 2011). They also argue that bringing back manufacturing positions and less off-shoring of mid-level positions is the answer to the unemployment problem (Kochan, 2013).

In addition, increased productivity alone of college educated people will not lead to additional positions for this group of potential employees (Vedder et al., 2013). Also,

much of the unemployment of college graduates can be blamed on the recent recession as well (Fogg & Harrington, 2011). For example, in 2009, 30 percent of baccalaureate degree holders were mal-employed (Fogg & Harrington, 2011). More recently, that figure reached 37% of college graduates for those individuals under 35, and this was a 10% increase over the percent of mal-employment in 2007 (Aronson, Callahan & Davis, 2015). Critics, again, argue that these individuals should not have pursued a bachelor's degree at all (Fogg & Harrington, 2011).

The students that fared the best in today's college labor market were those that majored in health-related fields, engineering, math, and computer science (Fogg & Harrington, 2011). Kochan (2013) also argued that steering mal-employed and non-technical baccalaureate degreed students into co-op programs with industry in order to teach them to develop technical skills for entry-level positions would create 1.5 million new hires that are needed for technical jobs. What this means is that part of the mal-employment problem may be that students are majoring in fields that are not in high enough demand at this time rather than a true issue of where the student received his degree (Fogg & Harrington, 2011).

It appeared in the literature that employers who are less familiar with the for-profit schools will choose students from non-profit colleges and universities first, especially since there are no studies showing that for-profit graduates are equivalent to their non-profit educated counterparts (Clinefelter & Aslanian, 2014). This lack of familiarity also appears to be the case for employers that attempt to put theory into practice, as much of the literature focuses on for-profit colleges and universities as being less effective in preparing students for the current labor market than their non-profit

counterparts (Cooley, 2013). This is the case despite the conclusion of Denice (2015) that four-year, for-profit schools are academically equivalent to non-profit institutions of higher learning. Four-year, for-profit graduates also earn significantly more than their high school graduate counterparts (Denice, 2015).

Comparison of For- and Non-profit Graduates

One way that for-profit and public, non-profit graduates are different is in the amount of tuition students pay as for-profit students pay a higher rate of tuition than their public, non-profit counterparts (Schade, 2014). Graduation rates at for-profit institution also are lower (Schade, 2014). For-profit schools also have received an inordinate amount of negative press due to the fact that many of these schools focus on two-year programs, and the recent recession and slow recovery made it difficult for students from two-year programs, in particular, to find employment (Denice, 2015). It is also felt that, at the two-year associate's degree level that an associate's degree from a community college is superior to a degree obtained from a for-profit university (Denice, 2015).

Without tuition assistance in the form of financial aid, many students would be denied access altogether to higher education (Elliott & Friedline, 2013). It is better for students at both for- and non-profit schools to pursue a four-year degree, in most cases, in order to secure employment (Denice, 2015). Recent unemployment trends indicate that, for persons with less than a high school diploma, unemployment rates are 12.58% compared with 6.72% for high school graduates, 5.29% for some college, and 2.80% for those persons with a four-year college degree (Cairo & Cajner, 2013). Cairo and Cajner (2013) also revealed that the rate of unemployment decreases with an increase in the level of education, and that those employers are reluctant to release employees in which they

have invested a high level of vocational training. In other words, higher levels of vocational training indicate a lower level of unemployment (Cairo & Cajner, 2013). What this also means is that, again, it is better to pursue a four-year degree than no degree at all, regardless of whether the degree is obtained from a for- or non-profit or an online university, although rates of unemployment are currently lower for non-profit educated graduates from a traditional education background (Auster, 2011).

An equalizer for both for- and non-profit graduates is that of an internship. It appears that an internship during the last year of college is one of the most valuable experiences that a graduate can have in order to increase his marketability (Helyer & Lee, 2014). Academic reputation also plays a part in employability, but students can increase their employability regardless of where they obtained their degree by increasing job-specific functional skills such as those related to the use of software (Finch, Hamilton, Baldwin, & Zehner, 2013). The most important skills, according to one study, were soft skills, written and verbal communication skills, listening skills, and professionalism (Finch et al., 2013). Program reputation was number 15 on a list of the individual factors affecting employability (Finch et al., 2013). Creative thinking skills, adaptability, and professional confidence were also high on the list of employability factors (Finch et al., 2013). Despite the similarities, much of the literature states that a non-profit degree is superior to a for-profit degree, and it appears that many employers will focus on the literature in steering their actions when making hiring decisions.

Characteristics of Students in the For-profit and Non-profit Environment

Regardless of where the graduate received his or her education, there are higher levels of job satisfaction in situations in which the degree and job requirements are

similar (Lee & Sabharwal, 2016). Millennials also tend not to want to work overtime unless they are paid for this additional time, so this factor affects their level of satisfaction as well (Lee & Sabharwal, 2016). Graduates who are first-generation college students who also attend for-profit schools rather than non-profits as well as online programs in high numbers have greater difficulty locating employment and may be less satisfied with their employment as well (Aronson et al., 2015).

One way that first-generation graduates are superior is in their ease of transition into an adult role in the form of being ready to obtain employment after college (Aronson et al., 2015). According to one study, it was found that men, and particularly those who were non-first generation college students, found the transition from college to work to be the most difficult (Aronson et al., 2015). Non-first-generation college students, however, tended to earn higher salaries in their first position after college and were well represented in income categories over $45,000 when compared with first-generation college students (Aronson et al., 2015).

Career Opportunities that will Level the Playing Field for College Graduates

The sales field may be a possible career path for for-profit and first-generation college educated business students since employers are having a difficult time filling all of the opportunities that are available (Bristow, Amyx, Castleberry, & Cochran, 2011). Part of the reason for the urgency to find new talent from the college graduate sector is that the field is expected to expand through the year 2020 (Alvarez, Taylor, & Rauseo, 2015). Also, according to the Bureau of Labor Statistics, demand is growing at an above average rate of 7-19% (Bristow et al., 2011). Due to the competitive nature of the labor market, however, employers are very selective with regard to whom they will hire

(Alvarez et al., 2015). Even so, the probability of a marketing major becoming a sales representative is 80%, and 60% of all business majors will likely accept a position with at least some necessity for sales skills (Agnihotri et al., 2014). Part of the reason that the need for salespeople is so great is that companies will lose 40% of their senior salespeople by 2016 (Agnihotri et al., 2014).

Those students who receive training directly related to the field of sales that includes role-playing and videotaping will likely fare the best, since employers view this as an indication that graduates can contribute more quickly once they are hired (Alvarez et al., 2014). The only downside to this philosophy that business schools have adopted with regard to teaching is the fact critics fear students are receiving a vocationally-oriented education rather than an education that teaches students to be problem solvers that can contribute effectively long term (Evans, 2015). In other words, the opinion of Evans (2015) is that students are only making short-term gains for their employers and are, therefore, receiving only limited scholarly benefits from this teaching philosophy.

The other side of the argument, however, is that students can develop their critical thinking skills using this method of education (Alvarez et al., 2015). Proponents of this style of training at the undergraduate level found the greatest increase in critical thinking skills associated with sales training were found in students who received the web-based version of the training (Alvarez et al., 2015). It may also mean that online educated students, many of whom are from the for-profit, online education environment, have a greater ability to increase their cognitive skills through education.

Graduates from programs that also offer courses in buyer behavior, marketing analysis, sales forecasting, technology, and company services will also be in high demand

by sales employers (Pettijohn & Pettijohn, 2011). Graduates, again, who have taken courses specifically in the field of salesmanship, will be sought after as well (Agnihotri et al., 2014). Additionally, students who are also relationship management oriented potential employees will likely have an advantage in being hired over the competition at some organizations.

Differences in the Types of Salespeople from the For- and Non-profit Environments and Online Versus On-ground Graduates

Relationship managers are individuals that bridge the gap between those salespeople who utilize relational or positional centrality to connect with their organizations (Gonzalez, Claro, & Palmatier, 2015). These individuals may be found in the for-profit or non-profit educational environments, as they are innovative boundary spanners who are also creative and unconventional (Gonzalez et al., 2015). Innovators, however, have been more likely to be found in the online education environment, which includes for-profit schools with a large number of students and includes The University of Phoenix (Harrington & Loffredo, 2010; Kentnor, 2015). What this means is that employers who will not hire for-profit, online educated persons may be missing the opportunity to hire these graduates who also have the ability to achieve 27% higher growth in sales than other members of their sales organization (Gonzalez et al., 2014).

Organizations that leave out relationship managers as part of their organizations are likely to be less effective due to the fact that there is not a group of individuals to bridge the communication gap between those individuals that employ relational and positional centrality (Bolander et al., 2015). These groups are unlikely to communicate with one another directly and instead communicate through those individuals that are

positioned centrally (Paukstatz, Steglich, & Witteck, 2011). Those salespeople that operate from a position of centrality are also usually the first to either leave or be released from an organization if there is a situation such as a general reduction in force of workers (Feeley, Moon, Kozey, & Slowe, 2010).

The chance that an employee who occupies a position of centrality will be released from an organization also depends on the number of social contacts the individual has made within the organization as well (Feeley et al., 2010). What this means is that these are people that neither occupy the position of originating the information nor are they the recipients of large numbers of political ties associated with relationally oriented salespeople. Instead, they simply act as a bridge between the two groups, and they are unconventional innovators that seem to know when and where to use the information they receive from individuals with positional centrality for the benefit of their organizations (Gonzalez et al., 2014). With regard to organizational mobility, these also may be some of the same persons affected by the fact that employees under the age of 42 years of age tend to change their employment situation 10.8 times, and seven of those changes occur before age 27 (Feeley et al., 2010)

One trend is toward only having relational salespeople in a sales organization, as it is argued that there are diminishing returns associated with those salespeople that use positional centrality and, therefore, rely more heavily on information to sell products and services (Homburg, Muller, & Klarmann, 2011). In reality, it is likely that a balanced sales organization has salespeople with relational and positional orientations as well as centrally positioned relationship managers as part of their sales organizations. The reason for this conclusion is that without salespeople with a positional orientation, it is

highly likely that possible product liability issues will be overlooked and positional salespeople can, many times, recognize ways to avoid and overcome these issues. It is also surmised that some of the salespeople with a positional orientation are also introverts who are more likely to be graduates of the for-profit, online education environment than their relationally-oriented counterparts (Harrington & Loffredo, 2010). In addition, salespeople with a positional orientation will, again, share information with relationship managers who will relay the information to salespeople with a relational orientation.

Since sales positions also require the use of technology to increase sales and to collaborate with other members of the sales organization, and, since there is documented evidence that facility with technology increases sales, students from for- and non-profit online programs may be at an advantage (Weinstein & Mullins, 2012). The reason for this conclusion is that these graduates have a great deal of experience with using a computer for their school work as part of project-based learning, particularly in the for-profit, online environment. This style of learning, in many instances, results in strong analytical written communication and technology skills (Loffredo & Harrington, 2010; Weinstein & Mullins, 2012). These graduates also have proven ability to work well independently and well-developed cognitive abilities (Sutton, 2014). This indicates a gap in the research that states that for-profit, online educated graduates do not have the skills that employers are seeking. The argument is instead that many employers are overlooking these skills in for-profit, online educated graduates.

Critics argue that the need to use technology in the workplace to allow salespeople to adapt their sales presentations to the individual needs of the customer is expensive (Homburg et al., 2011). They feel that salespeople should instead exercise a

one-size-fits-all strategy that relies on the salesperson's persuasive skills for selling (Homburg et al., 2011). In other words, it is believed that using adaptive selling skills to tailor sales presentations to the individual needs of the customer proves too time consuming and expensive and fails to lead to high enough financial rewards to warrant its use. Unfortunately, reliance on the one-size-fits-all strategy for selling has led to many physicians who are no longer willing to see salespeople for in-person visits in the pharmaceutical sales environment (Chressanthis et al., 2014). The reason that has also been given for the refusal of these physicians to see salespeople is that they can get their information through technology. It is more likely, however, that many physicians prefer salespeople, in many instances, who can tailor the sales presentation to their individual needs.

Factors Affecting Decisions to Hire Salespeople from the For-profit and Non-profit Settings

Due to the fact that it is difficult for employers to find potential salespeople who are a good fit with the organization, the average cost of hiring a college graduate is $5,054, and costs can be higher for positions in which demand is greater (Agnihotri et al., 2014). This demand is in contrast to the demand for college graduates overall, as in October 2011, 74.5% of the 1.3 million 2011 recent graduates were employed and the unemployment rate was 12.6% (Spreen, 2013). This information indicates that part of the reason for mal-employment is due to many graduates not looking in the right places for available positions (Fogg & Harrington, 2011).

Most business schools, however, do not offer sales related courses at all to prepare students for available positions, or they only offer a single course in sales

management (Fogel, Hoffmeister, Rocco, & Strunk, 2012). In the research, a gap also exists that measures the skills of for-profit educated salespeople against their non-profit educated counterparts. This gap signifies that if research is conducted to determine whether for-profit graduates are as well-qualified and perform as well as their non-profit educated counterparts, this may open many new opportunities for these graduates.

One way that for-profit educated graduates are at a disadvantage is due to the recruiting practices of employers on college campuses in order to hire new graduates (Agnihotri et al., 2014). Theory has indicated that for-profit and online graduates are less employable than their non-profit traditionally educated counterparts. It is more likely that most of the organizations that hire a large number of college graduates have formed close business relationships with traditional non-profit colleges and universities, and they are attempting to hire these graduates instead (Agnihotri et al., 2014). Sales careers are no exception (Agnihotri et al., 2014).

Another way that many for-profit graduates are at a disadvantage is that some non-profit, traditional colleges and universities, and particularly those that are Association to Advance Collegiate Schools of Business (AACSB) accredited, are offering sales training courses that include actual role-playing that directly prepares students for a sales career (Deter-Schmelz & Kennedy, 2011; Pettijohn & Pettijohn, 2011). Therefore, the offering of new opportunities for for-profit and online graduates likely means creating some of the same opportunities that are available to traditional, non-profit graduates. One of these possible opportunities is in the form of professional sales training at the undergraduate level. In 2008-2009, sales representative opportunities were in the second position on a global list of careers with talent shortages behind skilled

manual tradespeople (Deter-Schmelz & Kennedy, 2011). It is the hope of educators that this training will lead graduates to being hired as professional sales representatives upon graduation from their degree programs (Deter-Schmelz & Kennedy, 2011). A concern regarding this training exists, however, to the extent that, even though businesses spend $15 billion annually to provide their own training to salespeople, many salespeople find the training ineffective (Alvarez, Taylor, & Rauseo, 2015).

One reason that salespeople may find the training ineffective may be due to the selling style of the individual salesperson (Rapp, Bachrach, Panagopolous, & Ogilvie, 2014). Rapp et al., (2014) discovered if the training focuses primarily on product knowledge and the salesperson utilizes a relational style of selling, salespeople may believe that the training is not very helpful from the standpoint that it does not focus on rapport building and sales skills. The researchers concluded sales training should focus on product knowledge and rapport building and sales skills so that salespeople have all of the tools they need in their sales arsenal and can reach a wide variety of customers successfully (Rapp et al., 2014).

Critics of sales training at the academic level fear that students who participate in this training will not be well prepared for a sales career as a result of these programs. This concern is due to a lack of focus on skills such as written communication, problem solving and creative thinking, which are also part of the sales process (Mich, Connors, & Feldman, 2014). Evans (2015) also argued that training programs at the college level that are a result of universities attempting to prepare students for specific occupations, such as sales, leads to only a short-term gain and that colleges should instead focus on problem solving and the ability to work in teams as well as the study of theory. In other words,

universities should focus training on solving actual problems that currently exist in business through the use of theories in training students (Evans, 2015; Kochan, 2013). Deter-Schmelz and Kennedy (2011) also stated that the majority of schools with a sales training curriculum lacked coursework requiring written communication skills such as those associated with developing written sales proposals.

With regard to the development of online programs to train future salespeople at the university level, the majority of institutions of higher learning feel that online programs are not suitable for sales education programs (Deter-Schmelz & Kennedy, 2011). This is the case despite a study that was conducted that focused on the development of critical thinking skills through sales education at the college level (Alvarez et al., 2015). This study found that students receiving the web-based version of the training were the only group to show a significant gain in critical thinking skills as a result of the program (Alvarez et al., 2015). What this means is that, if the goal is to improve the students' critical thinking and associated problem solving skills, online education should be considered appropriate for college-level sales training programs. It can also be argued that training such as this would help to ease the transition from college to full-time employment for for-profit, online/mixed online, on-ground/on-ground educated graduates.

GPA as a Predictor of Critical Thinking Skills and How These Skills Determine Workplace Success

In some cases, employers are filling open sales positions with MBAs rather than baccalaureate degreed student graduates (Pettijohn & Pettijohn, 2011). What this means is that baccalaureate degreed student graduates from the for-profit sector who are having

trouble locating employment in the current labor market may benefit from pursuing an MBA. The reason for this conclusion is that, as grade point average increases for MBA non-profit educated students, the interest in a sales career decreases (Pettijohn & Pettijohn, 2011). Pettijohn and Pettijohn (2011) found if employers pursue MBAs for sales positions, they will need to focus primarily on those MBAs with lower grade point averages. This may provide opportunities for for-profit baccalaureate student graduates with high grade point averages as well as for their MBA counterparts from for-profits with high grade point averages as well based on the conclusions of Pettijohn and Pettijohn (2011).

Regardless of whether bachelor's and MBA students graduated from a for-profit or a non-profit institution of higher learning, the candidates that are fortunate enough to be considered by employers must have strong critical thinking skills, according to most employers (Stedman & Adams, 2014). While nearly 92% of employers felt that critical thinking skills were at the top of the list with regard to the most important qualities that a potential candidate must have, only 26% of employers stated that recent graduates had excellent critical thinking and problem solving skills (Stedman & Adams, 2014). This is the case despite the fact that colleges and universities place a great deal of importance on improving critical thinking skills of their students in both the face-to-face and online formats (Howard, Tang, & Austin, 2015; Stedman & Adams, 2014).

While face-to-face learning environments focus on in-class discussions to improve these skills, for-profit, online programs appear to focus primarily on a case-study driven approach to help students to develop their critical thinking skills (Howard et al., 2015; Pope, 2007; Stedman & Adams, 2014). In each case, the process is meant to

encourage problem solving and decision making skills to be used that promote critical thinking (Al-Mubaid, 2014). The point that can be made is that critical thinking skills can be developed in both the online environment used by most for-profit schools as well as in the face-to-face traditional classroom environment.

One study found that, among 659 undergraduate business students, the students who improved their critical thinking skills to the highest degree were those students with higher GPAs (Howard et al., 2015). These students were exposed to a case-based business course that was specifically intended to increase the students' critical thinking skills (Howard et al., 2015). Howard et al. (2015) used a pre- and post-test format and found that females with high GPAs, in particular, made the biggest gains in critical thinking skills. The researchers found employers who feel these skills are important may want to focus on students with high GPAs that also participate in a case-based program as part of their college coursework in seeking appropriate candidates for open positions. Colleges and universities that want to make their candidates more marketable should consider this teaching strategy as well (Howard et al., 2015).

In one study, in particular, the majority of the participating students that improved their critical thinking skills used the "seeker" style (Stedman & Adams, 2014). This style of searching for information is very common in online learners (Tury, Robinson, & Bawden, 2015). This style appears to be more prevalent in students at the post-graduate level who have more advanced information seeking skills that appear to improve critical thinking skills due to the fact that the students must find information on their own, in most cases (Tury et al., 2015). The need to seek out information independent of the student's instructor appears to enhance one's critical thinking and problem solving skills.

The use of the Internet also plays a major role in promoting the development of these skills as well (Er, Kopcha, Orey, & Dustman, 2015).

The conclusion that the GPA of a student is a predictor of a graduate's success was questioned by Kass, Grandzol, and Bommer (2012). This is the case despite the claim by Howard et al. (2015) that students improved their critical thinking skills the most when students' GPA was higher and that these skills are an important indicator of a student's success in a work environment. Kass et al. (2012) argued that students should instead focus on developing skills that allow them to lead, solve problems, and innovate, as these skills are predicted as being most important in a managerial capacity. It does appear, however, that all of these skill sets are important for student graduates to develop to make them more marketable to employers in today's highly competitive marketplace. This information is also important to consider in determining whether GPA affects salespeople's performance in the workplace as well.

Particularly in a sales environment in which the salesperson requires strong technical skills and product knowledge, it appears that GPA would be somewhat of a predictor of the salesperson's success. The reason for this conclusion is that it appears that academic performance predicts and enhances one's ability to locate and use information successfully in a sales environment. Information-seeking skills are also important from the standpoint that a salesperson, particularly in industries such as pharmaceutical sales, must be able to independently locate and share information in the form of journal articles with customers and colleagues (Alkhateeb et al., 2011). Much of this information must be located independently by the salesperson through sources such as Medline, for example, to stay current and to be competitive with regard to the type of

information being shared with customers and other salespeople (Tang & Tseng, 2013). Scholarly information that can be shared may also be available through academic and medical libraries, but salespeople must have strong research skills in order to uncover new information (Tang & Tseng, 2013).

Technology is a Necessary Tool for Graduates to Master in Making Themselves Marketable to Employers in the Sales Field

Sharing information and keeping records of which information should be or has been shared, based on customer needs, is a primary responsibility of salespeople in the pharmaceutical and scientific fields, in particular. In order to make the task easier, most companies supply salespeople with both sales force automation (SFA) and customer relationship management (CRM) technology products (Mariadoss, Milewicz, Lee, & Sahaym, 2014). Critics argue that SFA technology, however, is counterproductive in influencing salesperson performance and efficiency, and that organizations should consider this factor before investing large sums of money in this technology (Jelinek, 2013).

A reason technology may not be worth the price is that it is expensive to tailor sales presentations to the needs of the customer, and a one-size-fits-all selling strategy would not require the use of technology (Homburg et al., 2011). The problem with this philosophy appears to include the idea that customers may have concerns that must be addressed regarding products and services. Salespeople need access to technology to record and communicate this information to other members of the organization (Tarafdar et al., 2014). They also require the technology to retrieve competitive intelligence on new products in the marketplace so that, when customers inquire about how an

organization's products compare to the competition, the salesperson can answer intelligently (Mariadoss et al., 2014).

A reason that organizations are questioning whether the investment in technology is worth the cost is possibly due to a lack of compliance by salespeople and a concern that sales may be negatively impacted by its use (Jelinek, 2013; Tarafdar et al., 2014). For this reason, it has been suggested that innovator and early adopter types such as those individuals in the for-profit, online environment should be hired, who graduate with experience using technology (Jelinek, 2013). These individuals are more likely to comply with the use of technology due to their experience with technology products as part of their education related to project-based learning, and they are also more likely to encourage use by later adopters in their organizations (Jelinek, 2013). This process would provide a better indication of whether the investment in technology is worthwhile and would likely succeed.

A problem with technology compliance, however, is technostress on the part of the majority of employees that are exposed to SFA/CRM technology, and particularly younger salespeople (Tarafdar et al., 2014). Millennials who were born between 1979 and 1994 and are now 24 – 37 years old make up a large portion of the sales representative population of U.S. professional sales organizations (Myers & Sadaghiani, 2010). These are likely the same individuals who launched a class action lawsuit against Novartis Pharmaceuticals in 2012 asking for overtime pay for any work conducted beyond a 40-hour workweek (Lavin & DiMichele, 2012). This overtime likely included any time used outside of normal work hours to access SFA/CRM technology as part of the sales process.

The reason for this conclusion that millennials were responsible for the initiation of the lawsuit is the timing of the litigation and the fact that older sales workers likely used the system for many years without the initiation of a lawsuit. This situation has also been exacerbated by the need of salespeople to be available to customers outside of the normal workday due to the use of technology (Tarafdar et al., 2014). Due to their sheer number and their strong representation in sales organizations, these companies must attempt to address their concerns. One way of resolving this issue is to hire salespeople who are willing to use technology outside of the normal workday through heavy use on at least an intermittent basis to record information that is key to the organization's success (Tarafdar et al., 2014). This strategy may not mean that all millennials are appropriate candidates for employment with an organization that has deployed SFA/CRM technology, but many millennials will embrace the technology, particularly if its use is monetarily incentivized through bonuses and pay increases.

Ways that For-profit and Online Educated College Graduates May Be Able to Benefit from the Current Job Market Based on their Education

Since for-profit and online colleges and universities are attempting to attract a wide audience from which to enroll students, it is also important to consider Generation X and Generation Y and what is important to these generations in locating employment (Bristow et al., 2014). This is the case in order to provide the best possible educational experience that will lead to employment opportunities in today's highly competitive job market for for-profit and online educated students as well as their non-profit educated counterparts (Bristow et al., 2011). This means that colleges and universities in general need to do a better job of preparing students for employment, as companies are less and

less willing to take full responsibility for training college graduates for available opportunities (Capelli, 2015).

Many college graduates also see a sales career as too risky, and intentions to pursue a sales career is lower than might be anticipated (Peltier et al., 2014). This is the case despite the increasing need for salespeople. Willingness to accept a sales career can, therefore, increase employment prospects for student from for-profit and online colleges who obtain a baccalaureate degree (Pettijohn & Pettijohn, 2011). This decision also indicates a gap in theory that states that for-profit and online educated college graduates are unemployable. Instead, since for-profits, in their current form, are considered to be a break from the traditional method of delivering education, and especially those programs that are delivered only through online learning, their full acceptance will take more time. This may mean that for-profit, online educated students in particular will need to look for opportunities such as sales careers that non-profit, traditionally educated students are more likely to overlook.

Sales career opportunities that many salespeople may overlook include those with contract sales organizations. These organizations provide the pharmaceutical industry with a contract sales organization that assists the company's sales force with activities such as new product launches by expanding the sales force without incurring high fixed costs associated with hiring new salespeople (Rogers, 2009). InVentiv Health is a contract sales organization that provides salespeople on a short- and long-term contract basis to allow pharmaceutical companies to temporarily expand their sales organization's sales coverage (InVentivHealth.com, 2015). In November 2015, InVentiv Health was on the top ten list of employers with open sales positions, with 699 open positions in the

field of sales (Dill, 2015). An interesting change in the requirements necessary to become a contract sales representative in the pharmaceutical industry is the requirement that prospective sales representatives have taken coursework in business as part of the pursuit of an advanced degree (Indeed.com, 2015). A master's degree was not specified as a requirement, however (Indeed.com, 2015).

While a master's level degree and advanced coursework in business at a minimum is not always required, the minimum level of education required at most pharmaceutical firms, and for most positions in scientific fields, is a bachelor's degree. Most firms also now prefer some coursework related to the field of sales in recruiting college graduates for sales positions (Deter-Schmelz & Kennedy, 2011). The reason for this appears to be the fact that students who take at least one course related to the field of sales have a better idea of what a sales position involves and are, therefore, less likely to leave a sales position prematurely (Loe & Inks, 2014). According to Loe and Inks (2014), graduates from schools with a sales education program are 30% less likely to leave a sales position, and become productive 50% faster than graduates that have not taken advantage of an educational program of this type.

Skill Gaps that Might Affect Nearly All College Graduates and their Consequences for Employers

Nearly all college graduate first-time job seekers face struggles in locating their first career position, although the struggles appear to be greater for for-profit and online educated graduates. Part of this struggle is due to skill gaps that employers don't want to make up for due to the high cost of training (Cappelli, 2015). Another argument is that for-profit/online educated college graduates are graduating without a meaningful degree

in the eyes of employers (Auster, 2011). Some of these students also received a GED rather than a high school diploma, and some employers may also reflect less favorably on these graduates as well (Auster, 2011). For this reason, a study that compared online educated graduates to their traditionally educated counterparts in the field of sales appeared to be justified.

While in the past, four-year, non-selective colleges routinely accepted students with GEDs, in many instances, this is no longer the case (Simmons, 2013). The reason for this change appears to be that these colleges and universities, due to costs at private institutions of higher learning and the recent recession, are accepting more applicants that could have potentially attended a non-profit, private college or university (Simmons, 2013). This trend meant that these schools do not have the room for many would-be applicants who have obtained a GED and may also require some remedial coursework (Simmons, 2013).

Community colleges are also filling up as well due to this trend (Appel & Taylor, 2014). This trend has meant that for-profit and online colleges, many of which were initially meant to serve wealthier, career-oriented types who wanted to further their education through graduate degrees, but were unable to attend a traditional university, were put in a position to change the demographic radically (Simmons, 2013). These for-profit schools do serve that wealthier demographic, but they also serve students who are not wealthy, and who need remedial coursework that is not provided by the major online and for-profit schools, many of which also deliver education primarily or only through online learning (Simmons, 2013). Many of these students who need remedial coursework, therefore, do not complete their degree and leave with student loan debt as

well that they are not in a position to repay (Auster, 2011). If these schools want to continue admitting these students, they should also offer remedial coursework where it is needed. This has affected the reputations of many for-profit and online schools that were not originally designed for this group of students who really do need remedial education (Denice, 2015).

Skill gaps may very well be higher for single parents, as this group faces greater challenges in navigating the job market than its counterparts of other reference groups in many cases (Cappelli, 2015). Divorced, separated, widowed and never married people also earn less, and perhaps may or may not have more skill gaps, on average, than their married counterparts, who tend to earn higher salaries (bls.gov, 2013). It is likely that the students who actually graduate from for-profit and online schools are at least equivalent in job market desirability to those that graduate from non-profit traditional colleges and universities in some industries.

Critics cite lapses in funds for instruction at for-profit/online universities as the reason that students have more difficulty locating a career position after graduation (Appel & Taylor, 2014). Among 30 of the top for-profit, online schools, 22.4 percent of revenue was used for marketing and recruiting, while only 17.7 percent was used for instruction, resulting in a worse outcome academically, according to critics (Alderdice, 2015). One of the reasons that skill gaps exist is that employers appear to have a specific type of individual in mind when they attempt to fill a position, and they appear to be less tolerant of some potential candidates if they do not possess all of the necessary skills (Cappelli, 2015). Job seekers can attempt to combat this problem by developing skills during college, such as facility with the most popular software programs. This strategy

can level the playing field, even for technologically disadvantaged groups in applying for positions with some employers (Cappelli, 2015). Many of these skills, it appears, can be developed by attending continuing education programs related to the most popular software packages and sponsored by libraries and universities. In addition, perhaps books can be purchased that allow students to develop these skills independently. Also, employers simply lower skill requirements when it is more difficult to locate skilled employees, and they raise them when qualified applicants are plentiful (Cappelli, 2015). This is something that job seekers must also keep in mind in searching for a career position. Some of the soft skills that are considered most critical by these employers also include leadership, sales, communication, and customer service skills in that order of importance (Cappelli, 2015).

Skill gaps that may affect graduates at both for-profit, and non-profit colleges and universities include those associated with factors such as people skills as well as cognitive abilities (Borghans, Weel, & Weinberg, 2014; Klein, Dilchert, Ones, & Dages, 2015). Strong people skills are closely related to emotional intelligence as well and are more likely to be found in those individuals who exhibit a relational style of selling in the field of professional sales, for example (Lassk & Shepherd, 2013). Lassk and Shepherd (2013) posited that research indicates emotional intelligence can be taught. It is more likely, however, that emotional intelligence is an innate characteristic of those individuals that exhibit a relational selling style that has not been determined to decline with age. In many respects, emotional intelligence will likely serve medical sales representatives well due to factors such as its relationship to empathy and self-management (Harris,

Mirabella, & Murphy, 2012). Lassk and Shepherd (2013) also linked high levels of creativity to emotional intelligence.

Klein et al., (2015) instead focused on cognitive abilities as being a strong factor in contributing to the success of executives in the field of sales. Klein et al., (2015) focused on the idea that these abilities decrease over time with age, but it has been found that creativity associated with emotional intelligence and general mental ability are more static with age. It is also likely that those individuals who exhibit positional centrality in relating to others, and who are also likely to be found in the for-profit and online environments in high numbers tend to have greater cognitive abilities overall than those individuals who use relational centrality to relate to others. A possibility may exist when comparing older executives to younger executives with regard to cognitive abilities, that a fair comparison may not have been made. This possibility appears to be the case unless both sets of employees shared the same method of relating.

Those executives who rely on the style of relating labeled relational centrality likely rely more heavily on emotional intelligence in assessing others and solving problems. In contrast, those individuals who operate using positional centrality are more likely to rely more heavily on cognitive abilities such as inductive reasoning in solving problems and making decisions. It does not seem logical that general mental ability and emotional intelligence would remain static with age, but cognitive abilities would decline (Klein et al., 2015). For this reason, it appears that a study should be conducted comparing older and younger executives who use the same style of centrality, either relational or positional in relating to others, to determine if cognitive abilities actually decrease significantly with age.

The reason that this information is significant is that a proposed decrease in cognitive abilities is being used to determine at what age an executive is no longer effective at many organizations (Klein et al., 2015). This is the case despite the fact that these same executives who exhibit lower cognitive abilities exhibit high levels of creativity, and likely exhibit high levels of emotional intelligence as well. Lassk and Shepherd (2013), again, link emotional intelligence and creativity as strongly related traits that do not decrease with age. It is also likely that most people are born with either high levels of emotional intelligence or exceptional cognitive abilities, not both (Guignard, Kermarrec, & Tordjman, 2015).

Klein et al. (2015) determined through their study that executives exhibited declining cognitive abilities beginning at the age of 29, which is the age at which many adult students from the for- and non-profit environments are likely to graduate and start their careers. Non-profit, traditional schools also have a higher number of non-traditional students than was the case in the past, as only 29% of college undergraduate students are of traditional college age (Casselman, 2013). It was determined through this study that decreased cognitive abilities might make it more difficult to learn new skills (Klein et al., 2015). It was also determined that this would result in adverse impact for those individuals just starting out their careers who likely have high levels of creativity and emotional intelligence as well as a large vocabulary rather than exceptional cognitive abilities who graduate from traditional and non-traditional universities in high numbers (Klein et al., 2015). Klein et al., (2015) also found that those executives with lower cognitive abilities have strong vocabulary skills that did not decline, but rather increased with age. Harris et al., (2012) found that those individuals who exercise emotional

intelligence in the field of medical sales were more successful than those salespeople that relied more heavily on strong cognitive abilities to sell. It also appears that the success rate would be linked to the type of product being sold and the type of customer.

A more technical product might lend itself, in some cases, to a sales force that relied more heavily on cognitive abilities to sell effectively. Again, it likely depends on the selling environment and the product as to which style of relating is best. Organizations in medical sales might divide product responsibilities based on the style of relating used by a given sales representative. It appears that neither style is superior and that they both have their place in a sales organization (Deeter-Schmelz, 2016).

Researchers suggest that there are two types of people who apply for sales positions—interdependent salespeople who focus on others and independent salespeople who tend to focus more on personal accomplishments (Yang et al., 2013). It is more likely, however, that most individuals are somewhere in between, depending on whether they are extraverts or introverts. Sales organizations will likely hire both in order to diversify their sales organizations. The reason for this conclusion is that independent types will likely provide a great deal of excellent information that can be used by the entire sales organization and a selling style that appeals to many technically-oriented customers. For-profit and online colleges and universities are likely to have graduates of both types due their high level of diversity with regard to the personality styles of their students (Harrington & Loffredo, 2010).

Advancement Potential in For-profit and Online Versus Non-profit Traditionally Educated Graduates

There does not appear to be any differences in the desire for advancement or the level of organizational commitment of for-profit versus non-profit educated graduates. It is possible, however, that graduates from non-profit, on-ground institutions of higher learning who participated in sales-related education programs may be hired with the intent to be promoted to a management-level position, and particularly MBA students. Other than a situation such as this, it can be anticipated that graduates who are more politically oriented may be promoted more quickly than their less politically oriented counterparts (Briggs, Jaramillo, & Weeks, 2011). Sixty percent of college graduates left their first employer due to a lack of career advancement opportunities (Camacho, 2015).

In other words, younger employees tend to have much greater expectations regarding the promotional opportunities that will be offered to them than their more senior counterparts (Briggs et al., 2011). Other than differences related to age, barriers exist in the form of informal company networks, cultural fit, and mentoring (Briggs et al., 2011). For-profit and online graduates who have more difficulty locating a career position, in some cases, may be more patient regarding advancement opportunities and may persist longer if advancement opportunities are not forthcoming. Again, the more politically-oriented employees are more likely to receive promotions in most sales organizations (Briggs et al., 2011). Many organizations that now use data mining to gain information for hiring and promotion decisions may use test scores on standardized tests as well as GPA as an assessment regarding these decisions as well (Kuncel & Hezlett, 2011). Kuncel and Hezlett (2011) stated that standardized test scores of cognitive abilities are strong predictors of performance in the workplace. These tests measure

people's ability to reason, plan, solve problems, think abstractly, learn, adapt, and process and comprehend complex ideas and information (Kuncel & Hezlett, 2011).

Organizations that have subscribed to the idea that they must adopt a relational selling style also place a premium on extraversion as a personality characteristic of their salespeople (Pannacio & Vandenberghe, 2012). Other characteristics that are considered a strong indication of work performance include agreeableness and a negative relationship to neuroticism (Pannacio & Vandenberghe, 2012). This philosophy has a strong connection to the idea that salespeople should exhibit emotional intelligence. Pannccio and Vandenberghe (2012) believed that agreeableness in the workplace may be the result of the lack of employment alternatives. Agreeableness is also associated with emotional control and the ability to adapt to new interpersonal situations (Panaccio & Vandenberghe, 2012). These factors may be a stronger indication of whether a given employee will receive a promotion rather than where one's degree is from when these traits are exhibited in the workplace. In reality, it appears that both extraverted and introverted salespeople and particularly those salespeople selling technical products such as those in the pharmaceutical industry are needed in most sales organizations (Tieger, Barron, & Tieger, 2015).

Types of Organizations that Graduates of For-profit and Online Colleges and Universities Should Target as Part of Their Employment Search

The recommendation for for-profit educated business students is to consider the pursuit of a sales career. The reason for this recommendation is that there is a large amount of data that supports this as a viable career path for business students (Agnihotri et al., 2014). Business students at for-profit institutions earn 25% of all degrees in the

field of business, and they have a more difficult time locating employment than do students from health-related and computer fields, which are two of the other most popular majors at for-profit colleges and universities (Gilpin et al., 2015).

Since many of the students from for-profit and online schools represent a break from tradition, they will have a more difficult time being hired at some organizations unless it can be shown in the literature that the students are equivalent to their non-profit, traditionally educated counterparts (Toterni & Recardo, 2013). Much of the literature instead states that the reason these students are having a more difficult time locating employment opportunities is due to the receipt of a sub-standard education (Denice, 2015). The reason for this conclusion is that this is actually a discriminatory practice, but the premise that the students' education is substandard is not considered a discriminatory reason for not hiring a candidate (Auster, 2011).

There are organizations, however, that will likely hire these individuals who have an education that is built on project-based learning and problem solving rather than on memorization if it can be shown that for-profit and online educated graduates are equivalent to their non-profit traditionally educated counterparts (Sutton, 2014). These organizations include those that are classified as "A organizations," and they represent 10-20% of the total number of companies in the United States (Toterni & Recardo, 2013). The employees in these organizations will be hired based on accomplishments, such as high grade point average and may include students from for-profits and online schools who perform well in their academic career and in any employment opportunities in their background (Toterni & Recardo, 2013). This is particularly true if it can be shown that for-profit and online educated graduates are at least equivalent to their non-profit

traditionally educated counterparts. The organizations that fall into this category can be commended for hiring and using their human resources in a manner that ensures a competitive advantage (Karatop, Kubat, & Uygun, 2015). These organizations are also focused on results and promote solely based on being able to "hit the numbers" (Toterni & Recardo, 2013). These appear to be viable organizations in which for-profit and online educated students can pursue employment opportunities.

Another possible avenue for for-profit and online educated students to pursue is that of "C organizations," which include non-profit organizations and government agencies (Toterni & Recardo, 2013). This may be an avenue for students from the finance and accounting fields, and these organizations provide a great deal of security as well as opportunities for minorities and disadvantaged groups as well. In contrast, for-profit and online educated students may have the most difficulty finding employment at "B organizations," which are comprised of the largest population of companies in the United States, and they hire and promote based on having the right pedigree (Toterni & Recardo, 2013). This strategy goes against the theory that states that organizations should hire and promote based on an employee's competencies rather than strictly based on pedigree (Karatop, Kubat, & Uygun, 2015).

Many managers have good intentions, but because there is no hard evidence to support the idea that for-profit educated graduates are equivalent to their non-profit educated counterparts, they feel pressure to hire based on similar pedigree, education, or company profile (Toterni & Recardo, 2013). Despite the use of this plan for employee selection, which many employers consider to be less risky, attracting and keeping high quality employees is extremely challenging for organizations that simply rely on this

strategy (Festing & Schafer, 2014). A similar educational criterion often means a high IQ as well (Toterni & Recardo, 2013). This appears to be the case even though there is often no direct connection between having a high IQ and business success (Toterni & Recardo, 2013).

Applicants must also have human capital that includes strong critical thinking skills, according to most employers, as well as soft skills such as the ability to work as part of a team as well as creative and entrepreneurial abilities (Daymon & Durkin, 2013). Other desirable soft skills include interpersonal communication, reasoning, and problem solving (Daymon & Durkin, 2013). While Coad, Daunfeldt, Johansson, & Wennberg (2014) state that large amounts of human capital are needed by high growth firms such as those in the pharmaceutical industry, it is also stated that these firms are willing to hire young candidates, those who are less well educated, immigrants, and the long-term unemployed individuals who apply to these organizations as well. The reason for this is due to the fact that these employees will work for lower wages than would be the case for more traditional employment candidates. For this reason, it is also likely that these firms will hire graduates from online education programs as well, particularly if it can be determined that there are no statistically significant differences in actual sales performance between online educated graduates and their traditionally educated counterparts. The ability to demonstrate that this is the case may increase opportunities for for online educated graduates like those at The University of Phoenix, for example, at organizations that hire based on pedigree or similar education to the manager, such as "B organizations," which represent a large percentage of the available employment opportunities.

The pharmaceutical industry tends to have a large number of high growth firms and, at the end of the 1990s, 69% of pharmaceutical firms were SMEs, many of which were classified as high growth firms (Mazzucato & Parris, 2015). The number of SMEs in the pharmaceutical industry, which is classified as any organization with 500 or fewer employees, has likely narrowed to some degree according to Mazzucato and Parris (2015), but there is still a high number of these firms that would likely hire graduates from for-profit and online education programs if it can be shown that their sales performance is equivalent to their non-profit and traditionally educated counterparts. These organizations are continually searching for employees in the field of sales due to the fact that they patent new products persistently and, therefore, need to add salespeople to sell new products on a regular basis (Mazzucato & Parris, 2015). Not all high growth firms are SMEs, but many of them are classified as such.

Graduates of for-profit and online schools also may be targeted by employers who are looking for employees with specific personality characteristics, such as innovativeness as well as an entrepreneurial spirit. Many employers may also make hiring decisions based on personality inventories or strength assessments as well. High growth firms are likely to fall into this category, as they strive to hire individuals with strong abilities that can cope with the challenges faced by a growing organization (Coad et al., 2014). Two possible tests that may be used by these firms to find qualified candidates include the Myers-Briggs Inventory and the Clifton StrengthsFinder (Tomkovich & Swanson, 2014). The StrengthsFinder, in particular, measures tendency toward job satisfaction, intent to quit, and satisfaction with life (Tomkovich & Swanson, 2014). In one study, graduates with a strategic thinking strength had a greater propensity

to quit organizations prematurely and lower satisfaction with life than other types who took the StrengthsFinder test (Tomkovich & Swanson, 2014). For example, this factor would be important to high growth firms that spend an enormous amount of time and money to train new pharmaceutical salespeople.

High growth firms with sales organizations will also likely hire individuals with strong critical thinking skills. The reason for this conclusion is that these organizations likely need employees who can think independently and make their own decisions. Managers in organizations such as this likely have a great deal of additional responsibilities as well as that of managing a sales force (Daymon & Durkin, 2013). The concern is that educators are providing students only with the tools necessary to succeed in the role of sales representative rather than the tools to take the nest step into management by not focusing on critical thinking skills as part of their curriculum (Daymon & Durkin, 2013). The pharmaceutical field, in particular, is searching for employees with an MBA for this reason (Iyengar, 2015). According to Iyengar (2015), 86% of companies in the U.S. intend to hire MBA graduates. These graduates provide the ability to "think outside the box." Schools that are preparing undergraduates for employment in the field of sales may want to consider this factor in educating students as well.

One possible career path for for-profit and online educated job seekers is that of a pharmaceutical sales representative position with "A organizations" (Toterni & Recardo, 2013). These organizations are results oriented, and they don't hire based on having an Ivy League education and a certain pedigree (Toterni & Recardo, 2013). They instead

likely hire based on willingness to work hard and the ability to work independently as well as to solve problems and deliver results.

According to a study that was conducted in 2006, employers in the field of pharmaceutical sales at international organizations required a college undergraduate degree in 91.7% of cases, and none of the organizations that were polled required a graduate degree (Timor & Tuzuner, 2006). This is in contrast to the current requirement of a graduate degree, in some cases, in order to be promotable into a management position (Pettijohn & Pettijohn, 2011). Also, at least one year of experience was required, according to survey respondents in only 30% of cases, and a year of experience in the field of sales appears to be the standard for most of these positions today (Timor & Tuzuner, 2006). What this means is that students should attempt to gain sales experience while still in college, even in a commission sales position or through an internship, if possible, in order to meet this requirement. In addition, with regard to age, 33.5% of respondents required that the prospective salesperson will be between 21-25 years of age, and 58.35% required the salesperson to be 26-30 years old (Timor & Tuzuner, 2006). This is likely the standard today, as pharmaceutical salespeople are expected to begin their sales career soon after college, in most cases. With regard to computer skills, 41.7% of organizations required computer skills, while 58.3% felt that these skills could be learned later (Timor & Tuzuner, 2006).

The percentage requiring strong computer skills is likely to be much higher today, as the pharmaceutical industry has invested heavily in technology (Weinstein & Mullins, 2012). With increased investment in technology, firms want to ensure that these products are adopted by salespeople, and then to have the technology pay off through increased

sales performance (Weinstein & Mullins, 2012). This use of technology appears to be a hot button for many performance-oriented small and medium sized pharmaceutical sales organizations that may hire online educated graduates if it can be shown that the sales records of existing salespeople from this category are at least equivalent to those of their traditionally educated counterparts.

The use of technology is an area in which for-profit educated individuals, who received their education through online learning, can excel (Sutton, 2014). These individuals have strong skills related to technology that they can bring to a position in the pharmaceutical sales field (Sutton, 2014). These are also self-starters who can work well in an independent environment and solve problems independently as well (Sutton, 2014). For this reason, this career path appears to be ideal for these for-profit and online-educated students. This also indicates a possible gap in the research that indicates that for-profit and particularly online educated students are unemployable.

In order to make graduates more marketable to pharmaceutical sales organizations, prospective sales representatives can take a test to become certified through the American Association of Pharmaceutical Sales Professionals (AAPSP) (Alkhateeb et al., 2011). This test includes topics such as new drug development, formularies, generic drugs, laws and regulations, The Orphan Drug Act, supply and distribution chains, and the pharmaceutical market (Alkhateeb et al., 2011). The purpose of the test is to level the playing field, as prospective representatives can come from many different backgrounds, and this test can be used to gain employment as a professional sales representative in the pharmaceutical industry (Alkhateeb et al., 2011).

Rao et al., (2014) stated critical thinking skills and self and team management skills are also a concern of employers that are potentially interested in hiring MBAs after graduation. In addition Rao et al. (2014) found that creativity, innovation, critical thinking, leadership, prioritizing, and interpersonal/intercultural skills are ranked highly by employers. Rao et al. (2014) posited graduates who are interested in obtaining a professional position after graduation must be able to use the interview process to give examples of when they exercised key attributes that are important to employers. According to Aronson et al., (2015), young graduates experience a rate of unemployment that is twice that of older, more established graduates. In order to level the playing field, these graduates must be able to demonstrate, during the interview process, that they are worthy of being invested in by these organizations that will spend a great deal of money to train them. These organizations will supply funds for travel, possession of a company vehicle, medical benefits, competitive salaries, bonuses, tuition reimbursement, and retirement plans (Alkhateeb, 2011).

In addition, MBA graduates will likely need to demonstrate even higher levels of skill, as they may be hired with the intent that they will be promoted into a management position within a short period of time. Iyengar (2015) stated that 80% of companies have plans to hire MBAs, and those numbers have continued to rise as this is an increase from 73% in 2013. What this also means is that MBAs from for-profit and online education programs may be potential candidates for the position of professional sales representative in the pharmaceutical industry. In addition to an MBA, potential candidates will likely need to demonstrate knowledge regarding the pharmaceutical industry, the ability to solve problems, and the ability to communicate effectively (Iyengar, 2015). Iyengar

(2015) stated that the top of a long list of skills that employers are seeking of MBAs includes oral communication, listening skills, written communication, presentation skills, adaptability, and integrity. Many of these skills can likely be demonstrated during the interview process, and candidates can provide examples of written communication as well in order to make themselves attractive to employers in the pharmaceutical industry. The research has not determined whether an MBA actually provided a competitive advantage in the pharmaceutical sales industry, as the literature thus far did not determine whether this was the case (Iyengar, 2015).

One obstacle faced by pharmaceutical sales representative candidates in general, however, is competition from MBAs who are also vying for these positions. Some MBAs are being exposed to sales-related concepts in their MBA programs (Pettijohn & Pettijohn, 2010). Most do not have formal sales experience though, so this means that undergraduates who graduate with at least some experience in the field of sales can compete more effectively with these MBAs (Agnihotri et al., 2014). The reason that MBAs are being sought after for these positions is due to new responsibilities such as understanding buying behavior, gathering information, conducting marketing analyses, developing sales forecasts, and using new technology (Pettijohn & Pettijohn, 2010).

One way that these candidates can also compete more effectively is by pursuing an MBA (Pettijohn & Pettijohn, 2010). Current as well as prospective pharmaceutical representatives can make themselves more attractive to employers by pursuing a master's degree online that is directly related to the pharmaceutical industry (Williamson & Ganzon, 2006). This degree can be pursued in addition to pharmaceutical sales certification. One of these programs is offered by The University of Sciences at

Philadelphia (University of Sciences, 2015). The sales certification program, again, is also a test that can level the playing field, as adequate knowledge of this field can be demonstrated by both online and traditionally educated sales candidates in competing for a sales position (Alkhateeb et al., 2011).

With regard to the MBA program in an online Accredited Counsel for Business School Programs (ACBSP) accredited Pharmaceuticals and Healthcare Business degree program at the University of Sciences at Philadelphia, 91% of graduates were satisfied or very satisfied with the program (University of the Sciences, 2015). In addition, 93% had a job within 6 months, 89% earned more than $50,000, and 84% of these positions were in the healthcare and pharmaceutical industries (University of Sciences, 2015). What this means is that the pharmaceutical industry will hire graduates with ACBSP accredited online degrees, much like those offered by online schools such as Strayer University and the University of Phoenix, for example. The ability to show potentially that graduates, for example, from ACBSP for-profit business programs are at least as successful as a likely group or AACSB non-profit educated counterparts will likely open many new opportunities in the field of sales for these graduates with other industries as well.

More than 70% of entry level positions for college graduates are in the field of sales (Raymond, Carlson, & Hopkins, 2006). Something that has changed since 2006, however, is that an MBA is sometimes a prerequisite for an entry level position in the field of sales overall (Pettijohn & Pettijohn, 2011). Something that has not likely changed is the requirement by managers for entry level salespeople, which includes technical skills, experiential learning, acquired skills, college accomplishments, and extracurricular activities (Raymond et al., 2006). Having these skills and experiences can

level the playing field for online educated graduates with their non-profit traditionally educated counterparts. In pharmaceutical sales, again, it does not appear that an MBA is a specific prerequisite for many positions, except those that are specifically hired on the premise that sales employees will be promoted into management within a short period of time. It appears that for-profit and online educated student graduates who are interested in a position in pharmaceutical sales should also attempt to locate an internship position in the field of pharmaceutical sales as well.

An additional obstacle faced by prospective and current pharmaceutical sales representatives alike is that of an increasing number of physicians not willing to see salespeople (Chressanthis et al., 2014). The reason this is also an obstacle for prospective pharmaceutical salespeople is that some organizations are cutting back on the number of salespeople employed by their organization due to this problem (Chressanthis et al., 2014). This problem may result in a decrease in the number of salespeople being hired in some cases as well. So far, it appears that the biggest problems with regard to physician access by salespeople are in the western part of the United States and the northernmost part of the Midwest (Chressanthis et al., 2014).

The problem with this trend is that it likely started due to salespeople who have refused to use technology to record sales calls and to keep detailed records that lead to better recall of the individual needs of customers and more productive sales calls (Weinstein & Mullins, 2012). This is an area in which online educated potential salespeople would likely excel due to their excellent facility with technology (Sutton, 2014). This factor would appear to be a definite selling point for online educated

salespeople to promote themselves to prospective employers in the field of pharmaceutical sales.

Changes in the Pharmaceutical Industry that Have Resulted in More Limited Access to Physicians

Weinstein and Mullins (2012) promoted the idea that the ability to use technology effectively would lead to increased sales and greater willingness of customers to listen to the presentations of pharmaceutical representatives. Chressanthis (2014) also argued that salespeople should tailor their sales presentations to the individual needs of their customers in the pharmaceutical industry to avoid the possibility of physicians who are no longer willing to see salespeople for in-person visits. It can be argued that salespeople did not increase their use of technology in order to maintain detailed records of each customer that would allow for sales presentations tailored to the individual need of the physicians.

The reason for this conclusion is that only 47% of physicians were willing to see pharmaceutical sales representatives, based on 2015 data, and this was a decrease from a high of 80% of physicians who were willing to see sales representatives in the pharmaceutical industry in 2008 (Khedkar & Sturgis, 2015). Physicians who are part of large physician groups owned by major teaching hospitals in medium sized and larger markets are the least likely to see pharmaceutical salespeople (Khedkar & Sturgis, 2015). According to Khedkar & Sturgis (2015), this trend is in contrast to smaller independent physician-owned practices that still see pharmaceutical salespeople. Markets such as that of the Greater Cleveland, Ohio, marketplace fall into the category of very low access to

physicians by pharmaceutical salespeople as do major markets throughout the United States (Chressanthis et al., 2012; Khedkar & Sturgis, 2015).

These statistics are the case despite the fact that the pharmaceutical industry had marketing expenses related to pharmaceutical salespeople in the range of $89.5 billion, which was 60% of the total amount spent on a global basis (Patwardhan, 2016). These statistics are also the case even though pharmaceutical representatives can provide information on new products that are advancements over generic drugs in many cases (Patwardhan, 2016). It may also be the case that sales representatives in the pharmaceutical industry can reach physicians through digital methods as well as through speaker programs and through other creative methods (Khedkar & Sturgis, 2015). The opportunity to connect with physicians through these alternative channels may also be the reason that pharmaceutical companies are hiring MBAs to become managers at a record level (Murray, 2014).

Employment Outlook for Pharmaceutical Salespeople

The employment outlook, based on projected sales, appears to be strong overall for the pharmaceutical sales industry (Business Monitor International, 2013). The U.S. also has a Risk/Reward Rating (RRR) score of 80.6 out of 100, and this is the best rating for any pharmaceutical market on a global basis (Business Monitor International, 2013). With regard to sales, the compounded annual growth rate (CAGR) is projected to be 3.2 percent over the next ten years (Business Monitor International, 2013). Spending on pharmaceuticals rose to $263 billion, and this was a 2.9% increase from 2011 through 2012 (Business Monitor International, 2013). What this means is that the outlook for pharmaceutical representatives with regard to employment should remain strong. This

appears to be the case despite the increasing number of physicians who are limiting access to salespeople (Chressanthis et al., 2014). This outlook may provide a viable career path for many online educated graduates. This career field will, therefore, be the basis for a study to determine whether pharmaceutical salespeople that were educated in this manner perform less well than their non-profit, traditionally educated counterparts in the workplace.

Summary

In summary, a gap in the research exists to the extent that it has not been definitively determined that salespeople who are online educated perform less well in the workplace than those from traditional college programs. Many for-profit and online educated graduates may, therefore, require an extended period of time to locate a career position after college. The reason for this is that current theory states that the level of rigor is less than that of traditional degree programs. Many organizations attempt to put theory into practice and they, therefore, will not hire online educated graduates.

Despite the fact that online educated graduates have excellent computer skills, conscientiousness, the ability to work well independently, and a high level of innovativeness, theory states that these graduates are less well prepared for today's college labor market (Harrington & Loffredo, 2010; Keller & Karau, 2013). Also, it was found that those individuals who also have strong computer skills actually perform better in a sales capacity than those salespeople with weaker technology skills (Tarafdar et al., 2014). Weaker technology skills associated with a less than stellar sales record were found in many salespeople working in professional sales positions (Tarafdar et al., 2014). In addition, online educated salespeople are more likely to be introverts who are heavily

invested in their jobs (Mulki, Jaramillo, & Marshall, 2007). This factor also contradicts the idea that for-profit, and particularly, online educated graduates are less employable, as it indicates a high level of commitment that will translate to increased sales for their organizations. The major difference is that online educated graduates in the field of sales likely rely on a positional rather than a relational selling style in the workplace (Bolander et al., 2015). Also, both are needed to have effective sales organizations (Bolander et al., 2015).

Employers, in some cases, also fail to consider the fact that students in the for-profit, and particularly the online environment, tend to receive an education that is focused on applied learning rather than on memorization, which will allow them to apply what they have learned in the workplace (Sutton, 2014). In addition, it is stated that most online educated graduates are from vulnerable populations when in reality the typical online graduate is a female (70%) who earns $65,000 per year in a professional position (Franklin University, 2015). Critics also blame what they are calling a less effective form of education based on the level of funding allocated specifically to education at the for-profit level, despite the fact that non-profit education institutions are also being affected financially as well, with as many as 600 students in undergraduate classrooms at public universities (Besana & Esposito, 2014). Also, even though for-profit and online schools are considered less effective than non-profit traditional schools, enrollment increased 850% compared with 40% and 33% respectively at public and not-for-profit private institutions of higher learning (Gilpin et al., 2015).

It was also found that for-profit, and online educated students in particular, have a more difficult time locating employment than their non-profit traditionally educated

counterparts (Simmons, 2014). In addition, Appel & Taylor (2014) state that for-profit colleges and universities train while non-profit public and private institutions of higher learning educate students. In reality, nearly all colleges and universities are attempting to provide a vocationally-oriented education that is geared toward the needs of employers (Cairo & Cajner, 2013). It was also found that an internship was one of the most valuable experiences that a graduate could put on his resume, and program reputation was number 15 on a list of individual factors affecting employability (Helyer & Lee, 2014; Finch et al., 2013). In addition, it was found that, while employers are interviewing applicants from for-profit and online education backgrounds, there is still considerable pressure to hire based on having the right pedigree and a traditional, non-profit education (Toterni & Recardo, 2013).

Chapter 3: Research Method

The pursuit of this study was motivated by the fact that there was no documented substantiation that students from mixed online, on-ground colleges and universities were as effective in the workplace as their traditionally educated counterparts (Darolia et al., 2015). Fogle and Elliot (2013) have attempted to understand the motivation and perceptions of employers with regard to hiring baccalaureate level candidates from the online education environments. Providing information about whether mixed online, on-ground educated graduates actually perform less well than their traditionally educated counterparts will allow companies to make better decisions regarding the hiring of graduates from the mixed online, on-ground versus traditional institutions of higher learning.

The purpose for conducting this quantitative, comparative, descriptive questionnaire design was to compare what is in the literature as it relates to the quality of education from mixed online, on-ground educated graduates versus traditionally educated graduates with actual sales results from pharmaceutical sales representatives. The study was justified based on the fact that Darolia et al., (2015) stated that a study such as this would enable employers to make better hiring decisions if a study determined whether online educated graduates actually performed at the same level in the workplace versus their traditionally educated counterparts, as stated in the literature.

This study was designed to investigate whether sales performance indicated that mixed online, on-ground graduates were as effective in the workplace as their traditionally educated counterparts. The study had four research questions.

Q1. To what extent does school type (graduation from a mixed online, on-ground education program versus graduation from an all on-ground education program) affect actual sales performance in the pharmaceutical sales industry?

Q2. To what extent does education level of graduates affect actual sales performance in the pharmaceutical sales industry?

Q3. To what extent does GPA of graduates affect actual sales performance in the pharmaceutical sales industry?

Q4. To what extent do years of service of graduates affect actual sales performance in the pharmaceutical sales industry?

Hypotheses

$H1_0$. School type (graduation from a mixed online, on-ground education program versus graduation from all on-ground education program) does not have a statistically significant effect on sales performance.

$H1_a$. School type (graduation from a mixed online, on-ground education program versus graduation from an all on-ground education program) has a statistically significant effect on sales performance.

$H2_0$. Education level does not have a statistically significant effect on sales performance.

$H2_a$. Education level has a statistically significant effect on sales performance.

$H3_0$. GPA does not have a statistically significant effect on sales performance.

$H3_a$. GPA has a statistically significant effect on sales performance.

$H4_0$. Years of service does not have a statistically significant effect on sales performance.

$H4_a$. Years of service has a statistically significant effect on sales performance.

This chapter will include a research method and design section that will introduce how the analysis was conducted and was administered through the demographic questionnaire inquiring about four independent variables and one dependent variable. Operational definitions of variables will follow as well as the collection process of obtaining the data and a detailed explanation of the data analysis. Finally, assumptions, limitations, and delimitations also will be discussed as well as ethical assurances associated with the study.

Research Methods and Design(s)

The plan was for the use of a quantitative, descriptive, comparative research method and a one-way between subjects ANOVA with anticipated unequal variances and unequal sample sizes for each of the four independent variables. In this design, the independent variables were school type (mixed online, on-ground and all on-ground) and level of education (bachelor's and master's) as well as GPA in the pharmaceutical sales industry, years of service in the pharmaceutical sales industry, and the dependent variable was sales performance. The area of the study was the entire United States.

The reason a quantitative method was chosen over the prospect of conducting qualitative research is that the nature of the research is such that the literature appears to indicate that there may be specific relationships between the chosen independent variables that had not yet been explored. Using a one-way ANOVA for each of the four independent variables enabled the ability to determine whether these relationships were statistically significant. The precise nature of quantitative research was proposed as enabling the ability to determine whether these relationships such as those associated

with the prospect of greater career success in the field of sales was in any way linked to a higher college GPA, for example.

Population

The population for this study was the approximate 81,000 pharmaceutical sales representatives in the United States (Alkhateeb, Khanfor, Douchette, & Loudon, 2009). These sales representatives were presumably connected to both the mixed online, on-ground education environment and the traditional education environment as well. Roughly 20.2 million students attend American colleges and universities, and of these students, 2.4 million are from for-profit institutions of higher learning (National Center for Educational Statistics, 2015; National Conference of State Legislators, 2013).

The population was appropriate for this study, as the pharmaceutical sales industry has been a field that has expanded 94% since 1995 and likely contains opportunities for business majors from the mixed online, on-ground education environment (Alkhateeb et al., 2009). This field has been expected to grow 26% with regard to job opportunities through 2016 (Alkhateeb et al., 2011). Conducting a study using a growing industry that also contains high growth firms that will hire salespeople from varied educational backgrounds was therefore justified.

Sample

The sampling method was the use of a convenience sample. The location from which the sample was drawn was the entire United States by making electronic contact via email addresses. The plan was to purchase a list of 12,000 email addresses from a service that provides data on pharmaceutical sales representatives. Using this method provided a broad cross section of the industry rather than relying on representatives from

specific sales organizations for the collection of the data. The reason that a list of 12,000 representatives was obtained was that it was anticipated that a 5% response rate could be expected. Respondents were recruited using the e-mail addresses that were provided by the data service. In addition, medical buildings in Euclid, Willoughby, and Wickliffe, Ohio, were used to recruit salespeople in-person by having respondents return the survey through the mail or through the web site based on personal preference. Finally, Qualtrics' database was used to collect the remainder of the respondents needed for the study. One thousand six hundred and twenty invitations were sent out by Qualtrics and 58 pharmaceutical salespeople responded to the survey.

The sampling frame was 13,632 pharmaceutical sales representatives in a database from the organizations through which the contact information was provided. The sampling frame also included pharmaceutical representatives who visited medical buildings in Euclid, Willoughby, and Wickliffe, Ohio, on the days that the researcher was outside of the medical buildings for the purpose of recruitment. The database used to send recruitment emails was originally meant for use by marketers to promote their products but it also was used for the purposes of this study. The database that was used to collect the last 58 respondents was provided by Qualtrics. The age group represented by the population included persons 18 or older. Also, all salespeople had at least an associate's degree, as the industry hires RNs with an associate's degree, in some cases.

The second part of the data collection, again, included the use of the Qualtrics database through which this organization conducted the data collection for the remainder of the respondents for the study. The sampling frame was pharmaceutical sales representatives that were part of this organization's database. The reason Qualtrics was

used to collect the remainder of the participants was that data collection through the above methods was done with limited success and took a long period of time.

Variables included school type, degree type, GPA, years of service and actual sales performance using percentage increase or decrease in sales this year, year-to-date versus last year, year-to-date. G*Power 3 was used to determine the sample size. For school type, degree type, GPA, and years of service, the power analysis effect size was 0.5, α was .05 and the needed sample size to achieve sufficient power or $1 - \beta = (.95)$ was 54.

Materials/Instruments

The study involved collecting the data through a demographic questionnaire administered directly to sales representatives through an electronic website in the form of Survey Monkey and Qualtrics as well as through in-person recruitment and through LinkedIn. The questionnaire collected information on the schools from which the study participants graduated based on the highest degree level. In addition, the questionnaire collected current degree level and the most current GPA for the most recent degree conferred and years of service in pharmaceutical sales industry. The questionnaire also collected sales based on percentage increase or decrease in sales during the past year. The questionnaire was conducted in two waves and the second wave of the questionnaire also asked respondents their gender, their age and the state of their residence. This information also appeared in the consent form for both waves of the questionnaire as a qualifier that indicated the age range for respondents as well as the fact that they must reside in the United States to participate in the survey.

Operational Definition of Variables

Each variable was identified by responses obtained from the demographic questionnaire that each participant completed and submitted online (self-reporting). Each variable has been operationally defined as:

School type. School type was a categorical variable and was one of the primary constructs associated with questions #1 and corresponding hypotheses. School type was operationalized as a mixed online, on-ground or all on-ground educational environment.

Education level. Education level was a categorical variable and was one of the primary constructs associated with research questions #2 and associated hypotheses. Education level was operationalized as a bachelor's or master's level degree.

GPA. GPA was used as a categorical variable in this instance and this variable was associated with research questions #3 and corresponding hypotheses. GPA was operationalized as grade point average between 4.0 – 3.34 as an A and 3.33 – 2.68 as a B.

Years of service. Years of service was used as a categorical variable and this variable was associated with research question #4 and corresponding hypotheses. Years of service was operationalized as < 10 years of service and 10+ years of service.

Sales performance. Sales performance is a ratio variable and this variable was associated with questions #1, #2, #3, and #4 and corresponding hypotheses. This variable was operationalized as a percentage increase or decrease in sales.

Data Collection, Processing, and Analysis

The collection process was professional sales representatives in the pharmaceutical industry who were asked to participate by providing five different pieces of data that included percentage increase or decrease in sales from a cross section of the

pharmaceutical industry that included sales representatives throughout the United States. The additional factors that were collected included school attended, GPA, and highest degree conferred as well as years of service in the pharmaceutical sales industry. The second wave of the questionnaire also directly asked respondents their gender, state of residency and age. It was anticipated the sample also would include salespeople from high growth firms that hire both on-ground graduates and graduates who have taken classes online.

The reason that a between groups, one-way analysis of variance for each of the four independent variables with anticipated unequal sample sizes and unequal variances was appropriate for this study was that it analyzed each of the independent variables in relation to actual sales performance in the pharmaceutical sales industry. In this case, the independent variables were school type, education level, GPA, and years of service and the dependent variable was actual sales performance.

Again, a one-way between groups analysis of variance with anticipated unequal sample sizes and unequal variances was used to analyze each of the four independent variables. The design of the first one-way ANOVA had two groups which included (1) mixed online, on-ground and (2) on-ground educated graduates. The two levels associated with the second one-way ANOVA were bachelor's and master's level graduates. The next one-way ANOVA represented GPA on a grade scale of A – B with an A as 4.0 – 3.34, and a B as 3.33 – 2.68. The final one-way ANOVA represented years of service in the pharmaceutical sales field with <10 years of service and 10 + years of service. Each of the four independent variables was analyzed using SPSS software. The data were obtained through the responses of those who participated in the study.

Since the one-way between groups analysis of variance included anticipated unequal sample sizes and unequal variances, Levene's test for homogeneity of variances was employed to find the appropriate level of alpha to be used to analyze the data. For the two variables for which homogeneity of variances were violated (GPA and degree type), a Brown-Forsythe one-way between groups ANOVA was run. Instead of using t-tests, SPSS was instructed to create pairwise comparisons. The Type III sum of squares option, which is the default for SPSS, also was used to account for unequal sample sizes.

Assumptions

An assumption was the self-reporting nature of the demographic questionnaire would be the most appropriate method of delivery. An assumption was also that this method would allow for the appropriate sample size to be reached by initially introducing the questionnaire to potential respondents and then by sending out reminders. Statistical assumptions included those associated with the use of a between groups one-way ANOVA with anticipated unequal sample sizes and unequal variances, and they included the fact that the dependent variable was a ratio variable and the independent variables were categorical (Laerd Statistics Tutorial, 2017). Also, in this case, there were no participants that would appear in more than one group (Lund Research Ltd., 2013). In addition, it was assumed that there would be no outliers and that the dependent variable would be normally distributed (Lund Research Ltd., 2013). Finally, it was assumed that there would be homogeneity of variances for each combination of the two independent variables, and that if this was not the case, that a Bronw-Forsythe ANOVA could be run (Lund Research Ltd., 2013).

Anticipated unequal sample sizes were addressed with the use of the Type III Sum of Squares option, which is the default setting for SPSS, and which effectively addressed the issue of unequal sample sizes. With regard to unequal variances, Levene's test for homogeneity of variances was used to determine if the assumption of equal variances had been violated (Lund Research Ltd., 2013). When violation of homogeneity of variances was encountered, a Brown-Forsythe ANOVA was run, which corrected this. Increasing the sample size was also used to reduce the risk of unequal variances (Northwestern.edu, 1997). Since it was also assumed that no participants would appear in more than one group, only the most recent education experience was used to collect the data on pharmaceutical salespeople who graduated from college with the data having been restricted to that which reflected the most recent degree conferred. Outliers were addressed by removing the outliers, and non-normality was addressed by using a one-way ANOVA and assuming that it would be robust enough to handle issues of non-normality.

Whether any action should have been taken depended on the number of outliers. If there were less than a few outliers, it was determined that no action would be taken. Also, outliers were detected using a boxplot, and it was determined that if a significant number of outliers existed, the analysis would be conducted without the outliers (Laerd Statistics Tutorial, 2017). With regard to a lack of a normal distribution, the sample size was increased to increase the probability of a normal distribution. With the use of a robust test such as one-way between groups ANOVA, it was determined that normality could be violated to some degree and still provide valid results (Lund Research Ltd., 2013).

Limitations

The sample for this study was limited to the pharmaceutical sales representatives throughout the United States that were part of the database of the organizations that provided the lists for the study (Exact Data and Qualtrics) as well as participants recruited in person. Another limitation was the amount of time that the questionnaire was available online, which was a total of 23 weeks to the pharmaceutical sales representatives. In addition, a limitation was the fact that some e-mails did not reach the potential respondents, and some salespeople who recieved the e-mails regarding participation were no longer selling pharmaceuticals due to lay-offs and career changes and also were between positions as well. A limitation also existed to the degree that only sales representatives who visited the medical buildings that the researcher was standing outside of could participate in the study through in-person recruitment.

Delimitations

This study was delimited in several areas. It was delimited based on the fact that it did not reach all pharmaceutical sales representatives in the United States. It also was delimited based on the fact that the study did not collect information from pharmaceutical sales organizations, and instead relied on the self-reporting of sales representatives in the pharmaceutical sales industry. In addition, the study was delimited with regard to the types of statistical analyses that were conducted. It was determined that a one-way between groups analysis of variance with unequal variances that were corrected with the Brown-Forsythe between groups one-way ANOVA and unequal sample sizes were appropriate for this study.

Ethical Assurances

The research participants for this study were derived from a contact list of pharmaceutical sales representatives provided by a data service that provides lists of contact information of pharmaceutical salespeople throughout the United States that included Exact Data and Qualtrics. The study was such that no personal identity was attached to the data that was collected other than an optional email address that was sent as a separate message that will be in no way attached to the respondents' responses. Respondents sent an email indicating that they would like to take part in a drawing for some gift cards in exchange for their participation. This incentive was noted in the consent form. Therefore, there was not any risk of psychological harm or concern regarding confidentiality for subjects included as part of this study. Due to the fact the data did not contain any names or employee information of any type and was only identified by anonymous information (numeric codes) that included percentage increase or decrease in sales, GPAs, schools, and degree levels as well as years of service, informed consent was determined based on statements at the beginning of the questionnaire informing potential respondents that participation was voluntary. The data was, again, authentic but there were no identifiers regarding where the data came from.

The benefit for the participants and the industry was limited to a contribution to the literature and the risk was minimal. The benefits included the opportunity to determine whether there was a connection between school type attended as well as degree type, and years of service and GPA with actual sales performance in the workplace. The justice principle was addressed from the standpoint that participants received the benefits of obtaining the results of the study without accepting any direct risk. The reason for this

conclusion was that the data were not identifiable from an individual standpoint and were instead reported in an aggregate form without reference to the individuals from whom the data were obtained. A copy of the data was stored in a file on a password protected computer, again, without any identifiers of where the data originated from. For all of the reasons outlined above, the research was eligible for exempt status due to a high level of autonomy of individual salespeople regarding the decision to participate. Due to the lack of risk for subjects from which the data was obtained, it was felt that there would not be a problem, and that individuals would make the decision to participate based on this factor. Again, the results of the data were reported in an aggregate form and did not identify any individual participants. The IRBs approval was sought prior to the collection of any data (CITI Collaborative Training Initiative, 2016).

Summary

Based on the literature review, it does not appear that progress has been made thus far regarding the determination of whether online educated graduates actually perform less well than their traditionally educated counterparts in the workplace (Darolia et al., 2015). While Fogle and Elliott (2013) have attempted to understand the motivations and the perceptions of employers with regard to hiring baccalaureate level candidates from the online education environments, it has not been determined definitively why employers feel that there is a difference, particularly in graduates from the field of business. This study complemented existing literature by actually investigating whether on-ground educated graduates actually perform better than their mixed online, on-ground educated counterparts in the workplace. Findings from an investigation such as this may mean that employers will be able to make better informed

hiring decisions when faced with the choice between mixed online, on-ground an on-ground educated graduates to fill positions in the sales field.

This chapter discussed the research method and justified the reasons that a quantitative, comparative, descriptive design was chosen for the implementation of this study. The population also was described as was the sample and the determination of the sample size. The instrument used to collect the data also was briefly described as were the operational definitions of the variables. In addition, a detailed description of the data collection process, processing of the data, and data analysis procedures were also given. Finally, assumptions, limitations, and delimitations of the study were discussed as well as ethical assurances associated with the study.

Chapter 4: Findings

The purpose for this quantitative, comparative, descriptive questionnaire design was to compare what is in the literature as it relates to the quality of education from mixed online, on-ground educated graduates versus on-ground educated graduates with actual sales results from pharmaceutical sales representatives. This purpose was based on the dependent variable, actual sales performance, and on the independent variables: level of education (bachelor's or master's); school type (mixed online, on-ground and on-ground); grade point average (GPA); and years of service in the pharmaceutical sales industry. The pharmaceutical sales industry is an industry with both traditional and high growth employers. All employers in the pharmaceutical sales industry likely have a plan in place to hire some graduates from diverse educational backgrounds (Ammatuna & Changcoco, 2017). For this reason, pharmaceutical sales representatives throughout the industry from throughout the United States were asked to participate in the study. To fulfill this purpose, data collection involved using a questionnaire collected from pharmaceutical sales representatives via a self-developed questionnaire through an online survey website was disseminated to determine whether there was a difference in the literature versus actual sales performance of mixed online, on-ground versus on-ground graduate employees. This study was also distributed in-person to a small number of study participants as they entered or exited medical sites/offices and through LinkedIn.

Trustworthiness of the Data

The methods that confirm trustworthiness include internal validity, external validity, reliability, and objectivity. Validity and reliability were not established since the questionnaire was strictly demographic. Objectivity was established by utilizing a web-

based questionnaire which allowed the researcher to maintain distance between the researcher and the study participants in order to decrease bias.

Trustworthiness of the data was based on the assumptions of self-reporting data being collected by credible participants. The data was secured by utilizing a questionnaire that was easy to understand, as participants provided basic information including the exact school attended, GPA, years of service in the pharmaceutical sales industry, the highest level of education attained, and whether or not they graduated from a program where they took some or all of their classes online. School type was measured based on whether a study participant attended a mixed online, on-ground education program or on-ground environment. The exact school attended was also provided by study participants. GPA was determined based on standard divisions for determining grades, which were 4.0 – 3.34 for an A, 3.33 – 2.68 for a B, 2.67 – 1.68 for a C, and 1.67 – .68 for a D grade. Years of service were determined based on 6 divisions to determine intervals of time in the pharmaceutical sales industry ranging from < 1 year to 10 + years and included 6 items. Education level was secured by utilizing standards of progress through the formal public and private education system of colleges and universities, including associate's, bachelor's, master's and doctorate degree levels. Information regarding whether a student graduate took all or some of his/her classes online as part of their education program was gathered by specifically asking whether all classes were taken online and then by asking whether some classes were taken online as a separate question.

Overlapping methods of securing the data included asking for the specific school attended and then utilizing two questions to confirm whether some or all classes were taken online. An example exact school was given as an example of the information that

was needed for the questionnaire, as initially this information was not included, resulting in a respondent that failed to name the school he/she attended. Furthermore, sales results were obtained by specifically asking for the percentage increase or decrease in sales from last year to this year at the time of the survey. A shortcoming was the small sample size. A shortcoming was also not asking for the area of study of respondents as it would have been interesting to find out if the associate's level respondents were nurses. In addition, a shortcoming was also not asking if respondents had work experience related to the medical field when they began selling pharmaceuticals.

Participant Demographics

Twenty six participants were male (27.66%). Thirty nine participants were female (41.49%), and 29 participants were unknown (30.85%). The ages of participants ranged from 26-30, $n = 3$ (3.19%); 31-35, $n = 7$ (7.45%); 36-40, $n = 9$ (9.57%); 41-45, $n = 15$ (15.96%); 46-50, $n = 7$ (7.45%); 51-55, $n = 7$ (7.45%); 56-60, $n = 14$ (14.89%); 60-65, $n = 6$ (6.38%). The unknown participants who did not answer the age question were $n = 26$ (27.66%).

Sixty-eight participants lived in 26 states and the state residence of 23 participants was unknown. With regard to school type, $n = 76$ (80.85%) were from the on-ground school type and $n = 17$ (18.09%) were from the mixed online, on-ground school type. With regard to the highest degree level of participants, $n = 3$ (3.19%) had an associate's level degree, $n = 55$ (58.51%) had a bachelor's degree, $n = 32$ (34.04%) had a master's degree, and $n = 1$ (1.06%) had a doctorate level degree, and $n = 3$ (3.19%) were unknown. As for GPA, $n = 51$ (54.26%) have a 4.0-3.34 GPA, $n = 38$ (40.43%) had a 3.33-2.68 GPA, $n = 4$ (4.26%) had a 2.67-1.68 GPA, and $n = 1$ (1.06%) was unknown.

As for years of service, n = 2 (2.13%) had < 1 year, n = 6 (6.38%) had 1-3 years, n = 6 had 3-5 years, n = 6 (6.38%) had 5-7 years, n = 6 (6.38%) had 7-10 years, n = 65 (69.15%) had 10 + years, and n = 3 (3.19%) had an unknown number of years of service in the pharmaceutical sales industry. The participant demographics are provided in Table 5; due to the size of the table, it can be found in Appendix D.

Results

The results are based on the data collected from 94 participants (n = 94) and analyzed using statistical tests to determine relationship among the variables. The results have been presented in respect to the specific research question (RQ) and associated hypothesis (H) addressed. In addition, the results are based on the process of conducting a one-way, between groups ANOVA on the data associated with each of the four variables.

Research Question 1/Hypotheses $H1_0$ and $H1_a$

A one-way univariate between groups ANOVA was run to determine if sales results were different for different school types. The 93 (one participant was not used due to the fact that he/she was a participant of an unknown school type) participants were classified into two groups based on his or her respective school type: On-ground (OG) (n = 76) and Mixed online, on-ground (M-OL-OG) (n = 17). There were three outliers in the data as assessed by inspection of a boxplot for values greater than 1.5 box lengths from the edge of the box. The outliers that were removed had values of -.90, -.81, and -.84. With regard to normality, the Shapiro Wilk test was used and was non-normally distributed for OG graduates (.002) and normally distributed for M-OL-OG graduates (.419). However, it was determined that the one-way ANOVA is robust to non-normality

(Laerd Statistics Tutorial, 2017). There was also homogeneity of variances as assessed by Levene's test for equality of variances (p = .364).

Data regarding descriptive statistics were presented as mean +/- standard deviation (see Table 1). Pharmaceutical sales performance was reported as OG (n = 73) 10.88% +/- 25.054% and M-OL-OG (n = 17) 20.00% +/- 29.043%. The differences between these groups of school types were not statistically significant F (1, 90) = 1.72, p = .193, partial eta squared .019. Based on this data, the null hypothesis failed to be rejected and the alternative hypothesis was not accepted.

Table 1

Descriptive Statistics for School Type

School type	*M*	*SD*
On-ground	0.1088	0.25054
Mixed OL-OG	0.2	0.29043

Research Question 2/Hypotheses $H2_o$ and $H2_a$

A Brown-Forsythe one-way ANOVA was run to determine if sales results were different for different degree types. Participants were classified into two groups: bachelor's (n = 55) and master's (n = 32). Nine outliers were detected as assessed by inspection of a boxplot for values greater than 1.5 box lengths from the edge of the box and they were removed. With regard to normality, the Shapiro Wilk test was used and was non-normally distributed for bachelor's (.018) and master's (.034). It was determined that the one-way ANOVA was robust to non-normality (Laerd Statistics Tutorial, 2017). Homogeneity of variances were violated as assessed by Levene's Test of Homogeneity of Variances (p = .001). In this case, a Brown Forsythe test of equality of

means was run (p = .139) and the results indicated that homogeneity of variances was no longer violated.

Data regarding descriptive statistics were presented as mean +/- standard deviation. Pharmaceutical sales performance was reported as bachelor's (n = 48) 8.36% +/- 13.961% and master's (n = 30) 17.19% +/- 30.004%. The results revealed there were not any significant differences (p > .05). Therefore, the null hypothesis failed to be rejected and the alternative hypothesis was not accepted. The difference between the groups was non-significant F (1, 77) = 3.101, p = .082, partial eta squared .039.

Table 2

Descriptive Statistics for Degree Type

Degree type	*M*	*SD*
Master's	0.1719	0.30004
Bachelor's	0.0836	0.13961

Research Question 3/Hypotheses $H3_o$ and $H3_a$

A Brown-Forsythe one-way ANOVA was run to determine whether actual sales results for pharmaceutical sales representatives were different for different levels of GPA. Participants of the study came from two groups: 3.33-2.68 (n = 38) and 4.0-3.34 (n = 51). There were ten outliers that were removed as assessed by inspection of a boxplot for values greater than 1.5 box lengths from the edge of the box. The Shapiro Wilk test of normality was used to determine normality and was normally distributed for graduates at the 3.33-2.68 level (.132) and non-normally distributed for graduates at the 4.0-3.34 level (.022). It was determined that the one-way ANOVA was robust to non-normality (Laerd Statistics Tutorial, 2017). Homogeneity of variances was violated as assessed by Levene's Test of Homogeneity of Variances p =.001. In this case, a Brown Forsythe

Test of Equality of Means was run (p = .307) and the results indicated that homogeneity of variances was no longer violated.

Data regarding descriptive statistics were presented as mean +/- standard deviation. Pharmaceutical sales performance was reported as 3.33-2.68 (n = 32, 9.35% +/- 10.611%) and 4.0-3.34 (n = 47, 13.86% +/- 27.211%). The results revealed that there were not any significant differences (p > .05). Therefore, the null hypothesis failed to be rejected and the alternative hypothesis was not accepted. The differences between the groups were non-significant F (1, 78) = .796, p = .375, partial eta squared .010.

Table 3

Descriptive Statistics for GPA

GPA	*M*	*SD*
4.0-3.34	0.1386	0.27211
3.33-2.68	0.0935	0.10611

Research Question 4/Hypotheses $H4_o$ and $H4_a$

A one-way univariate ANOVA was run to determine if sales results for study participants were different for different years of service. Study participants were classified into two groups: < 10 years (n = 26) and 10 + years (n = 65). There were two outliers that were removed as assessed by inspection of a boxplot for values greater than 1.5 box lengths from the edge of the box. With regard to normality, the Shapiro Wilk test was used and was normally distributed for < 10 years (.484) and non-normally distributed for 10 + years (.005). However, it was determined that the one-way ANOVA is robust to non-normality (Laerd Statistics Tutorial, 2017). There was also homogeneity of variances as assessed by Levene's Test for Equality of Variances (.301).

Data regarding descriptive statistics were presented as mean +/- standard deviation (see Table 4). Pharmaceutical sales performance was reported as < 10 years (*n* = 26, 16.32% +/- 28.864%) and 10 + years (*n* = 63, 10.65% +/- 24.768%). The differences between these groups of years of service were not statistically significant $F(1, 89) = .875$, $p = .352$, partial eta squared .010. Based on this data, the null hypothesis failed to be rejected and the alternative hypothesis was not accepted.

Table 4

Descriptive Statistics for Years of Service

Years of Svc.	*M*	*SD*
10 + years	0.1065	0.24768
< 10 years	0.1632	0.28864

Evaluation of Findings

The evaluation of findings has been presented to compare the findings from this study with those studies cited in the literature. The intent is to demonstrate how the findings from this study may contribute to the field of practice and related literature. Based on the literature that states the each level of an independent variable should have at least seven participants in order to be part of the analysis, this rule of thumb will be followed in analyzing the data outlined in the results section (Van Voorhis & Morgan, 2007).

Research question 1. Based on the results of RQ1, the null hypothesis failed to be rejected. Based on this finding, the results indicated there is not a statistically significant difference in school type. This result counters the fact that Fogle and Elliott (2013) have revealed that distance education offerings are perceived as being less effective than traditional education settings in preparing students for future employment.

Due to the fact that managers had no evidence to support this idea that online graduates received an equivalent education, they felt pressure to hire based on similar pedigree, education, or company profile (Toterni & Recardo, 2013). The results of this study also agreed with the premise that online students must be able to motivate themselves and to work independently to a higher degree than classroom educated students due to the fact that, while not statistically significant, M-OL-OG graduates had stronger sales results than OG educated graduates in this study (Sutton, 2014).

The number of students taking at least one course online totals 2.6 million (Clinefelter & Aslanian, 2014). In addition, Kentnor (2015) stated that as of 2015, of the 20.6 million students enrolled in higher education, 6.7 million are enrolled in online coursework. These statistics agree with the results of this study in which 17 of 90 or 18.9% of all study participants were enrolled in online coursework as part of their degree program. This study indicated a growing trend toward taking at least some coursework online in the education setting and, therefore, justified the need for this analysis.

One reason for the higher level of sales performance in M-OL-OG graduates over OG educated graduates in this study may be the fact that since sales positions require the use of technology, online educated graduates who have a great deal of experience with using a computer for their schoolwork as part of project-based learning may be at an advantage (Weinstein & Mullins, 2012). These graduates also have proven ability to work well independently and well-developed cognitive abilities (Sutton, 2014). In addition, and counter to the results of this study, with regard to the development of online programs to train future salespeople at the university level, the majority of institutions feel that online programs are not suitable for sales education programs (Deter-Schmelz &

Kennedy, 2011). This is the case despite the results of this study and despite the fact that students receiving the web-based version of the training were the only group to show a significant gain in critical thinking skills as a result of their program (Alvarez et al., 2015). The results were unexpected due to the fact that an online education is considered to be inferior to an all on-ground college education.

Research question 2. Based on the results for RQ2, the null hypothesis failed to be rejected. While not statistically significant, having a master's degree led to stronger sales results than having a bachelor's degree. This result supported the fact that the pharmaceutical sales field in particular is searching for sales employees with an MBA (Iyengar, 2015). According to Iyengar (2015), 86% of companies in the U.S. intended to hire MBA graduates. Rao et al. (2014) stated critical thinking skills and self and team management skills are also a concern of employers that are potentially interested in hiring MBAs after graduation. What this means is that perhaps even more MBAs may be potential candidates for the position of professional sales representative in the pharmaceutical sales industry. This is the case despite the fact that most MBAs do not have formal sales experience at the time of being hired (Pettijohn & Pettijohn, 2010).

Also, this study counters the fact that research has not determined whether an MBA actually provided a competitive advantage in the pharmaceutical sales industry (Iyengar, 2015). This may also be the reason that bachelor's graduates are more prevalent than master's graduates in the pharmaceutical sales industry based on the results of this study. This study also supports the idea that an obstacle faced by pharmaceutical sales candidates in general includes the competition from MBAs who are also vying for these positions (Pettijohn & Pettijohn, 2010). Something that may become

more prevalent as a result of studies such as this is that having an MBA may become a prerequisite for many more sales positions in the pharmaceutical sales industry. Also, studies such as this may change the fact that it does not appear an MBA is a specific prerequisite, except for those salespeople that are hired on the premise that these sales employees will be promoted into management within a short period of time. The results that demonstrated master's graduates performed better than bachelor's graduates from the pharmaceutical sales industry were also expected based on much of the literature that stated that these graduates have stronger critical thinking skills (Iyengar, 2015).

Research question 3. Based on the results for RQ3, the null hypothesis failed to be rejected. While not statistically significant, there was a fairly substantial difference between having a 3.33-2.68 GPA versus having a 4.0-3.34 GPA, with those graduates with a 4.0-3.34 having a stronger sales result in this study. This was the case despite the fact that the GPA of a graduate as a predictor of success in the work environment was questioned by Kass, Grandzol, and Bommer, (2012).

In support of the results from this study, Kuncel and Hezlett, (2010) stated many organizations now use data mining to gain information for hiring and promotion decisions including GPA and scores on standardized tests. Also, employers at "A" organizations are those that hire based on accomplishments such as a high grade point average (Toterni & Recardo, 2013). In addition, Howard et al. (2015) stated that students improved their critical thinking skills the most when their GPA was higher and that these skills are an important indicator of success in the work environment. Also, despite the fact that a higher GPA leads to success in the workplace based on much of the literature, Pettijohn and Pettijohn (2011) found if employers pursue MBAs for sales positions, they

will need to focus primarily on those MBAs with lower grade point averages. The reason for this conclusion is that, as grade point average increases for MBA non-profit educated students, the interest in a sales career decreases (Pettijohn & Pettijohn, (2011). This may be the reason that there are many more bachelor's degreed individuals in this study than master's graduates. The results were expected given the fact much of the literature associates a high GPA with success in the workplace.

Research question 4. Based on the results for RQ4, the null hypothesis failed to be rejected. While not statistically significant, there was a substantial difference between having < 10 years of experience in the pharmaceutical sales industry and having 10 + years of experience, with those graduates with < 10 years of experience having a stronger sales result in this study. The reason for this result in this study is likely due to sales training at the academic level. Evans (2015), however, argued that training programs at the college level that are a result of universities attempting to prepare students for specific occupations, such as sales, leads only to a short-term gain and that colleges should instead focus on problem solving and the ability to work in teams as well as the study of theory.

In addition, the advent of online coursework may have meant that graduates with fewer years of experience had more exposure to technology through online learning in this study. It has been suggested that innovator and early adopter types such as those individuals from the online environment should be hired who graduate with experience using technology as supported by this study (Jelinek, 2013). In support of this argument, salespeople need to access technology to retrieve competitive intelligence on new products in the marketplace so that, when customers inquire about how an organization's

products compare to the competition, the salesperson can answer intelligently (Mariadoss et al., 2014). The results were expected given the fact that salespeople who graduate from sales training programs at the university level likely receive a short term gain in performance and salespeople with greater than ten years of experience are likely to be placed in more challenging roles that require advanced problem solving skills that may not have been taught in their academic programs.

Summary

Key points presented in this chapter included the fact that the researcher was guided by the concerns addressed in the literature. The first concern that was addressed in the literature was whether the type of school attended (OG versus M-OL-OG) had an effect on actual sales performance in the pharmaceutical sales industry. It was determined that there was not a statistically significant difference in performance based on school type in this study. A second concern was whether degree type had a statistically significant effect on sales performance in the pharmaceutical sales industry and in was determined in this study that this was not the case. A third variable considered the relationship between GPA and sales performance in the pharmaceutical sales industry. This study demonstrated that there was not a statistically significant difference in sales performance determined by GPA. Finally, the last concern that was addressed in the literature based on this study was whether years of service in the pharmaceutical sales industry had a statistically significant effect on sales performance. It was found that there was not a statistically significant effect based on years of service. We can conclude from this study that there is no statistically significant difference in sales performance based on these independent variables. Therefore, employers can feel

equally comfortable hiring student graduates from the OG and M-OL-OG environments based on the results of the study for open positions in the pharmaceutical sales industry.

Chapter 5: Implications, Recommendations, and Conclusions

The problem investigated in this study was based on the assumption that without documented substantiation students from OG colleges were as effective in the workplace as their counterparts at M-OL-OG schools. The purpose for conducting this quantitative study was to compare what is in the literature as it relates to the quality of education from OG educated graduates versus M-OL-OG graduates with actual sales results (self-reporting) from pharmaceutical sales representatives. All employers in the pharmaceutical sales industry likely have a plan to hire some graduates from diverse educational backgrounds. For this reason, pharmaceutical representatives throughout the industry were asked to participate in this study. To fulfill this purpose, data were collected from an online survey to statistically examine the variables based on the self-reporting of participants' personal information (including the school attended, whether any online classes were taken, GPA, years of service in the pharmaceutical industry, and degree level as well as sales results from this year, year-to-date versus last year, year-to-date).

There were several limitations that emerged during the study. The sample for this study was limited to the pharmaceutical sales representatives throughout the United States and obtaining responses was a constant struggle. An attempt was made to try various techniques to recruit and collect data to obtain the desired sample size (i.e., social media [LinkedIn], in-person in Cleveland, Ohio, area, and data collection service such as Exact Data and Qualtrics that compile lists of contact information of pharmaceutical salespeople throughout the United States).

Another limitation was the amount of time that the questionnaire was available online to the pharmaceutical sales representatives. In addition, a limitation was some emails did not reach the potential respondents, and some salespeople who got the emails regarding participation may have been between positions as well and not eligible to participate in the study. A limitation associated with the in person recruitment and distribution of the survey was the limited number of sales representatives who visited the medical buildings that the researcher was standing nearby (physically located).

To protect participants, there was not any risk of psychological harm or concern regarding confidentiality for subjects included as part of this study. Due to the fact that the data did not contain any names or employee information of any type and was only identified by anonymous information (numeric codes) that included percentage increase or decrease in sales, GPAs, school type and degree level as well as years of service, informed consent was determined based on statements at the beginning of the questionnaire informing potential respondents that participation was voluntary. The data was, again, authentic but there were no identifiers regarding where the data came from.

The benefit for the participants and the industry in general was great, but the risk was minimal. The benefits included the opportunity to determine whether there was a connection between school type attended as well as degree type, years of service and GPA with actual sales performance in the workplace. The justice principle was addressed from the standpoint that participants received the benefits of obtaining the results of the study without accepting any direct risk. The reason for this conclusion was that the data were not identifiable from an individual standpoint and were instead

reported in an aggregate form without reference to the individuals from which the data were obtained.

To protect data, a copy of the data was stored in a file on a password protected computer, again, without any identifiers of where the data originated from. For these reasons outlined above, the research was eligible for exempt status due to a high level of autonomy of individual salespeople regarding the decision to participate. The results of the data were reported in an aggregate form and did not identify any individual participants. The IRB's approval was sought prior to the collection of any data (CITI Collaborative Training Initiative, 2016). Based on the findings from this study, this chapter presents the limitations, recommendations, and conclusions.

Implications

There were several overall implications from this study. It can be implied, based on this study, that the need to use technology in the workplace allows salespeople to adapt their sales presentations to the needs of the customer, but it is expensive (Homburg et al., 2011). It can also be implied from this study that younger salespeople are more likely to possess strong skills related to technology. In addition, it can be implied that the lack of use of technology in selling situations has led to many physicians who are no longer willing to see salespeople who do not tailor sales presentations to the physcians' individual needs (Chressanthis et al., 2014). Another implication is that perhaps employers are focused more on hiring graduates with an on-ground education rather than an online education over being concerned about employees who graduated from a for- or non-profit environment. The reason for the inclusion of this implication is that, in this study, the percentage of for-profit graduates appears to be equal to the percentage in the

population as a whole, and this is not the case for online educated graduates, as they represent roughly 32% of college graduates and only 18.9% of graduates in this study who are from the online environment.

Implication 1. Based on the results of research question one (RQ1), the null hypothesis failed to be rejected and the alternative hypothesis not accepted. The results addressed the study problem by demonstrating that there were no statistically significant differences in sales performance between OG graduates and M-OL-OG educated graduates. This implication was employers in the pharmaceutical sales industry were beginning to hire some graduates based on educational diversity and that these graduates could perform as well as graduates from a traditional environment. Sales results were stronger for the M-OL-OG graduates compared with OG graduates. Since the results were not statistically significant, this implied educational diversity was not a factor in determining how well a pharmaceutical sales representative performed in the field of sales. A related implication was that having taken coursework in the online setting did not have a negative effect on sales representatives overall.

The results also addressed the purpose of the study. The results indicated, while not statistically significant, there was a substantial difference between graduates who have taken courses online versus graduates who took all of their coursework in the on-ground environment, with online graduates having stronger sales results. This implied that perhaps online coursework is actually more rigorous than on-ground coursework. In support of this implication, online graduates have proven ability to work well independently and well-developed cognitive abilities (Sutton, 2014). This indicates a gap

in the research that states online educated graduates do not have the skills employers are seeking (Fogle & Elliott, 2013).

The results aligned with the conceptual framework in that they indicated there may be differences that go beyond simply comparing OG and M-OL-OG graduates in the workplace. The results implied, perhaps with a larger sample size, there may be a statistically significant difference between those graduates from the OG setting versus the M-OL-OG education setting. The implications to practice are such that it appears that the pharmaceutical sales field should have representation of M-OL-OG that is equal to their representation in the general population. The results were expected given the benefits addressed in the literature regarding online graduates.

Implication 2. Based on the results of research question two (RQ2), the null hypothesis failed to be rejected and the alternative hypothesis not accepted. The results addressed the study problem by demonstrating that master's graduates performed better than bachelor's graduates in this study. It can be implied, based on this study, that even though master's graduates perform better than bachelor's graduates, they aren't being hired at the same rate as bachelor's graduates. This may be the case due to the fact that, as grade point average of MBAs increases, the desire for a sales career decreases (Pettijohn & Pettijohn, 2011). Also, having a master's degree led to stronger sales results than having a bachelor's degree. This implied that hiring master's graduates over bachelor's graduates is an effective strategy to increase sales if employers can find enough candidates willing to go into the field of sales. The reason that MBAs are being sought after for these positions is due to new responsibilities such as understanding

buying behavior, gathering information, conducting marketing analyses, developing forecasts, and using technology (Pettijohn & Pettijohn, 2010).

The results were aligned with the literature which stated, since sales positions require the use of technology to increase sales and to collaborate with other members of the sales organization, master's graduates may be at an advantage (Pettijohn & Pettijohn, 2010). The results also implied that having a master's degree with possible work in the medical field along with pharmaceutical sales experience, perhaps with a larger sample size, would lead to statistically significant sales performance versus those salespeople with a bachelor's degree. The implication to practice is such that it can also be implied that Master's level graduates are being hired with the intent of these MBAs to become managers within a short period of time (Murray, 2014). In addition, it can be implied that these graduates are being hired to learn the customers, whether or not they increase sales significantly, so that they become more effective managers. The research, however, has not determined whether an MBA actually provided a competitive advantage in the pharmaceutical sales industry (Iyengar, 2015). This study implied that there may be an advantage to hiring MBAs in the pharmaceutical sales industry. The results were expected given the literature which states that MBAs have stronger critical thinking skills (Iyengar, 2015).

Implication 3. Based on the results of research question three (RQ3), the null hypothesis failed to be rejected and the alternative hypothesis not accepted. It can be implied based on this information that having a high GPA leads to better sales results in the pharmaceutical sales industry despite the fact that the results were not statistically significant. Another implication based on these results is that having a high GPA

developed strong critical thinking skills that allowed salespeople to succeed in pharmaceutical sales due to the ability to reason, plan, solve problems, think abstractly, learn, adapt, process and comprehend complex ideas and information (Kuncel & Hezlett, 2011). In addition, a related implication might be that a high GPA combined with the ability to use technology effectively led to the ability to tailor sales presentations to the individual needs of customers leading to higher sales.

The results aligned with the conceptual framework in that students with an average GPA cannot compete as effectively in pharmaceutical sales based on the results of this study. This aligned with the theory that colleges and universities are potentially educating students who cannot compete as effectively in the college labor market versus their counterparts with higher GPAs (Fogg & Harrington, 2011). Another implication was that having a high GPA meant these graduates used their conscientiousness and critical thinking skills to a higher degree than graduates with an average GPA (Keller & Karau, 2013). The results were expected given the literature that supports a high GPA as being associated with success in the workplace.

Implication 4. Based on the results of research question four (RQ4), the null hypothesis failed to be rejected and the alternative hypothesis was not accepted. It can be implied based on this information that having less than 10 years of experience in the pharmaceutical sales industry leads to better sales results despite the fact that the results were not statistically significant. It can also be implied that younger salespeople who use technology more effectively are at an advantage in today's highly competitive sales environment. In addition, it can be implied that perhaps the cognitive abilities of older salespeople have decreased with age (Klein et al., 2015). This is a controversial claim as

it is documented that cognitive abilities begin to decline at age 29 (Klein et al., 2015). It is more likely that emotional intelligence fills the void when cognitive abilities decline (Harris, Mirabella & Murphy, 2012).

It can be implied based on this claim that it depends on how technical the products are that are being promoted as to whether decreased cognitive abilities will be a factor in decreasing sales. The reason for this claim is that strong people skills are closely related to emotional intelligence (Lask & Shepherd, 2013). It can, therefore, be implied that if people skills sell the product, sales will not decrease with decreased cognitive abilities. Lask and Shepherd (2013) also linked high levels of creativity to emotional intelligence. In many respects, emotional intelligence will likely serve medical sales representatives well due to factors such as its relationship to empathy and self-management (Harris, Mirabella & Murphy, 2012). Based on this data, it can be implied that, while not statistically significant, the disparity in sales results may be somewhat due to decreased cognitive abilities in older salespeople. It can also be implied, however, that older salespeople are put into more challenging roles in the sales industry due to their seniority, and that is the reason sales are lower. The results were expected due to the literature which states that there is a short term gain in sales results due to sales training at colleges.

Recommendations

Two sets of recommendations are offered based on the findings, limitations, delimitations, and implication from this study (practical recommendations and methodological recommendations).

Practical recommendations. Employers in the pharmaceutical sales industry should hire salespeople from the aggregate groups noted in this study at the same level that they hire salespeople with a higher GPA or a higher level of education to determine if there is really evidence of a high level of performance of these groups in the pharmaceutical sales industry. Employers should also hire a greater number of employees who have participated in a mixed or all-online education program to find out if the trend that was demonstrated in this study is replicated in practice. In addition, employers should encourage their sales employees to use technology to keep accurate sales records and to collaborate with other members of the sales organization to increase sales. The reason for this recommendation is that an increasing number of physicians and healthcare providers in general are no longer willing to see pharmaceutical salespeople for in-person visits. The reason for this is likely due to the fact that salespeople who do not keep accurate records of sales calls are not likely to tailor sales presentations to the individual needs of their customers.

Methodological recommendations. Future research regarding the comparison of OG and M-OL-OG educated graduates' performance in the pharmaceutical sales field is recommended. Education of online educated graduates is evolving to the point at which there should not be a difference in performance in the workplace, especially when comparing online educated graduates to on-ground graduates. It is also recommended that the aggregate groups which did not have enough respondents to adequately study their performance including those salespeople from the associate's level of education and those salespeople with a 2.67-1.68 GPA should be part of future research. The reason for

this recommendation was due to the high level of performance demonstrated by these small groups of study participants.

Future research should be conducted using quota sampling if it is the goal to compare for- and non-profit educated graduates so that they can be adequately compared. Qualtrics stated there was a large cohort of for-profit educated graduates working in the pharmaceutical sales industry that can be accessed for future research using their services and their database. It is recommended that researchers use a service such as Qualtrics in order to access an adequate number of graduates for future research. It is also recommended that future researchers attend medical education conferences as a way of reaching potential survey respondents as well.

Conclusions

The goal of this study was to compare what is in the literature as it relates to the quality of education from M-OL-OG versus OG educated graduates with actual sales results from pharmaceutical sales representatives. The study focused on determining whether there was a difference in sales performance based on the type of education that respondents received. There were limitations to this study that included who could participate based on the limitations of the United States as the geographical region, the small sample size, and the amount of time the study was available to potential participants. Results indicated there were not significant differences in pharmaceutical sales performance based on school type, GPA, and level of education, and years of service.

Based on these results, implications and recommendations, future research might include quota sampling so that it can be determined if for-profit educated graduates

perform the same in the workplace as non-profit educated graduates. Additional research should also include a larger sample size and members of the associate's level education group as well as those participants in the 2.67-1.68 GPA group to determine if these groups perform better than other members of their respective independent variables.

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Appendices

Appendix A: Recruitment Letter/Video Script

To:

From:

Subject:

My name is Karla Kassey, I am a doctoral candidate at Northcentral University, located in San Diego, California. I am doing research to compare what is known in the literature about the quality of education from for-profit educated graduates versus non-profit educated graduates as it relates to the quality of education based on the actual sales results of pharmaceutical sales representatives.

I got your email address from *Exact Data,* and industry database. I hope to recruit 210 individuals from the pharmaceutical sales industry. The activity you will take part in is the finishing of an online survey via Survey Monkey. The activity will take less than 2 minutes to complete. If you are working at this time as a pharmaceutical sales representative, you can be in this study.

As a reason to do the study, all sales reps that send the researcher an email with their email address will be able to take part in the drawing to win one of 30 $10 gift cards, regardless of completing the study or not. These gift cards will be from a popular restaurant/coffee shop (Panera Bread and Starbucks) or discount department store (Target and Wal-Mart).

Appendix B: Request Letter for Site Permission

My name is Karla Kassey, I am a doctoral candidate at Northcentral University, located in San Diego, California. I am doing research to compare what is known in the literature about the quality of education from for-profit educated graduates versus non-profit educated graduates as it relates to the quality of education based on actual sales results of pharmaceutical sales representatives.

I would like to stand outside on the public sidewalk and recruit potential survey respondents for my study. According to the IRB at Northcentral University, I need a letter of permission from you on your letterhead or through an official email account stating that it will be alright for me to participate in this activity between the hours of 9:00 A.M. – 5:00 P.M. Monday through Friday when the medical buildings in your city are open. I am interested in making contact with pharmaceutical sales representatives to whom I can pass out a recruitment flyer and a copy of a survey to be mailed back to me upon completion.

Appendix C: Online Survey

Directions: Please provide one answer to each of the questions below

DEMOGRAPHICS

Gender

- Male
- Female
- Prefer not to say

Age

- 18-25
- 26-30
- 31-35

- 36-40
- 41-45
- 46-50
- 51-55
- 56-60
- 60-65
- Prefer not to say

Residency location within the United States (Provide name of state only—eg. FL or NY)

_____

_____

Survey Questions

1. **Please indicate the highest degree awarded to you by choosing one of the following:**

- **Associate's**
- **Bachelor's**
- **Master's**
- **Doctorate**
- **Other (Please specify)**

  _____
- **Prefer not to say**

2. **Please indicate the school that you attended for the highest degree awarded to you (eg. Boise State, for example)**

_____

_____

3. **Please indicate your GPA based on the range below that best fits your profile**

- **4.0-3.34**
- **3.33-2.68**
- **2.67-1.68**
- **1.67-.68**
- **Prefer not to say**

4. **Please indicate your years of service in the pharmaceutical sales industry**

- **< 1 year**
- **1-3 years**
- **3-5 years**
- **5-7 years**
- **7-10 years**
- **10+ years**
- **Prefer not to say**

5. **In comparing sales in your sales territory from last year to this year at this point in time, please indicate the + or – percentage change in sales for this**

year versus last year. (For example, if you made $1,000 in sales last year as of July and $1,500 in sales this year as of July, you would report a +50% increase in sales in the space below)

_____%_____

6. **Indicate if you attended an all-online program at your college or university**
   - o **Yes**
   - o **No**
   - o **Prefer not to say**

7. **Indicate if you attended a program where you took only some of your classes online at your college or university**
   - o **Yes**
   - o **No**
   - o **Prefer not to say**

THANK YOU for your willingness to take part in this study

Appendix D: *Demographic Characteristics of Participants (N =94)*

Table 5

Demographic Characteristics of Participants (N =94)

Characteristic	*n*	%
Gender		
Male	26	27.66
Female	39	41.49
Unknown	29	30.85
Total	94	100
Age at time of survey		
18 - 25	0	0
26 -30	3	3.19
31 - 35	7	7.45
36 -40	9	9.57
41 -45	15	15.96
46 -50	7	7.45
51-55	7	7.45
56 -60	14	14.89
60 -65	6	6.38
Unknown	26	27.66
Total	94	100

State of Residency at time of survey		
CA	8	8.52
KS	3	3.19
MO	3	3.19
NH	1	1.06
AL	3	3.19
NY	8	8.52
PA	3	3.19
FL	3	3.19
OH	3	3.19
MI	2	2.13
IN	3	3.19
TX	6	6.38
WI	1	1.06
AZ	6	6.38
TN	2	2.13
GA	4	4.26
NE	1	1.06
NC	4	4.26
UT	1	1.06
LA	1	1.06
KY	1	1.06
WA	1	1.06
MA	1	1.06
OK	1	1.06
CT	1	1.06
Unknown	23	24.47
Total	94	100

Degree type		
Associate's	3	3.19
Bachelor's	55	58.51
Master's	32	34.04
Doctorate	1	1.06
Unknown	3	3.19
Total	94	100

School type		
On-ground	76	80.85
Mixed online, on-ground	17	18.09
Unknown University	1	1.06
Total	94	100

GPA		
4.0 - 3.34	51	54.26
3.33 -2.68	38	40.43
2.67 -1.68	4	4.26
1.67 - .68	0	0
Unknown GPA	1	1.06
Total	94	100

Years of service		
10 + years	65	69.15
< 10 years	26	27.66
Unknown years of service	3	3.19
Total	94	100

Sales results by percent		
90.00% to 99.99%	0	0
80.00% to 89.99%	0	0
70.00% to 79.99%	4	4.26
60.00% to 69.99%	1	1.06
50.00% to 59.99%	4	4.26
40.00% to 49.99%	2	2.13
30.00% to 39.99%	5	5.32
20.00% to 29.99%	17	18.09
10.00% to 19.99%	12	12.77
0.00% to 9.99%	26	27.66
0.00% to -9.99%	6	6.38
-10.00% to -19.99%	2	2.13
-20.00% to -29.99%	7	7.45
-30.00% to -39.99%	1	1.06
-40.00% to -49.99%	1	1.06
-50.00% to -59.99%	2	2.13
-60.00% to -69.99%	0	0
-70.00% to -79.99%	0	0
-80.00% to -89.99%	2	2.13
-90.00% to -99.99%	1	1.06
Total	94	100