CORRELATION STUDY OF ADULT EDUCATORS' FACILITATION EXPERIENCE, PROFESSIONAL/ACADEMIC DISCIPLINE, AND ANDRAGOGY PRACTICES

by

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ABSTRACT

Use of Dr. Malcom Knowles' andragogy theory amongst professionals who are responsible for educating or training other adults was researched in this study. The study provided a unique perspective that did not focus on a single industry or job profession. The primary research question asked if there was any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that adult educators' teach to the adult educators' use of andragogy practices while facilitating adult educators' knowledge transfer and exchange sessions. Study results may provide business leaders with a direction for developing more effective customized training programs for organizational trainers and adult educators, potentially producing a higher return on investment. The researcher surveyed 393 adult educators through the use of social networking and a university list-server using Dr. Knowles' Personal Adult Learning Style Inventory. Data were analyzed for statistical relevance using SPSS software. No relationships between adult educators' adult teaching experiences and adult educators' use of andragogy practices when facilitating the adult educators' knowledge transfer and exchange sessions, regardless of the educators' professional/academic discipline were reflected in the findings. Study results imply that andragogy skills do not naturally improve with teaching experience, andragogy training needs to be continuous, and that there seems to be no profession/academic discipline that is more or less predisposed to having adult educators that use andragogic methodologies when teaching, educating, or training adults.

DEDICATION

I would like to dedicate this dissertation to my beloved family. First and foremost, to my wonderful wife, Alina, who was the wind beneath my wings every time storm clouds appeared or the typhoon hit home. She gave me the strength to always carry on. Secondly, to my children, Catelyn and William, who learned to be uncharacteristically quiet while "Daddy is working on his dissertation". Thirdly, to Irina, Mark, Maya, and Larisa, who kept lovingly bothering me throughout the last four years with their inquisitive questions like "are you done yet?" and "when will you be finished?" Finally, to the rest of my family, present and departed, who have never given up their faith in me: I love you all! I could not have done it without your unending love and unnerving support.

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I thank you all from the bottom of my heart!

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Introduction

The focal point of this study was to research the use of andragogy theory amongst professionals who are responsible to educate or train other adults. Though there are numerous published articles and dissertations regarding andragogy theory, its effectiveness, its limitations, and its use in various settings (Binsfeld, 2012; Birzer, 2003, 2004; Conaway, 2009; Geber, 1988; Hatcher & Cutler-White, 2009; Kolb, 1981; Stephen, 2012; Williams, 2005), this study built upon, and added to, the current wealth of knowledge by finding out if there is any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that adult educators' teach to the adult educators' use of andragogy practices while facilitating adult educators' knowledge transfer and exchange sessions. The purposefully broad approach to the sampling frame provided a unique perspective that did not focus on a single industry or job profession. Since the research focused solely on the andragogic teaching behaviors of the professional educators of adults, the setting within which the knowledge transfer and exchange sessions occur (i.e. corporate as opposed to higher education), or the purpose for which the knowledge transfer and exchange sessions occur (i.e. corporate training as opposed to higher education certification), becomes inconsequential for this particular study.

All successful organizations strive to continuously maximize the productivity of the organization's personnel and nonhuman assets, improve quality of the organization's product and/or service, and to offer the highest rate of returns to the organization's stakeholders. Often times, the organizational success is in the hands of its employees. As Sun (Tzu, 2009) famously noted in his book The Art of War, proper and substantial training is essential in creating an

organization that can overcome many obstacles, and become a force that is to be respected and avoided by all adversaries.

Effectively training employees is a managerial and leadership challenge faced by many organizations (Armstrong-Stassen & Templer, 2005). However, developing employees whose job responsibility includes educating other adults, whether those adults are the employees of the organization or the consumers of the organization's products and/or services, is a leadership challenge of a unique nature. This unique type of employee, whose job responsibility is primarily to educate other adults, is the primary focal point of the research study.

If viewed from a wide, organizational, perspective, institutions of higher learning share many of the same core goals as any other for-profit or nonprofit organization (Cyert, 1981). However, compared to organizations in other industries, institutions of higher learning employ a disproportionately large percentage of employees whose full-time or part-time job is primarily to educate or train adults (American Intercontinental University, 2013; Ashford University, 2013; "Higher education," 2013; Kinslow, 2011; Spigelmyer, 2011). For this reason, the research study is arguably more valuable for the higher education industry than for any other industry. Yet, the research study applies to any organization that requires a specific set of employees to train/educate other adults, regardless whether those adults can be classified as employees, customers, clients, or students.

For the purpose of continuity and clarity, all faculty members who consider their work at the institution of higher learning as faculty members' primary form of employment, and all organizational trainers who are employed solely and directly by the organization whose employees organizational trainer trains shall be commonly referred to in the paper as internal adult educators; while all adjunct faculty members and outsourced organizational trainers shall

be commonly referred to as external adult educators. Combined as a group, all educators of adults will simply be referred to as adult educators. Also, all trainings or the process of teaching classes shall be referred to as knowledge transfer and exchange sessions.

Often times, adult educators are chosen for teaching positions based on the fact that the adult educators are subject matter specialists and have demonstrated basic abilities to teach the adult educators' subject matter (Bergmann, 2011; Buyok, 2008; "Higher education," 2013; Minter, 2009; Moreillon, 2003). Being a subject matter expert that teaches adults may create a false belief that the subject matter expert has also mastered the knowledge of effective adult teaching methodologies, also referred to as andragogy ("Andragogy," 2006; Birzer, 2004; Knowles, 2005). Though various individual parts of the problem and its offshoots have been researched to some extent (Beverly Geber, 1988; Birzer, 2004; Forrest III & Peterson, 2006; Gigerenzer, 2004; Knowles, 2005; Kolb, 1981; Tough & Knowles, 1985), the author was unable to find published research to show if there is any correlation between an adult educator's teaching experience, the professional/academic discipline that the adult educator teaches, and the adult educator's use of andragogy methods when educating/training adults. This is a significant leadership/management/human resource development problem. It has been noted that other authors have studied andragogy use within the fields of adult education, as well as employee development, in various fields and settings (Binsfeld, 2012; Conaway, 2009; Stephen, 2012; Williams, 2005). However, all reviewed studies were different from this study in the respect that none of the authors attempted to answer whether there is any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that the adult educators teach to the adult educators use of andragogy practices while facilitating adult educators' knowledge transfer and exchange sessions.

With organizations spending over $200 billion, as of 2013, on employee training, with roughly 46% of that money being spent on external organizational trainers/educators (Bresin, 2014; Harward, 2014), the need for the trainers/educators to be effective in transferring knowledge to adult learners cannot be undervalued. Additionally, the for-profit adult education industry, which relies on adult educators to teach its enrolled students, is estimated to be over $30 billion (Bloomberg News, 2014; Hanford, 2014). These market numbers do not include the nonprofit educational institutions of higher learning, whose market valuation is difficult to fully assess due to its members' nonprofit statuses, which also rely on internal and external adult educators. By having a clearer understanding of the actual training needs of adult educators, human resource leaders can develop specialized training for the sole purpose of making adult educators be more effective as educators of adults.

Definition of Terms

Throughout the entirety of this study, the listed terms shall have the following meaning:

1. Adjunct faculty: a part-time faculty member (DiStefano, Rudestam, Silverman, & Sage Publications, 2007; Oyster, Stange, & Sloan, 2011). An adjunct faculty is a specialist in his or her field, and is currently working full-time in that field (Oyster et al., 2011). Adjunct faculty are those faculty members who are appointed on a course-by-course basis (Kinslow, 2011). For the purpose of the research, no distinction in definition will be given to external adult educators who teach primarily for a living at various institutions versus external adult educators who only teach sporadically at one school.

2. Adult educator: Someone who practices the profession of facilitating the learning of adults by applying the principles and methodologies of andragogy (Knowles, 2005; Kolb, 1981).
3. Andragogy: a learning theory based on a humanistic learner-centered curriculum development and enactment that was popularized by Malcolm Knowles within the field of adult education (Knowles, 2005; Sandlin, 2010).
4. Facilitation skills: an educators' ability to transfer personal and professional content knowledge to the adult learners in the on-ground, on-campus class using various methods, tools, and classroom technologies. Facilitation consists of communicative, monitoring, and meta functions (DiStefano et al., 2007, sec. Facilitation).
5. Faculty member: an adult educator working at an institution of higher learning as an educator of adults.
6. Full-time faculty: a faculty member who works full-time in an institution of higher learning as a teaching faculty and/or researcher ("Full-Time Faculty," 2013; Kinslow, 2011).
7. Higher education: "education beyond the secondary level; especially **:** education provided by a college or university" ("Higher education," 2013)
8. Institutions of higher learning: An accredited or pre-accredited public, private, or nonprofit organization, which legally provides credit towards the attainment of a 2-year, bachelor's, or graduate degree (University of Oklahoma, 2013).

9. Knowledge transfer and exchange sessions: an interactive process involving the interchange of knowledge between information user, or the learner, and the information provider, or the educator (Mitton & Adair, 2007).
10. Professional Development: a formal or informal practice that intends to develop the professional skills or expertise of employees without general learning being the express objective; also sometimes referred to as Continuing Professional Development or CPD in the literature (Collin, Van der Heijden, & Lewis, 2012).

Background of the Problem

Organizational spending on employee training is estimated to be over $200 billion as of 2013, with roughly 46% of that money being spent on external organizational trainers and educators (Bresin, 2014; Harward, 2014). Additionally, the for-profit college and university industry is estimated to be over $30 billion (Bloomberg News, 2014; Hanford, 2014). These market numbers do not include the nonprofit educational institutions of higher learning, whose market valuation is difficult to fully assess due to its members' nonprofit statuses.

As a mentor for new faculty, coach for veteran faculty, and a member of the Faculty Development Committee for a major North American university, as well as a corporate trainer for a human resources development company, the researcher receives on a regular basis adult learner and human resource administrators' complaints regarding adult educators' teaching or facilitation performance, and employee and manager complaints regarding the ineffectiveness of organizational trainers. Such problems with internal and external adult educators are not new, and many have been previously noted and studied in various research (Baxter & Jack, 2008; Buyok, 2008; Galbraith, 1990; Whitesell, 2006). Just as an example, one of the regularly cited reasons for the knowledge transfer problems within higher education industry is that the external

adult educators are normally hired for adult educators' professional knowledge, and not for adult educators' teaching or the class facilitation skills (Buyok, 2008; Galbraith, 1990). Problems with organizational trainers and adult educators ineffectiveness has also been thoroughly studied and published (Felder, Brent, & Prince, 2011; Van Wynen, 2001; Yi, 2005).

Like most organizations, many of the institutions of higher learning mandate some type of new employee training (Minter, 2009). However, after a thorough literature review, the researcher was unable to find a single published study that raises the question if adult educators, regardless of adult educators' industry or title, of different disciplines and adult-teaching experience actually would benefit from having different breadth of andragogy skills training prior to being allowed to teach adults.

The researcher could also not find in the literature a name of a single institution of higher learning that requires continual andragogy training. Though some of the institutions of higher learning did require additional annual continuing education training from the adult educators, the training was usually discipline-content related (American Intercontinental University, 2013; Ashford University, 2013; DeVry University, 2013; Minter, 2009; University of Phoenix, 2011). Through further research, the researcher found that the continuing education requirements varied greatly from institution to institution (American Intercontinental University, 2013; Ashford University, 2013; DeVry University, 2013; Minter, 2009; University of Phoenix, 2011). A substantial review of the literature showed that many universities and colleges follow a similar policy of allowing external adult educators to continue to teach without additional andragogy training as long as the external adult educators teach at least one class per calendar year (Caprio, Warasila, Cheatwood, Costa, & Dubowsky, 1998; Gerhart, 2004; Kucsera & Svinicki, 2010;

Moreillon, 2003; J. P. Murray, 2002; Richardson, 1992; Strom-Gottfried & Dunlap, 2004; Whitesell, 2006).

Statement of the Problem

In general, the process of educating adults, regardless whether those adults are employees or customers, occurs in all organizations (Birzer, 2003; Butterworth, 1988; Drucker, 1992; Kessels & Poell, 2004). Organizations, for-profit and nonprofit alike, rely on large numbers of adult educators, full-time and part-time, to educate adult employees, students, and/or clients on topics ranging from business to education to health science (Bresin, 2014; Harward, 2014; Minter, 2009; Morton, 2012; National Center for Education Statistics, 2011; van Dellen, 2009). From the institutions of higher learning human resources' perspective, the adult educators represent a huge investment for the institution (Gaillard-Kenney, 2006; Plumlee, Kachelmeier, Madeo, Pratt, & Krull, 2006; Schneider, 2004; Wyles, 1998). In fact, external adult educators represented almost 43.7% of all teaching faculty members in institutions of higher learning across the U.S. (National Center for Education Statistics, 2011). Organizations have spent over $200 billion, as of 2013, on employee training (Bresin, 2014; Harward, 2014). The need for the trainers/educators to be effective in transferring knowledge to adult learners, and the need for resources that are spent on employee development be spent in an effective manner, cannot be understated.

The problem is that without knowing if there is any association between the adult educators' adult-teaching experiences and/or the professional/academic discipline those adult educators are teaching to the adult educators' use of andragogy practices during knowledge transfer and exchange sessions, organizations may have an ineffective strategy for training the organization's adult educators that is based on faulty assumptions. This potentially ineffective

training strategy could lead to waste of limited organizational resources and ineffective, or even counterproductive, organizational trainers whose responsibility is to educate adults. Such outcome can be potentially avoided if knowledge attained from this study is used by the organizational leaders.

Statement of the Study's Purpose

The purpose of this quantitative, correlational research study was to test whether the adult educators' adult-teaching experiences and/or the professional/academic discipline those adult educators are teaching correlates to the adult educators' use of andragogy practices during knowledge transfer and exchange sessions. The study tested the existence of the said correlation through surveying of 393 adult educators residing in the United States whose professional responsibility included facilitating knowledge transfer sessions to other adults. The instrumentation used to collect data for this study included (a) Personal Adult Teaching History Inventory questionnaire that was created by the researcher to gain demographic information, and (b) the Personal Adult Learning Style Inventory developed by Knowles (2005) for the purpose of gaining general insight with regard to educators' usage of andragogy principles.

Though, ideally, all adult educators would have filled out the provided survey, in reality, that was not be realistic. Based on statistics software calculations, a confidence level of 95% would be obtained while attaining a confidence interval of 0.05 with a 385 person sample size if the assumption that the general population size is smaller than ten billion adult educators is accurate. The net sample size of 393 persons has exceeded the minimum sample requirement.

Significance of the Study

The importance of this study cannot be understated for any organization or industry (Birzer, 2003; T. D. Cox, 2013; Dirani, 2012; Hoq, Mahmud, & Nahar, 2010; Martin &

Woodside, 2009). It is imperative for modern day businesses that heavily rely on organizational trainers to maximize the effectiveness of the organization's adult educators when it comes to organizational trainer's ability to actually transfer knowledge to the adults (Birzer, 2003; Dirani, 2012; Drucker, 1992). Organizational leaders and managers must have a clear understanding of the training needs of organization's employees who are hired for the sole purpose of educating the core customers of the business or the employees themselves (Bambrick-Santoyo, 2013; Filipe, Silva, Stulting, & Golnik, 2014; Jones & Robinson, 1997; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Ross, 2008). The problem is that in order to create and maintain a nurturing environment within the organization that continuously enhances the adult educators' andragogy skills, the organizational leadership and management teams must know how andragogic the organization's adult educators are, whether specific andragogy training is to be required, and whether that training is to be dependent on the adult educators' teaching experiences in conjunction with the professional/academic discipline that external adult educators teach (Birzer, 2003, 2004; Cranton, 1994; Drew & Woodside, 2009; Hatcher & Cutler-White, 2009; Knowles, 2005; Kolb, 1981; Tough & Knowles, 1985).

This study is particularly vital for the institutions of higher learning industry, as the continual increase in competition from newly formed private and public institutions of higher learning, free course offerings from Massive Open Online Course Organizations (MOOCS) (Vardi, 2012), as well as continual pressures on educational institutions to lower operational costs and tuition fees indicate that modern day college and university education is becoming a commodity (Noah, 2000). From an economist's perspective, the natural progression of the adult education industry becoming a commodity is to be expected (Noah, 2000).

There are significant statistical findings based on collected data from 1992 to 2002 that show that adult learners are becoming less discriminant with their selection when it comes to enrolling in colleges or universities that have a less discriminatory selection process (Doti, 2004). In other words, colleges and universities that do not enjoy the privilege of having more adult learners wanting to enroll into the institution's programs than the particular college or university is able to service must compete within the marketplace where the potential adult learner does not see significant differences between the competing institutions of higher learning (Doti, 2004; Noah, 2000). This is known as having an elastic demand curve (Doti, 2004). Having an elastic demand curve creates pressures on the college and university administration when it comes to being able to effectively charge the necessary tuition fees in order to cover its operational costs (Doti, 2004; Noah, 2000).

In order for an institution of higher learning to be able to have full control over its income generation strategies, it must create an inelastic demand for its educational services (Doti, 2004). This can only occur if new potential adult learners believe that the college or university can provide something of value that other competing colleges or universities cannot. Unlike Ivy League universities, which enjoy the benefits of having an Ivy League reputation and established social networks, lesser-prominent colleges and universities must promote themselves as a superior value to each potential adult learner. It is important to note that the value must be significant in order to overcome the fact that MOOCS offer all of the courses for free (Vardi, 2012). One such value that any university or college can provide to the adult learner is the instructional effectiveness of its faculty when it comes to knowledge transfer between adult educator and the adult learners.

As of present, there is a significant quantity of research published on external adult educators' performance issues in community colleges and online universities (Gaillard-Kenney, 2006; Gerhart, 2004; Morton, 2012; Schneider, 2004; Strom-Gottfried & Dunlap, 2004; Wyles, 1998). The researcher also found limited studies on the topic of the importance of adult educators' use of andragogy practices within institutions of higher learning. However, the researcher was unable to find research with regards to adult trainers' actual systemic use of andragogy practices, within either institutions of higher learning or other organizational settings, for the purpose of training or educating adults, which indicates a significant gap in the literature that will be addressed by this study.

The knowledge gained by this study can be used by all organizations that rely on educators of adults to transfer knowledge to other employees, adult students, or adult customers. For the benefit of the higher education industry, the question can be reworded to ask if the standardized andragogy training for all external or internal adult educators is sufficient? Or if the faculty andragogy training should be customized depending on the academic discipline that the adult educators are going to teach and/or adult educators' prior teaching experience? The study also shows whether the actual professional/academic discipline that the adult educators teach in actually affects adult educators' internalization of andragogy skills.

Significance of the Study to Leadership

Resulting knowledge provides business leaders with a direction for developing more effective customized training programs for the purpose of developing organizations current or future trainers and adult educators, which could potentially produce a higher return on investment for the institution. The instrumentation used in the study can be used for any type of business that relies on educators or trainers to educate or train adults.

At the same time, for all of the institutions of higher learning, this study provides urgently needed insight into the problem of effective faculty training (Buyok, 2008; Chan, 2010; Kucsera & Svinicki, 2010; Minter, 2009; Moreillon, 2003; Tough & Knowles, 1985). This study initiates a dialogue on what kind of training can improve adult educators' performance at facilitating classes at an institutions of higher learning, regardless if these institutions are for-profit or nonprofit, public or private. This is very important for the industry because at the present, the current higher education industry is under extreme economic pressure (Avery & Turner, 2012; Bloomberg News, 2014; Hanford, 2014). The corporate leaders and local managers at various institutions of higher learning are being squeezed by what seems as contradictory forces. There is a lot of political and consumer pressure to lower the cost of college and university education, especially now that outstanding adult learner loans exceed $1 trillion (Avery & Turner, 2012).

The cost of employee training, as well as the benefits of successful employee training programs, has been well documented throughout the last century (Bedinham, 1998; Clements & Josiam, 1995; Hyounae Min, Vincent P. Magnini, & Manisha Singal, 2013; Schmuckler, 1999). There is significant data that shows that companies which deploy effective training programs benefit dramatically through higher employee productivity, reduction in overhead costs, lower employee turnover rates, and increase in the quality of service produced by the employees (Cascio, 2006). The institutions of higher learning are no different in this matter, as effective faculty andragogy training may produce similar improved quality of service results as other types of employee training programs (T. Johnson, Wisniewski, Kuhlemeyer, Isaacs, & Krzykowski, 2012). A study done at Carroll University, which provided andragogy and technology training

for faculty members who started teaching in online modality, provides additional support for this assumption (T. Johnson et al., 2012).

This study provides a stepping stone in the fields of management, leadership, and employee development; specifically in the subfield of employee training where the employees being trained are the future adult educators themselves. Leaders from all organizations that educate adults, regardless whether those adults are employees or customers, can gain valuable insight from the study (Frey & Overfield, 2002; Kucsera & Svinicki, 2010; Meyer & Marsick, 2003; Minter, 2009; van Dellen, 2009). The study shines a spotlight on an otherwise obscure topic that is vital to organizational success in the modern business world, but has not been thoroughly discussed or analyzed in the past.

Nature of the Study

For this study, a quantitative nonexperimental correlational design was appropriate. The quantitative research paradigm was an appropriate method for this research because the sample was statistically generalizable or representative (Mills, Durepos, & Wiebe, 2010) of the adult educators at various organizations in the United States. Additionally, the data collection results were objectively quantified for the purpose of searching for relationships among the variables, as well as make predictions, and identify possible patterns from the data results (Bordens & Abbott, 2010; Lewis-Beck, Bryman, Liao, & Sage Publications, 2004; Miller & Brewer, 2003).

As with any quantitative research, there is an assumption of researcher's objectivity. To meet the standard of objectivity in research following the quantitative paradigm, the researcher assumed that the research process is deductive, accurate, and reliable in its entirety (Lewis-Beck et al., 2004; Neuman, 2011). The quantitative methodology was deemed best fit for this research

because the particular research problem entailed comparing and analyzing possible relationships across independent variables.

Nonexperimental correlational design is appropriate for this study because a correlational design illustrates statistical relationships across multiple variables while disallowing the researcher from manipulating the independent variables. A correlation design is considered effective to recognize trends between the statistical data (Bordens & Abbott, 2010; Lewis-Beck et al., 2004; Tacq, 2004). Bordens & Abbott (2010) concluded that a correlation design study would be appropriate to enumerate a relationship between independent variables, generalize a finding towards a larger population, and to show a link between the past events or experiences and the present actions or behaviors. It is important to note that a correlational design does not seek to find causal association between the variables.

The study tested the existence of the said correlation through surveying of 393 adult educators residing in the United States. The instrumentation used to collect data for this study included (a) Personal Adult Teaching History Inventory questionnaire that was created by the researcher to gain demographic information (Appendix A), and (b) the Personal Adult Learning Style Inventory (Appendix B) developed by Knowles (2005). Based on the SPSS software's statistical analysis results of the data, the Pearson correlation coefficient, also referred to as Pearson's r, and Spearman's rank correlation coefficient, also known as Spearman's rho, was used to show if there was a dependence between variables (Bobko, 2001; Chen & Popovich, 2002; Salkind, 2006; Vogt, 2005).

Research Questions and Hypotheses

The overarching purpose of this study was to answer the research question: is there any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that adult educators' teach in to the adult educators' use of andragogy practices when facilitating the adult educators' knowledge transfer and exchange sessions?

The related hypotheses and matching research questions would be:

H_o1: The adult educators' adult teaching experience does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

H_a1: The adult educators' adult teaching experience does relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

RQ1: Does the adult educators' adult teaching experience relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions?

H_o2: The adult educators' professional/academic discipline that the adult educators teach in does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

H_a2: The adult educators' professional/academic discipline that adult educators teach in does relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

RQ2: Does the adult educators' professional/academic discipline that adult educators teach in relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions?

H_o3: The adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

H_a3: The adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

RQ3: Does the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions?

Theoretical Framework

The theoretical underpinning of the research study was based on the work of Dr. Malcolm Sheppard Knowles on the study of andragogy. In the 1970s, Dr. Knowles introduced the theory of andragogy for the purpose of differentiating the learning styles of adults versus children (Knowles, 2005; Smith, 2002). There are six assumptions that were offered by Dr. Knowles in regards to andragogy (Knowles, 2005). Those assumptions were that unlike children, adults are self-directed or independent learners who tend to rely on personal experience

as a resource for learning (Knowles, 2005). Unlike children, adults are continuously ready to learn that what the adult believes will be valuable to the adult in the immediate future, versus some distant future (Knowles, 2005). Lastly, adults, unlike children, are internally motivated to learn that what is believed to be valuable; and, therefore, adults need to know why what the adult is learning is valuable (Chan, 2010; Evelyn, 2011; Knowles, 2005). The theoretical framework is appropriate because theories of andragogy are transferable to all types of organizational training, as long as the people being trained are adults.

Assumptions

The researcher assumed that the adult educators that are being studied are ethical professionals. The researcher also assumed that the adult educators answered truthfully and accurately to the survey questions administered by the researcher. The researcher assumed that the participants understood the questions that were being asked in the survey, and that the participants did not feel coerced into answering the questions in any particular way. Finally, the researcher assumed that the results from the study may not be generalizable for some specific population groups, as those groups may be unique in individual qualities or demographics that are not considered by the research.

Scope, Limitations, Delimitations, and Generalizability

As with all studies, this study offers only a snapshot view of the andragogy use by the adult educators who chose to take the survey. Because the survey was open to all adult educators, there was no telling which demographic groups will be mostly represented by the survey results. The adult educators' pool that was relied upon in the current study may not have been a true representative of all adult educators. Therefore, the results may not be generalizable beyond the scope of the study.

Additionally, this study did not question the effectiveness of training in general, or the ability of adult educators to learn and retain andragogy skills. Child educators, child counselors, and other child development professionals were excluded from the study, unless the child educators also professionally educate adults in parallel to the child educators' child development responsibilities. In other words, school teachers would not be qualified for the study unless the teachers also work as adult educators in some professional capacity. The researcher also acknowledges that various outside factors like general physical and mental well-being of the adult educators taking the survey, at the time the survey is administered, as well as other outside stressors, may have affected the participants' opinions to the questions provided.

Slavin & Smith (2009) stated that one limitation that researcher should be aware of is regarding research that deals with education and relies on sample sizes smaller than 250. Slavin & Smith (2009) state that systematic reviews of research that had sample sizes smaller than 250 tended to have a larger positive effect than studies with larger sample size. As this study relied on a sample size of 393, this potential problem has been avoided.

Correlation studies, in general, limit the ability to make strong inferences regarding the outcome of the data due to the fact that the researcher has no control over some of the data collection processes, including antecedent of the studied phenomenon (Chen & Popovich, 2002; B. Johnson & Christensen, 2012; Salkind, 2006; Vogt, 2005). The researcher was aware of this limitation, and took it into consideration when analyzing the data.

The lack of the ability to truly randomly assign participants to the study is also considered a limitation to the ability to make strong inferences based on the outcome of the data (Chen & Popovich, 2002; B. Johnson & Christensen, 2012; Salkind, 2006; Vogt, 2005). Utilizing social media and university list-server created the most random sample possible by

having the researcher have no control over which participants took the survey, what professional/academic disciplines the participants represented, or how many years of experience the participant had teaching adults. However, the methods of promoting the survey to participants created an inadvertent commonality among the participants, such as having a LinkedIn account or a working email. The researcher was aware of this potential limitation, but had no recourse for this other than acknowledging the fact that the shared commonalities made the sample not truly random.

Chapter Summary

Adult educators can be found in practically every organization that employs adult employees. As Chapter 2 shows, adult educators' importance to organizational success has been well-documented. Though there are numerous published research studies that show the importance of adult education to organizational success and the importance of understanding andragogy methodologies to successfully teaching adults, there are no studies that attempt to find out if the use of andragogy by adult educators is correlated to either the educator's experience as an adult educator or to profession/academic discipline that the adult educator teaches. This study partially fills the gap in the research.

Chapter 2

Literature Review

Literature Review Approach

To complete the dissertational literature review, the researcher relied on numerous academic databases that were available through the university library. The researcher primarily relied on the following library research databases to find articles for the purpose of secondary information: ABI/INFORM, Emerald, Google Scholar, Journal of Leadership Studies, JSTOR, National Center for Education Statistics, ProQuest, ProQuest Dissertations and Theses, SAGE Journals, SAGE Knowledge, and SAGE Research Methods Online. The keywords used for the research included, but were not limited to: adult education, andragogy, management, human resource development, employee training development, faculty development, training, organizational trainers, corporate trainers, institutions of higher learning, statistics, quantitative, and leadership. The researcher tried to primarily resort to articles and books that were published within the last five years, however, articles and books that were deemed as highly relevant or historically significant but were published more than five years ago were also used. After an extensive research, 203 articles or sources were thoroughly analyzed. Of the 203 articles or sources, 95 were cited in the literature review chapter. A total of 147 sources were used in this paper.

Literature Review Overview

The organizational spending on employee training is estimated to be over $200 billion as of 2013, with roughly 46% of that money being spent on external organizational trainers and educators (Bresin, 2014; Harward, 2014). Additionally, the for-profit college and university industry is estimated to be over $30 billion (Bloomberg News, 2014; Hanford, 2014). These

market numbers do not include the nonprofit educational institutions of higher learning, whose market valuation is difficult to fully assess due to its members' nonprofit statuses.

The topic of training or educating adults has been discussed in numerous publications (Armstrong-Stassen & Templer, 2005; Bergmann, 2011; Beverly Geber, 1988; Birzer, 2004; Chan, 2010; Drew & Woodside, 2009; Frey & Overfield, 2002; Gigerenzer, 2004; Knowles, 2005; Minter, 2009; Moreillon, 2003; J. P. Murray, 2002; Sandlin, 2010; Tough & Knowles, 1985). The published research tends to separate organizational trainers from educators working at institutions of higher learning (Harward, 2014; Mitton & Adair, 2007; Moreillon, 2003; Swartz, Swartz, & Liang, 2007). The researcher could not find any articles to explain the reason for the separation other than due to the limitation of the scope chosen by the authors of the previously published research. Still, based on the literature review, the challenges of training adults whose responsibility is to educate other adults, whether in a corporate or university setting, is quite similar (Chan, 2010; Katz, 2010; Poell, Krogt, Vermulst, Harris, & Simons, 2006; Richardson, 1992; van Dellen, 2009; Yi, 2005).

In regards to corporate training, research shows that employees of various professional disciplines have different learning style preferences (Poell et al., 2006; Wenham & Alie, 1992). The various authors commonly suggest that corporate educators should not assume that all employees learn the same way. These findings are also corroborated in various adult education studies and theories (Birzer, 2003; Forrest III & Peterson, 2006; Knowles, 2005; Yi, 2005).

The use of andragogy theory and the importance of an effective professional development approach for the sole purpose of professional development of employees, as well as the importance of being able to evaluate the effectiveness of professional development has been researched before (Bambrick-Santoyo, 2013; Kessels & Poell, 2004; Martin & Woodside, 2009;

Michael L. Birzer, 2003; Penuel, Fishman, Yamaguchi, & Gallagher, 2007). One study of twenty-eight professional development providers, who have trained over 400 adults in the field of education, has shown a correlation between the perception of the effectiveness of the professional development by the adult learners to the adult learners' ability to incorporate and implement the knowledge that the learners have received (Penuel et al., 2007). Penuel et al. (2007) findings corresponded with andragogy theory as postulated by Knowles (2005).

A significant challenge to professional development in regards to leadership training within organizations is raised by various authors (Kessels & Poell, 2004; Slayton & Mathis, 2010). Slayton & Mathis (2010) found that there is an assumption that good leaders are reflective practitioners and have skills to generate behavioral changes in others, which the researchers referred to as change management. However, Slayton & Mathis (2010) argue, reflective, skillful practitioners often fail to accomplish their goals as leaders because of the leader's inability to permanently change the behaviors of the adult followers to the desired behaviors. The failure is attributed to the inability of the leaders to successfully transfer knowledge to the followers (Slayton & Mathis, 2010). For this reason, the researchers believe that the competency of andragogical knowledge and skills is mandatory for all organizational leaders, as well as any organizational trainer that is tasked with the responsibility of educating leaders and managers (Slayton & Mathis, 2010). This opinion is supported by Knowles (2005) findings.

A more novel approach to andragogy and human resource development is raised by Kessels and Poell (2004). Kessels and Poell (2004) approach andragogy from the social capital theory. The authors argued that andragogy in combination with social capital theory may be a transforming power that turns a traditional workplace environment into a conducive organizational learning environment (Kessels & Poell, 2004). The importance of a conducive

learning environment is that a conducive learning environment helps develop employees not just through classroom education but through hands-on learning and knowledge sharing; and its benefits to the modern day knowledge economy is supported by numerous authors (Birzer, 2003; Dirani, 2012; Fornaciari & Lund Dean, 2014; Kessels & Poell, 2004). As Drucker (1992) hypothesized at the forefront of the modern knowledge economy, traditional economic factors such as financial capital, equipment, labor, and other economic or production resources will be far less valuable than innovation and the ability to share knowledge and passions between the members of the organization or workgroup (Drucker, 1992; Filipe et al., 2014; Kessels & Poell, 2004). Kessels & Poell (2004) state that andragogy skills, when used within the context of social capital, will be crucial in developing the next generation of high performing employees and innovative organizational environments.

The use of andragogy theory and approaches to train organizational employees has been studied in numerous industries (Birzer, 2003; Fornaciari & Lund Dean, 2014; Kessels & Poell, 2004; Martin & Woodside, 2009). The authors of these studies primarily approached their research from a comparison between andragogical approaches to employee training and whatever was the previous approach used by the organizations in the studies (Bambrick-Santoyo, 2013; Birzer, 2003; Filipe et al., 2014; Kessels & Poell, 2004; Martin & Woodside, 2009; Slayton & Mathis, 2010). The authors generally found that training the employees within the andragogical philosophical approach provided better results when measured by individual learners' satisfactions and utilization of the learned materials (Birzer, 2003; Kessels & Poell, 2004; Martin & Woodside, 2009). Additionally, those employees who were not only trained in the andragogical philosophical model framework but also were allowed to train others utilizing the andragogical framework have reported higher rates of success in knowledge transfer between

employees (Fornaciari & Lund Dean, 2014; Kessels & Poell, 2004; Slayton & Mathis, 2010; Taylor & Laros, 2014).

However, though andragogy is considered one of the best known theories in adult education, there are studies that challenge these and other findings regarding the true effectiveness of andragogy within the field of organizational training, as measured by knowledge acquisition between employees (Taylor & Laros, 2014). It is pointed out that the lack of empirical research regarding the effectiveness of andragogy, as well as the complexity in defining what exactly the practice of andragogy is, questions the validity of andragogy as a unifying theory of adult education (Taylor & Laros, 2014). Some of the authors have suggested that other theories, such as transformational learning theory, should be considered as viable substitute for Andragogy theory when it comes to educating organizational employees (Taylor & Laros, 2014). There is a general consensus that unique approaches and best practices to educating adults or training organizational employees should be considered in conjunction with andragogy (Bambrick-Santoyo, 2013; Birzer, 2003; Butterworth, 1988; Fornaciari & Lund Dean, 2014; Penuel et al., 2007; Taylor & Laros, 2014).

The challenges of training or educating adults have been discussed in numerous studies (Felder et al., 2011; Meyer & Marsick, 2003, 2003; Yi, 2005). Meyer & Marsick (2003) noted that educators of adults in any type of organizational setting must make sure that the education aligns with the corporate missions and goals, as well as provide multiple avenues of learning for the adult. This could include e-learning, classroom learning, and hybrid models.

Similar to a college or university setting, a corporate educator has a set of objectives that must be taught. New knowledge must be gained and retained by the learner in order for the training to be considered successful. Additionally, similarly to a classroom in institution of

higher learning, a corporate educator may find that the base knowledge and learning style of the learners in the classroom is quite different from pupil to pupil (Katz, 2010; Meyer & Marsick, 2003; Poell et al., 2006; Wenham & Alie, 1992).

Another striking similarity regarding educators within a corporate environment and institution of higher learning environment is the use of outside specialists to facilitate the actual knowledge transfer and exchange sessions. Harward (2014) estimated that 46% of organizational trainers do not work full-time for the organization whose employees the organizational trainers are training. These corporate educators are often referred to as outsourced trainers. The National Center for Education Statistics (2011) estimates that approximately 50% of all adult educators teaching at institutions of higher learning do not work full-time for those institution. These college or university educators are often referred to as adjunct faculty. Due to the striking similarities in job responsibility, the author shall refer to all organizational trainers/educators and college/university faculty members as adult educators. For the purpose of continuity and clarity, all full-time faculty members and in-house organizational trainers shall be commonly referred to as internal adult educators; while all adjunct faculty and organizational outsourced trainers shall be commonly referred to as external adult educators. The non-descriptive term adult educators shall refer to both, internal and external, groups.

The issue of external adult educators' effectiveness has been raised in a number of published studies. Galbraith and Shedd (1990) had raised a series of unique challenges that employing external adult educators brings to an institution of higher learning. Study authors argued that those external adult educators that do not participate in shared internal organizational developmental activities are inferior to internal adult educators (Galbraith, 1990, p. 8). Buyok (2008, p.4) cites research in the Galbraith and Shedd article that states that external adult

educators showed significant lack of understanding of "curriculum, teaching methodologies, adult learner assessment, teaching and learning styles, and pedagogical theories" (p. 4).

It is noted in the literature that most institutions of higher learning provide numerous opportunities, mandated or voluntary, to external adult educators to improve the adult educators' curriculum development skills, teaching methodologies, and adult learner assessment tactics. Though the importance of such training is discussed heavily throughout the literature, the measurement of the actual usage of andragogy methodologies lacks conclusiveness (Buyok, 2008, p. 5; Whitesell, 2006). Additionally, the author could not find any literature that stated that organizations require outsourced trainers to complete internal organizational training prior to commencement of training of organization's employees.

In order to be able to fully appreciate the problem at hand, it is important to understand the interrelationship between andragogy, the adult educator, and the adult learners. This chapter is subdivided for the purpose of providing clarity on all of these elements and the corresponding interrelationships.

Andragogy and Management

A recent search for the term andragogy in university library databases returned more than 4600 hits. It is needless to say that a lot was already said on this topic. The Encyclopedia of Curriculum Studies defines Andragogy as "a perspective on humanistic learner-centered curriculum development and enactment that was popularized by Malcolm Knowles within the field of adult education" (Sandlin, 2010). The Dictionary of Human Resources and Personnel Management has defined andragogy as "the science of adult learning, that is of teaching adults in an adult way, as opposed to teaching them as if they were children" ("Andragogy," 2006). It

further describes andragogy as a developmental response to the increasing number of adults with availability of time and money that need to be trained or furthered in education.

History of Andragogy

Though Malcolm Knowles is given significant credit to promoting the theory, andragogy as a concept has been around for quite some time. In fact, the term andragogy is reported to have been fully recognized by scholars in the nineteenth century (Forrest III & Peterson, 2006, p. 114; Knowles, 2005; Sandlin, 2010). The topic of how adults learn, and how that learning is different from children, was written about eons prior to Dr. Knowles publication. The Chinese, Hebrew, and Greek philosophers had written about the different approaches that an educator should take when dealing with adults (Knowles, 2005, p. 35). However, it was the American Association of Adult Education, which was founded in 1926, and significantly funded by the Carnegie Corporation of New York, that is given the credit to starting the modern-day adult-as-a-learner movement.

One of the first major published scientific findings in regards to adult learning occurred in 1928, which was when Edward Thorndike started the Adult Learning publication (Knowles, 2005). Thorndike's research primarily tried to prove that adults can in fact learn. This was critical to the adult education model. In his research, Thorndike did not delve into the concept of how adults actually learn; but, at that time, it was sufficed to prove that it was indeed possible to teach adults new information.

Malcolm Knowles believed that the root of andragogy is in its integrative process. He did not give credit for his development of the andragogy theory to just a single field of study. Dr. Knowles went out of his way to give credit to various fields of study, and to many theorists before him. He specifically referenced the important developments in sociology, psychology,

and education, which made the development of his own theory possible (Knowles, 2005; Wilson, 2004).

In the 1970s, Dr. Malcolm Knowles officially introduced his andragogy theory. The theory specifies the differences in how adults and children learn; and why these differences are important to consider when educating adults (Knowles, 2005). Dr. Knowles' post-1984 theory of andragogy consists of six Core Adult Learning Principles; his initial theory only had four Core Adult Learning Principles (Knowles, 2005). Those principles are: learner's need to know, self-concept of the learner, prior experience of the learner, readiness to learn, orientation to learning, and motivation to learn.

Learner's need to know. Based on the work of Tough (as cited in Knowles, 2005), Knowles andragogy theory places significant emphasis on the importance for adult learners to know why the adult students need to learn that what the adults students are learning. Adults, unlike children, have many demands on their mental reserves. Learning new information is taxing on those limited reserves. Therefore, it becomes imperative for the facilitator to explain to the adult learners why the adults need to learn what is being taught to the adults.

Unlike children, it is ineffective to try to force adult learners to memorize information which the adults do not see a direct benefit in. In his paper The Pedagogy of the Oppressed (1970), Paolo Freire (as cited in Knowles, 2005, p. 65) wrote that it is vital to raise the consciousness of the adult learner. In other words, adults need to see not only the broader perspective of the information, but how what the adults are learning actually fits into the greater scheme of the adult's life.

Self-concept of the learner. Based on the works of Karl Jung and other psychologists, psychotherapists, and sociologists, Knowles believed that all adult learners start with the adults

own self-concept (Knowles, 2005, p. 65). The idea behind self-concept is that all adults have a need to feel control of their own life, and are capable of self-direction. Adults wish to feel that others respect their personal self-concept. Adult learners tend to resent and resist in situations where the adults feel that educators or trainers are imposing the trainer's will onto the adult learner (Knowles, 2005, p. 65).

This creates an especially difficult challenge for an educator who is trying to provide new knowledge that may go against the beliefs of the adult learner. Facilitators must work with the adult learner's self-concept and redirect or reeducate that learner in a way that would make the new information more acceptable to the learner. However, it is futile to assume that an educator can force an adult to accept all new information, no matter how accurate is, without the initial self-acceptance by the adult learner (Forrest III & Peterson, 2006; Knowles, 2005; Sandlin, 2010).

Prior experience of learner. Unlike children, adults come into a classroom full of memories of experiences that have molded the adults into the people that the adults are. Some of those experiences are positive in nature, while others are negative. Adults have numerous biases and prejudices that have been learned and formed throughout the adults' lives. The adults also have an abundant supply of memories of cultural mores, which dictate the adults' reactions to stimuli that surrounds the adults (Friedrich, 2004; Gigerenzer, 2004).

It is these prior experiences and memories that will often times dictate how adult learners will respond to new information, and the adult learners' willingness to integrate the new information into the adult learners' current pools of knowledge. At times, adults may not be aware of their own bias or misinformation. All of this potentially creates significant challenges

to an educator of adults, which a teacher of children normally needs not to worry about (Knowles, 2005).

Readiness to learn. The Buddhists have a quote that is often recited. "When the student is ready the teacher will appear" (Wilder, 2013, p. 1) Knowles truly believed in this. His fourth principle stands on the idea of this quote. One cannot teach adults anything before the adult students are ready to learn that what is being taught (Knowles, 2005, p. 67). Knowles urged educators to be aware of the individual adult learners' learning limitations. In a provided example, Knowles (2005) recommends that managers first allow workers to experience the daily demands of a certain job position before trying to train the workers on how to do the job. Workers that have a perspective of what is going to be expected will become willing learners, when compared to workers who have no clue of what is to be expected in the near future.

Orientation to learning. For Knowles, orientation to learning was probably the most important of the six principles. Adults, unlike children, will not accept learning for the purpose of simply learning (Knowles, 2005, p. 67). In other words, every piece of new knowledge that adults are expected to learn must have immediate relevance to the adult's life. The relevance must be direct, and not intrinsic or secondary. Knowles shared an example of how an adult literacy program failed because the words that the enrolled adults were learning to read were not the words the adult would normally be using. Teaching an adult to simply be able to read a book was ineffective. However, when the orientation changed to teaching adults to read signs and other day-to-day objects, the program became extremely successful (Knowles, 2005, p. 68).

Knowles believed that adult educators must orient the individual teaching styles to always be relevant. In another example, Knowles demonstrated how by simply changing the curriculum of an English writing class from first we cover grammar and then we start writing

properly to first start writing and then we will figure out the proper grammar, a 1950s adult writing college course went from being a total failure to a noted success (Knowles, 2005, p. 68).

Motivation. Though the study of motivation for learning is nothing new, unlike children, adults are motivated by external motivators. External motivators are varied and include how one is perceived by others, potential for higher income, a chance for a better job opportunity, and so forth. Tough (as cited in Knowles, 2005) found in his research that negative motivators such as "negative self-concept as a adult learner" (p. 68) can actually block adults from learning. Knowles believed that motivation is very important and that educators should understand the real motivations behind adult learners.

Criticism of Andragogy Theory

For all of its popularity, the andragogy model theory has created significant controversy in the literature regarding adult education. One of such critiques is whether andragogy is a learning theory, a set of assumptions about adult learners, or simply a guide to how to teach adults (Knowles, 2005, p. 1; Sandlin, 2010; Wilson, 2004). Knowles (2005) responded to the critique by defining theory as "a comprehensive, coherent, and internally consistent system of ideas about a set of phenomena" (p. 10). Knowles believed that andragogy is in fact a learning theory since it explains a complex phenomenon, which includes the key components of learning.

Other criticism came from the argument that andragogy is based on the soft sciences of psychology, and not on neurosciences, which have made great strides in the understandings of the human mind and education during the last several decades (Bruer, 1999). There are others who find Knowles' model too simplistic, and argued that it does not explain trauma, genetical makeup, intelligence, or other biological and/or social elements that can relate to an adults ability to learn (Bruer, 1999; Knowles, 2005; Sandlin, 2010; Wilson, 2004). Knowles admits to the

limitations of the theory, and the fact that there is still much research to be completed. He emphasizes the difficulty that researchers are faced with when trying to measure effectiveness of adult education, or the efficacy of those training programs (Knowles, 2005, p. 235). Still, Knowles (2005) contends that though the theory is not perfect, nor is it designed to explain the learning constructs of every adult, it is a working model that has significant research to support its accuracy.

There has been significant criticism to what exactly separates an adult learner from a child learner. Often times, the criticism has been referred to as a false dichotomy (D. S. Murray, 2009, p. 31). Knowles tries to sidestep the argument by offering no direct answer. Based on the literature review, there seems to be no accepted defining line. Knowles argues that there are significant numbers of young adult learners in schools that would benefit more from andragogical model of teaching than from a pedagogical model. He also accepts that not every adult would benefit from the andragogical model of learning, and may find the pedagogical model more effective (Knowles, 2005).

Management and Employee Development

Andragogy has become a mainstay in the management subfield of employee education and development. Numerous specialists in the field of human resources development have adamantly argued that too many organizations rely on the ineffective pedagogical style of teaching when it comes to employee training. These authors argue over the importance of understanding andragogy because it is far more effective as a method of teaching adults than its pedagogical counterpart, in most of the adult learning cases (Forrest III & Peterson, 2006; Geber, 1988). Some authors feel that andragogy in management training is the key to successful development of training programs at all levels of the organization (Birzer, 2003, 2004; Drew &

Woodside, 2009; Hatcher & Cutler-White, 2009). Birzer's et al. (2003, 2004) field work has shown much promise to the application and efficacy of the andragogical methodology in employee training.

External Adult Educators

Adjunct faculty members are one of the more common types of external adult educators. The term adjunct faculty has an evolutionary history. Previously considered as part-time faculty, these external adult educators have become a mainstay in traditional and nontraditional institutions of higher learning (Caprio et al., 1998; Morton, 2012; Pearch & Marutz, 2005). Currently, it is estimated that around half of all faculty members teaching at institutions of higher learning are adjunct faculty (National Center for Education Statistics, 2011). While in community colleges (Caprio et al., 1998) and for-profit universities, adjunct faculty represent the vast majority of the teaching faculty. Unlike adjunct faculty members' full-time counterparts, these external adult educators have not chosen teaching as the primary profession. Most of these external adult educators have full-time jobs elsewhere, and often time do not rely on the income the adjunct faculty members generate from teaching as the sole source of income (Bergmann, 2011; Caprio et al., 1998; Morton, 2012; Pearch & Marutz, 2005).

As institutions of higher learning continually look for ways to lower operating costs while meeting the educator-staffing needs, adjunct faculty have provided an excellent solution (Morton, 2012). By keeping external adult educators as part-time employees, the institutions of higher learning save significant amount of money on benefits and other perks that are usually associated with employing full-time educators. External adult educators also do not expect continual employment, therefore allowing colleges and universities to employ adult educators on an at-will basis, solely based on the at-the-moment staffing needs. The lack of required

commitment on behalf of the institutions of higher learning has major benefits for the institutions, but, at the same time, it creates significant challenges.

Qualifications to Becoming an External Adult Educator in a College or University Setting

The qualifications to being an external adult educator in a college or university setting varies greatly between the various institutions of higher learning and college's or university's respective departments (American Intercontinental University, 2013; Ashford University, 2013; DeVry University, 2013; University of Phoenix, 2011; Walden University, 2010). With many university-level educational programs directly dependent on third-party accreditation, requirements for employment as an external adult educator vary from program to program.

By comparing the external adult educator employment qualification requirements of five competitive for-profit universities in the United States of America that offer accelerated adult-education programs, certain commonalities are apparent. All of the five universities have program-specific requirements. Some programs require that the external adult educators have professional license in good standing, if a license is required in order to practice the profession that the external adult educator is going to be teaching. Additionally, depending on the subject matter, all of the five universities require the external adult educator to have either a graduate degree (American Intercontinental University, 2013; Ashford University, 2013; University of Phoenix, 2011), or a terminal degree (DeVry University, 2013; Walden University, 2010) in that subject matter, from an accredited university.

External adult educators are expected to be specialists in external adult educators' field of specialization. All of the researched universities require external adult educators to have current working knowledge in their field by either holding active employment in adult educators' respective field, or being an active consultant in that field. Prior work experience is mandated by

all universities researched. Additionally, the universities prefer to hire external adult educators with previous university level teaching experience, though none of the universities state a required previous teaching experience as a condition of employment. All five universities require all new external adult educators to complete an in-house training program of some sort prior being allowed to teach (American Intercontinental University, 2013; Ashford University, 2013; DeVry University, 2013; University of Phoenix, 2011; Walden University, 2010).

Benefits Associated with Hiring External Adult Educators

One of the most cited benefits is the cost savings. External adult educators are part-time employees by definition. External adult educators rarely unionize and rarely demand the types of benefits that are normally associated with full-time employee status. When adjusting for benefits and pay increases, (Schneider, 2004, p. 18) estimates that the cost savings is about 300%. In other words, for the price of one internal adult educator, an organization can employ three external adult educators.

Teaching effectiveness is usually an expectation for external adult educators. External adult educators are normally hired for their knowledge in a specific area of expertise and adult educators' ability to educate their adult learners in that area of expertise (Caprio et al., 1998; National Center for Education Statistics, 2011; Schneider, 2004). Since external adult educators are employed on per class or per training basis, external adult educators who do not meet the expectations set by the hiring administrators can be easily replaced with another external adult educator.

Issues Associated with Employing External Adult Educators

There are numerous challenges associated with employing external adult educators in a college or university setting. One of the most commonly referenced issue is that external adult

educators see their job as part-time work; and therefore do not have the necessary involvement in the organization of higher learning (Bergmann, 2011; Gerhart, 2004; Morton, 2012; Pearch & Marutz, 2005; Richardson, 1992). External adult educators may be spending only a few hours a week teaching a class, and therefore may not be aware of all the campus events that are happening outside their class. The external adult educators may also choose to skip meetings, trainings, and other administration-sponsored events due to schedule conflicts or lack of time. The issue can lead to external adult educators not being aware of critical changes in campus policies, procedures, or other critical information (Bergmann, 2011; Gerhart, 2004; Morton, 2012; Pearch & Marutz, 2005; Richardson, 1992). .

External adult educators who are not continuously teaching may choose not to stay in touch with the campus administration until after the external adult educators are assigned a class. The extended absence can lead the external adult educators to have gaps in campus related news updates (Bergmann, 2011; Gerhart, 2004; Morton, 2012; Pearch & Marutz, 2005; Richardson, 1992). Also, extended absence from the classroom can lead the external adult educators to forget prior training, such as andragogy, that adult educators may have received from the college or university (Buyok, 2008; Frey & Overfield, 2002; Spigelmyer, 2011).

In the corporate training, as well as universities and colleges, another noted issue is the lack of consistency between various external adult educators, even when external adult educators are teaching the same subject matter (Gerhart, 2004). Since all external adult educators bring their own knowledge and style to the classroom, and many organizations award academic freedom to external adult educators to teach the perspective course however adult educators see fit within certain guidelines, adult learner adult learners may end up with significantly different learning experiences depending on the adjunct faculty that is teaching the class. Though the lack

of consistency may be remedied through the use of standardized lesson plans, there are no guarantees that the external adult educators will follow through the provided plans (Morton, 2012; Schneider, 2004; Strom-Gottfried & Dunlap, 2004; Wyles, 1998).

Another major issue that kept being raised in the literature review is that external adult educators who are specialists in a specific field of study are not always good at teaching what the external adult educators know (Bergmann, 2011; Caprio et al., 1998; Gerhart, 2004). Though most organizations have some kind of a vetting process of making sure that all potential external adult educators can in fact teach adults, there are no guarantees that this will be the case until the actual external adult educators are evaluated during the actual knowledge transfer and exchange sessions (Bergmann, 2011; Buyok, 2008; Moreillon, 2003).

Expectations Towards Adult Educators

The administration's expectations towards external adult educators are similar in many respects to the expectations towards the internal adult educators (Bergmann, 2011; Hartman, 2009; Katz, 2010; National Center for Education Statistics, 2011; Poell et al., 2006; Schneider, 2004; van Dellen, 2009; Wyles, 1998). However, some differences are noted in the literature.

Like the internal adult educators, external adult educators are expected to teach their subject matter expertise (Nally, 2008; Plumlee et al., 2006; Swartz et al., 2007; Whitesell, 2006; Wyles, 1998). External adult educators are also expected to timely assess adult learner learning through grading and critiquing papers, projects, presentations, and other works produced by the adult learners. The external adult educators are expected to provide feedback that is beneficial to the adult learners. The feedback is expected to provide the adult learners with informative evaluation of what the adult learners have mastered and what the adult learners still need to learn (Duke University, 2013; University of Phoenix, 2011; Walden University, 2010).

All adult educators are expected to be able to teach effectively. All institutions of higher learning that were researched in the paper offer new faculty members some kind of introductory training or orientation; however, the exact content of the training or orientation was not provided. (American Intercontinental University, 2013; Ashford University, 2013; DeVry University, 2013; Duke University, 2013; University of Phoenix, 2011; Walden University, 2010). Strom-Gottfried & Dunlap (2004) offered a model of the type of training that the researchers believe all new external adult educators should complete before being given an actual class to teach. The suggested one-day workshop includes the topics of: curriculum development, teaching strategies, institutional policies and procedures, dealing with challenging classroom situations, and evaluating adult learner performance (Strom-Gottfried & Dunlap, 2004). Whether or not new external adult educators can assimilate the sheer quantity and complexity of the information provided in the one-day workshop has not been evaluated.

Reported Effectiveness of Training-the-Trainer Programs

There is significant amount of published evidence that indicates adult educators training programs are overall beneficial. The methods used to evaluate these adult educators training programs were generally based on: adult educators' self-reported survey or interviews; some sort of adult learner ratings survey; adult learner passing and retention rates; and/or observation by the researcher (Buyok, 2008; Frey & Overfield, 2002; Kucsera & Svinicki, 2010; Moreillon, 2003; Richardson, 1992; Spigelmyer, 2011). Many of the surveys recorded the adult educators' feelings towards the training, as well as whether or not the adult educator found the training valuable.

The overall conclusion in the literature was that the adult educator training was a positive experience. Unfortunately, most evaluations failed to provide any additional useful or relevant

information. With the exception of just one study that followed a group of adult educators for seven years, most of the studies did not follow the adult educators after the completion of the training (Richardson, 1992, pp. 15–18, 1992).

Numerous articles have suggested the kind of training adult educators should receive. The suggested training normally consisted of: policies and procedures, syllabus development, and some type of pedagogy or andragogy theory. The length of this trainings ranged between one day and one week (Buyok, 2008; Frey & Overfield, 2002; Moreillon, 2003; Richardson, 1992; Spigelmyer, 2011).

It is fair to state that any type of adult educator training would be beneficial when compared to no training at all. Though there were numerous published comparative studies on the topic of general training methodologies (Buyok, 2008; Frey & Overfield, 2002; Knowles, 2005; Moreillon, 2003; Richardson, 1992; Spigelmyer, 2011), there has been no published comparative research in regards to actual andragogy use by adult educators who completed the respective training programs.

Organizational Training

The field of organizational training has been studied extensively over the past half-century. A recent query for academic, peer-reviewed articles regarding organizational training at a university library gave back over 142,000 results. An extensive review of the abstracts of a many of the articles showed that most of those articles fall into one of the following three general subcategories: organizational training effectiveness (Bedinham, 1998; Gass & Priest, 2006; Hoq et al., 2010; Sheng-Tao, 2013; Stonebraker & Hazeltine, 2004), quantifying the benefits of organizational training (Allen, 1994; Bedinham, 1998; Clements & Josiam, 1995; Hoq et al., 2010; Hyounae Min et al., 2013; Jackson, 2008; Maignan, Ferrell, & Hult, 1999; Ross, 2008;

Thomas & Qiu, 2012), and being successful as an organizational trainer ("Association for Talent Development," 2014; Sheng-Tao, 2013; Swanson & Falkman, 1997; Thornton & Brattebo, 2009).

Organizational Training Effectiveness. The topic of organizational training effectiveness was a common topic between the various articles (Bedinham, 1998; Gass & Priest, 2006; Sheng-Tao, 2013; Stonebraker & Hazeltine, 2004). The general consensus between the articles and studies was that organizational training effectiveness is vital for the success of the organization (Gass & Priest, 2006; Jackson, 2008; Schmuckler, 1999; Swanson & Falkman, 1997). However, proving or even evaluating whether an organizational training program was successful at accomplishing its desired result is a challenging task (Bedinham, 1998). Bedinham (1998) states that companies routinely use questionnaires as a way to assess the effectiveness of organizational training. However, Bedinham (1998) notes that questionnaires often do not take into account the complexity of the topics or the difficulty that the learners had with learning of the topics. To the contrary, questionnaires may provide false positive results regarding the actual occurrence of knowledge transfer. For this reason, Bedinham (1998) suggests that looking for changes in behavior is a better form of evaluation of training effectiveness. The idea is also supported by other studies (Hyounae Min et al., 2013; Kaupins, 1997; Ross, 2008; Sheng-Tao, 2013). Sheng-Tao (2013) adds that by having employees act out the desired behaviors in a classroom environment is more effective than having employees listen to a lecture or complete some other type of stationary exercise.

In 1997, Kaupins published a study that measured 211 organizational trainers' opinions regarding twenty of the most common training methods used for knowledge transfer within US organizations. Kaupins' (1997) study found that trainers generally believed that real-life cases

and internships were rated the highest regarding knowledge transfer occurring, while the use of televised lectures had the worst results. Kaupins (1997) confirmed that these results were in line with Knowles' andragogy theory of adult learning.

Virtual organizational training was another major topic that was discussed in the articles (Stonebraker & Hazeltine, 2004; Xu, Huang, Wang, & Heales, 2014). The general consensus amongst the articles was that virtual organizational training can work if it is done properly. The biggest issue with virtual training is the lack of the human element (Stonebraker & Hazeltine, 2004; Xu et al., 2014). Unlike a generic computer, a human educator is able to perceive the telltale signs of students either not understanding the materials, or simply disinterested in the materials; however, the problem can be overcome with proper development of a virtual learning system that customizes itself to the learner (Xu et al., 2014).

The effectiveness of such virtual education systems is still controversial (Stonebraker & Hazeltine, 2004; Xu et al., 2014). Though the articles have described numerous successes of organizations using multimedia and online education systems, human interaction still seems to be an important element for successful knowledge transfer (Kaupins, 1997; Schmuckler, 1999; Stonebraker & Hazeltine, 2004; Swanson & Falkman, 1997; Xu et al., 2014). There seems to be a general consensus amongst the articles that organizational training is becoming more of a hybrid methodology that encompasses multimedia and human interaction. Though the various methods to organizational training have shown various levels of results, the hybrid approach that follows a singular learning strategy seems to show the most amount of promise (Gass & Priest, 2006; Hoq et al., 2010; Ross, 2008; Schmuckler, 1999; Sheng-Tao, 2013; Stonebraker & Hazeltine, 2004; Swanson & Falkman, 1997; Xu et al., 2014).

Quantifying the Benefits of Organizational Training. Quantifying the benefits of organizational training is an issue that organizational trainers and management face continuously (Bedinham, 1998; Clements & Josiam, 1995; Hyounae Min et al., 2013; Maignan et al., 1999). Though there seems to be no disagreement about the general importance and benefit of organizational training, particular organizational training programs have been questioned for the training programs' cost-benefit bottom-line (Bedinham, 1998; Clements & Josiam, 1995; Hyounae Min et al., 2013). Clements & Josiam (1995) provided a model, called the Swanson-Gradous Model, to help identify and project the financial benefits of any organizational training program.

The Swanson-Gradous model (Clements & Josiam, 1995) requires the evaluating manager to identify and quantify performance problems or deficits that the employees face prior to the training. It then instructs the manager to calculate the net gains from the training by evaluating post-training performance of the employees. The final stage is to deduct the costs associated with the training in order to calculate net results (Clements & Josiam, 1995).

However, doing cost-benefit analysis of training creates its own dilemmas, including those of impartiality of the evaluator and the net value evaluation of improved performance (Bedinham, 1998; Clements & Josiam, 1995; Hyounae Min et al., 2013). Clements & Josiam (1995) have provided numerous case studies that show how the authors resolved these issues. The authors were in agreement that the value of organizational training needs to be calculated and presented to the organizational leadership just like any other project that requires a financial investment (Bedinham, 1998; Clements & Josiam, 1995; Hyounae Min et al., 2013).

Being Successful as an Organizational Trainer. The third major body of research was in the sphere of becoming or remaining an effective organizational trainer. For this topic, the

published ideas were quite diverse, though these published ideas had some commonalities. One of the commonalities was the importance for the organizational trainers to be culturally aware of the environment (Allen, 1994; Hoq et al., 2010; Jackson, 2008; Kaupins, 1997; Maignan et al., 1999; Ross, 2008; Swanson & Falkman, 1997; Thornton & Brattebo, 2009). The term culturally aware was used to mean social culture of the employees, as well as individual cultures of the organizations. There was a general agreement that the organizational trainer must teach to the culture of the organization, which meant that customization of the training materials and approaches was very important (Hoq et al., 2010; Ross, 2008; Schmuckler, 1999; Thomas & Qiu, 2012). One question that the literature review did not answer was if there was an agreed-upon superior approach to organizational training. However, numerous authors pointed out the benefits and effectiveness of using andragogy practices for the purpose of corporate training (Kaupins, 1997; Kessels & Poell, 2004; Woodard, 2007).

The Association for Talent Development was mentioned by several authors as an organization that is trying to create a standard within the organizational training industry (Gray, 2014; Kwon, Wadholm, & Carmody, 2014). The Association for Talent Development (ATD) has self-proclaimed itself as the world's largest association of Talent Development Professionals ("Association for Talent Development," 2014). Established in 1943, ATD reports having members from more than 120 countries, representing private and government sectors ("Association for Talent Development," 2014).

ATD provides numerous services to its members including continuing education, networking opportunities, and certification as a Certified Professional in Learning and Performance (CPLP) ("Certification," 2014). The author was unable to find any conclusive evaluation of the value of the CPLP certification to the organizational trainer, though Kwon et al.

(2014) noted that there were multiple discrepancies between the teaching materials provided by CPLP and the CPLP certification exam. A November 15, 2014 search for the keyword CPLP on the employment website Monster.com returned ten results of organizations looking to hire corporate trainers. The same search on Careerbuilder.com yielded seventeen results. After an in-depth review of the job advertisements, the author noted that CPLP certification was not mandated, but preferred, in all of the twenty-seven advertisements. Organizational trainers that had job related experience but not the CPLP certification were also welcomed to apply ("CPLP Jobs," 2014, "CPLP Jobs on CareerBuilder.com," 2014).

Gaps in Literature

There are significant gaps in literature when it comes to organizational educators' andragogy theory/tools use. After a thorough literature review, Buyok (2008) writes "there is an absence of research and evaluation of professional development effectiveness" (p. 73). This sentiment is confirmed by others. "In our planning process, we found a shortage of current literature about assessment and evaluation of adult learner achievement" (Frey & Overfield, 2002). Knowles (2005) wrote of the dire need of more evaluations of andragogical models in order to support or revise the andragogy model itself.

Kucsera and Svinicki (2010) have completed an extensive literature review on evaluations of faculty development focusing on instructional improvement. The authors reviewed publications of the six leading industry journals, Change Magazine, and the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) website (Kucsera & Svinicki, 2010, p. 26). After reviewing all of the sources, the authors' aggregate conclusion was that there were serious gaps in research regarding faculty evaluations, and that recommendations regarding faculty development were sparse (Kucsera & Svinicki, 2010, p. 7). The authors concluded that

the findings reinforced what the Weimer & Lenze (1997) study had concluded, which is that organizations continually use instructional interventions, such as employee training, with virtually no empirical justification to the actual effectiveness of the said interventions (Kucsera & Svinicki, 2010, p. 7).

Conclusion and Summary

Much of the literature that was found during the literature review was primarily focused on the development of an adult educator (Armstrong-Stassen & Templer, 2005; Buyok, 2008; Minter, 2009; Mitton & Adair, 2007; Moreillon, 2003; Poell et al., 2006). There were no studies found that attempted to see if there is a correlational relationship among adult educators' teaching experience, the academic/professional discipline that the adult educators' teach, and adult educators' use of andragogy practices to facilitate adult educators' knowledge transfer and exchange sessions.

The review of current literature shows the important role that andragogy plays in management, leadership, and adult training/education (Birzer, 2003, 2004; Drew & Woodside, 2009; Hatcher & Cutler-White, 2009; Knowles, 2005). This is especially evident when it comes to the designing of professional development programs for trainers, employees, and other adult learners (Knowles, 2005; Poell et al., 2006; Yi, 2005). The literature also shows that adult educators, regardless whether adult educators are employed by institutions of higher learning or other organizations, must be effectively trained in the use of andragogy practices in order to be effective as educators of adults (Birzer, 2003, 2004; Drew & Woodside, 2009; Hatcher & Cutler-White, 2009; Knowles, 2005). The andragogy theory of learning has proven itself to be generally effective as a model for teaching adults, in various teaching environments (Knowles, 2005; Sandlin, 2010; Tough & Knowles, 1985; Wilson, 2004). Though andragogy has its critics,

the considerable compilation of evidence weighs heavily in its favor (Forrest III & Peterson, 2006; Geber, 1988; Gigerenzer, 2004; Knowles, 2005; Kolb, 1981; Tough & Knowles, 1985).

The next chapter shall discuss the data collection and data analysis processes. It shall also explain in further detail the instrumentation that was designed Knowles (2005) for the purpose of assessing the use of andragogy by adult educators.

Chapter 3

Methodology

The purpose of this nonexperimental correlational quantitative study was to determine if there was any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that adult educators' teach in to the adult educators' use of andragogy practices when facilitating the adult educators' knowledge transfer and exchange sessions. Chapter 3 explains the methodology used to collect the data necessary to analyze the research question, as well as the design used to test the hypotheses stated in the study. Chapter 3 also describes the participants of the study, the data collection procedures, instrumentation, and the statistical tools that were used for the data analysis.

Research Method and Design

For this study, a quantitative nonexperimental correlational design was appropriate. The quantitative research paradigm is an appropriate method for this research because the sample was statistically generalizable or representative (Mills et al., 2010) of adult educators. Additionally, the data collection results were objectively quantified for the purpose of searching for relationships among the variables, as well as to make predictions, and identify possible patterns from the data results (Bordens & Abbott, 2010; Lewis-Beck et al., 2004; Miller & Brewer, 2003).

Other potential quantitative research designs were considered. However, they were rejected by the researcher. These quantitative research designs included but were not limited to: experimental study, ex post facto study, and descriptive study designs.

An experimental study design was deemed inappropriate because it would require a comparison of two or more randomly assigned groups that were treated in some specifically

different way (Black, 2002; Vogt, 2005). In this study, there was only one group. The researcher did not treat any subjects in study in any manner that was different from any other subjects.

The ex post facto study is used to determine differences between groups of people that have common characteristics amongst their group members, but is different from the comparison group or groups (Black, 2002; Vogt, 2005). These characteristics, which could include life experiences, traits, preferences, and so forth, could be the focal independent variables of the research (Black, 2002; Vogt, 2005). Though the ex post facto study method could have been used to search for a relationship between the adult educators' professional/academic discipline that the adult educators teach in and the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions on the basis that the adult educators' professional/academic discipline is a categorical group that can be considered a characteristic of the members of the group, ex post facto study method would be impractical for the second independent variable, which is years of experience teaching adults. The years of experience teaching adults was not predetermined by the researcher, and could not be used as a category (Black, 2002; B. Johnson & Christensen, 2012; Vogt, 2005, 2011).

A descriptive study design is primarily used to provide the researcher descriptive data regarding the group being studied (Black, 2002). Though this type of study design may identify the existence of certain variables and/or characteristics of the group (Black, 2002), it is not designed to search for any particular relationships (Black, 2002; Cramer & Howitt, 2004; B. Johnson & Christensen, 2012). For this reason, the researcher felt that this type of study design was inappropriate for this study.

As with any quantitative research, there is an assumption of researcher's objectivity. To meet the standard of objectivity in research following the quantitative paradigm, the researcher

assumed that the research process was deductive, accurate, and reliable in its entirety (Lewis-Beck et al., 2004; Neuman, 2011). The quantitative methodology was deemed best fit for this research because the particular research problem entailed comparing and analyzing possible relationships across independent variables.

Nonexperimental correlational design was appropriate for this study because a correlational design illustrates statistical relationships across multiple variables while disallowing the researcher from manipulating the independent variables. A correlation design is considered effective to recognize trends between the statistical data (Bordens & Abbott, 2010; Lewis-Beck et al., 2004; Tacq, 2004). Bordens & Abbott (2010) concluded that a correlation design study would be appropriate to enumerate a relationship between independent variables, generalize a finding towards a larger population, and to show a link between the past events or experiences and the present actions or behaviors. It is important to note that a correlational design does not seek to find causal association between the variables.

However, there are negative characteristics associated with nonexperimental correlational designs. For one, uncontrollable extraneous variables may influence the results of the study. Additionally, there is no way to assert with full confidence the truth of the hypothesized relationship between the two independent variables (Black, 2002; Vogt, 2005, 2011). However, the two negative characteristics by themselves do not invalidate the findings.

Some of the uncontrollable extraneous variables that could have affected the results of the study include having predominantly adult educators that only teach in one discipline take the survey. However, that did not happen as eight disciplines were represented in this study. Another could have been a lack of diversity in the number of years of teaching experience that the adult educator participants taking the survey have. That also did not happen. The educator

participants represented in this study had between one and forty-seven years of experience. Though true mitigation of uncontrollable extraneous variables that may relate to the results of the study was impossible, the researcher did the best to control the extraneous variables by having no influence to which adult educators chose to take the survey. The researcher also had no control over the participants in the study, which discipline the participants represent, or how many years of experience the participants had teaching adults; thus creating the most indiscriminate results possible.

In order to avoid collecting research data without a strategic direction, Black (2002) and Voight (2011) recommends to have a prepared strategy regarding which descriptive statistical elements to observe and analyze. The researcher had designed such strategy. The strategy included observation, in addition to the two independent variables and one dependent variable, total electronic and paper responses, number of incomplete or invalid responses, and number of responses that were requested to be removed by the participants. The results are listed and explained in Chapter 4.

Black (2002) also recommends that researchers use a previously tested questionnaire or measuring instrument. If a device has not been measured, Black (2002) recommends testing the instrument on a small group of participants. The researchers has chosen to use the PALSI instrument that was designed by Knowles (2005) and previously validated by other researchers (Cox, 2013; Madden, 2008). The researcher's own PATHI instrument was surface validated through a field test, which included being read by experts for clarity.

Research Question and Hypotheses

The overarching purpose of this study was to answer the research question: is there any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that adult educators' teach in to the adult educators' use of andragogy practices when facilitating the adult educators' knowledge transfer and exchange sessions?

The related hypotheses and matching research questions were:

H_o1: The adult educators' adult teaching experience does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

H_a1: The adult educators' adult teaching experience does relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

RQ1: Does the adult educators' adult teaching experience relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions?

H_o2: The adult educators' professional/academic discipline that the adult educators teach in does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

H_a2: The adult educators' professional/academic discipline that adult educators teach in does relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

RQ2: Does the adult educators' professional/academic discipline that adult educators teach in relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions?

H_o3: The adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

H_a3: The adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

RQ3: Does the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions?

Sampling Frame

Target population. The study population included all adults who were responsible to educate, coach, or train other adults in an organized setting. There was no way of finding out exactly how many adult educators are in the general population. However, as of January 4, 2015, the human population was estimated at about 7,215,790,000 (U.S. Census Bureau, 2015). The selection criterion was that all participants actively teach or train adults for the purpose of transferring specific, previously decided upon knowledge, in an organized fashion. Each participant had to teach primarily in a single professional/academic discipline. The average

number of years of adult teaching experience, the exact breakdown of disciplines that were represented within the specific sample, and in what setting the adult educator preformed are provided as demographic information in Chapter 4.

Study sample. The participants of this study were drawn from a criterion-based convenience sample of approximately 393 adult educators whose professional responsibility includes facilitating knowledge transfer sessions to other adults. Though it is preferable to have a large number of adult educators participate in the survey, based on statistics software calculations, a confidence level of 95% can be obtained while attaining confidence interval of 0.05 with a 385 person sample size if the assumption that the adult educators' population size is smaller than ten billion is accurate (Australian Bureau of Statistics, 2015). Therefore, the 393 person sample size was sufficient to encompass every living person.

Using a A-priori sample size calculator, the researcher found that the sample size of 385 will also give an anticipated effect size of 0.02, which is considered small, with a desired statistical power of 0.8 and a probability level of 0.05 when dealing with just one predictor (Soper, 2015). A minimum sample size of 54 would be needed to get an anticipated effect size of 0.15, which is considered medium, with a desired statistical power of 0.8 and a probability level of 0.05 when dealing with just one predictor (Soper, 2015). A minimum sample size of 25 would be needed to get an anticipated effect size of 0.35, which is considered large, with a desired statistical power of 0.8 and a probability level of 0.05 when dealing with just one predictor (Soper, 2015). When dealing with two variables, a minimum sample size of 67 would be needed to get an anticipated effect size of 0.15, which is considered medium, with a desired statistical power of 0.8 and a probability level of 0.05 (Soper, 2015), while a minimum sample

size of 31 would be needed to get an anticipated effect size of 0.55, which is considered large, with a desired statistical power of 0.8 and a probability level of 0.05 (Soper, 2015).

Data Collection

The following are the steps followed to obtain the study sample. Immediately upon approval from the IRB, the PATHI was sent out to four specialists for validation. Upon validation, PATHI and PALSI instruments were coded into Survey Monkey for online collection of survey data. Additionally, 200 paper versions of the electronic survey instruments were printed.

The link to the online survey was then shared initially with approximately 1500 adult educators through LinkedIn, Facebook, email, and University of Illinois' National Institute for Learning Outcomes Assessment list-server. After which, the link was re-shared unknown number of times by the participants with their colleagues. All 200 paper versions of the survey were also distributed upon request of the participants. The survey was kept open for a period of one month.

The data was collected through the administration of an online survey via Survey Monkey. Adult educators who wished to participate in the survey but had no access to an internet-connected computer were offered a paper survey to fill out with all the identical instructions and forms as those that would be seen by participants taking the online survey.

The adult educators were provided with specific instructions on how to complete the survey. The survey consisted of: Personal Adult Teaching History Inventory (Appendix A) and the Personal Adult Learning Style Inventory (Appendix B). Prior to seeing the actual survey, the participants were provided with an Informed Consent Form (Appendix C), which was built into the online survey, and had to be e-signed before starting the survey. Once signed, all adult

educators that wished to continue to participate were automatically forwarded to the survey. The participants that chose to fill out a paper survey had to provide a wet signature on the Informed Consent Form prior to receiving the survey.

Upon the completion of the survey, all participants were provided with a Withdrawal From Study instructions letter, which appeared on the participant's screen or as the last page of the printed survey (Appendix D). The Withdrawal From Study instructions letter had directions on how to withdraw from the study if the participants chose to withdraw from the study at a later date, as well as how to reach the researcher. Only one survey participant had contacted the researcher to have that participant's results removed from the data collection.

The Personal Adult Teaching History Inventory (PATHI) asked the participants to identify the primary professional/academic discipline in which the participants teach, years of adult teaching experience, and in what setting do the participants teach adults (i.e. academic, corporate, or other) . The survey consisted of just three questions.

The Personal Adult Learning Style Inventory (PALSI) (Knowles, 2005, p. 284) was developed by Malcolm S. Knowles for the purpose of garnering general insight with regard to an educator's and adult learner's orientation toward the theory of andragogy. Full permissions without limitation was granted by Knowles for using the PALSI inventory (Appendix E) (Knowles, 2005, p. 283). The self-administrated inventory consisted of 30 questions, and used a five point Likert-type scale to record the answers. Knowles has also created and provided a scoring card to evaluate the inventory, directions for using the inventory, and the grading scale to measure the level of how andragogic is the person taking the inventory.

Instrumentation

The instrumentation used to collect data for this study included (a) Personal Adult Teaching History Inventory questionnaire that was created by the researcher to gain demographic information, and (b) the Personal Adult Learning Style Inventory developed by Knowles (2005) for the purpose of gaining general insight with regard to educators' usage of andragogy principles.

Adult educators who wished to withdraw from the survey after submitting their survey results were able to do so by either emailing the researcher, contacting the researcher by phone, or sending a text message. The researcher's contact information, as well as instructions on how to withdraw from the study, was provided to all participants. Once the researcher received such a request, he instantly tracked the specific survey by matching the requested participants' name or control number to the survey. That single particular survey was deleted from all digital files and results.

Personal Adult Teaching History Inventory (PATHI)

The Personal Adult Teaching History Inventory (Appendix A) was designed to collect three pieces of information from the participants. Question one asked: "Which professional/academic discipline do you primarily teach?" The participants were offered to choose from one of eight professional/academic disciplines.

To help define professional/academic disciplines, the US Department of Education's Integrated Postsecondary Education Data Systems classifications have been used. The classifications consist of sixty professional/academic disciplines, which then break down to 2095 sub-disciplines (US Department of Education: National Center for Education Statistics, 2010). Based on the disciplines' commonalities, the sixty classifications were grouped into eight

primary classifications. The full list of classifications and sub-classifications is available on the Department of Education's website. The list of the sixty classifications and their relationship to the eight primary classifications is provided in Appendix F. The participants were given a link to the classifications on the survey, if the participants wished to make sure that the correct professional/academic discipline choice was made. The eight primary professional/academic discipline classifications are:

- Business, Economics, Management, and related fields
- Construction, Engineering, and related fields
- Education, Vocational Training, and related fields
- Healthcare, Mental Health, and related fields
- Information Technology, Computer Science, and related fields
- Law, Criminal Justice, Military Sciences, and related fields
- Natural Sciences, Physical Sciences, and related fields
- Social Sciences, Humanities, Religion, Liberal Arts, and related fields

The participants were asked to pick only the primary discipline that participants teach. Though it is possible that some participants occasionally teach in multiple disciplines, participants had to choose just one discipline that best described the subject matter that the participants taught.

Question two asked: "Approximately how many years have you been educating adults in a corporate, university or college, or any other type of organizational setting?" (Appendix A). The purpose for asking the second question was to have a quantifiable way to illustrate or track adult teaching experience in an organizational setting. It is important to consider adult educators' complete teaching experiences, and not limit adult educators' experiences to any

individual teaching institution because some educators may have significant adult teaching experience outside the current place of employment.

Question three asked "In what setting do you primarily educate adults?" (Appendix A). The study participant was offered three options. These options were: "As a faculty, full-time or adjunct, in an institution of higher learning"; "As an organizational trainer. This is my primary or secondary work responsibility within my organization"; and "Other settings" (Appendix A).

This information provided crucial demographic data about the sample that was the basis of this study. The professional/academic discipline that the adult educator teaches in and the experience as an adult educator are the two independent variables of the study. The third question provided an opportunity to statistically separate faculty, organizational trainers, and other types of adult educators from each other, and provided additional insight regarding commonalities and differences between the educators within the different settings.

To ensure that the wording was understood correctly, the PATHI was validated by being provided to four experts in the research field who also happened to be adult educators. The experts were asked to read, respond, and provide constructive feedback in regards to the three questions in the inventory. This was necessary since the PATHI had not been previously used or validated in another study.

Personal Adult Learning Style Inventory (PALSI)

Personal Adult Learning Style Inventory (Appendix B) was developed by Knowles (2005) for the purpose of providing insight into a person's general orientation toward the use of andragogy. Knowles' (2005) inventory was specifically designed for organizational trainers, teachers, group facilitators, administrators, and adult educators (p. 282). The PALSI was specifically designed to be used in various settings, including educational and business/industrial

settings. To accommodate both the educational and industrial settings for the PALSI, Knowles (2005) specifically allowed the words facilitator and trainer to be used interchangeably, as well as the words learning and training.

Validity of the PALSI instrument. The PALSI inventory has been published in various publications, including Knowles, Holton III, and Swanson's The Adult Learner (2005). A recent ProQuest and Google Scholar search indicated that the PALSI instrument has already been used in scholarly, peer reviewed publications and dissertations throughout the last two decades to address the learning styles of adult learners as well as teaching styles of faculty, teachers, and/or organizational trainers (Cox, 2013; Madden, 2008). The validity of the PALSI instrument has been demonstrated for studies such as this one, which rely on the self-report nature of the instrument (Cox, Murray, & Plante, 2014). Therefore, Knowles' (2005) PALSI instrument should be considered a valid tool for gathering data on adult educators' use of andragogy principles.

Description of the PALSI instrument. Knowles' (2005) inventory consists of 30 questions. The questions are categorized into six components. The components include: (I) learning orientation, (II) learning design, (III) how people learn, (IV) learning methods, (V) program development, and (VI) program administration. The participant was asked to choose between two sets of theoretical approaches when posed with a certain learning or education challenge. There were no correct or incorrect answers. Each question simply asks the participants to record participants' opinions on the survey that is based on a five-point Likert-scale model. Figure 1 provides an overview of the possible answers that could have been used by the participants to record individual opinions.

O	I agree fully with statement A
O	I agree more with statement A than B
O	I do not agree with either statement A or B
O	I agree more with statement B than A
O	I agree fully with statement B

Figure 1. Overview of the possible answers. Adapted from "The Adult Learner: the definitive classic in adult education and human resource development (6th ed.)," by M. Knowles, 2005, p. 283. Reprinted with permission (Appendix E).

Knowles (2005) also provided a scoring guide and an explanation to the level of orientation participants may have toward the use of pedagogy versus andragogy individually for each of the six categories, as well as for the cumulative overall results. Figure 2 demonstrates the scoring rubric for the overall results.

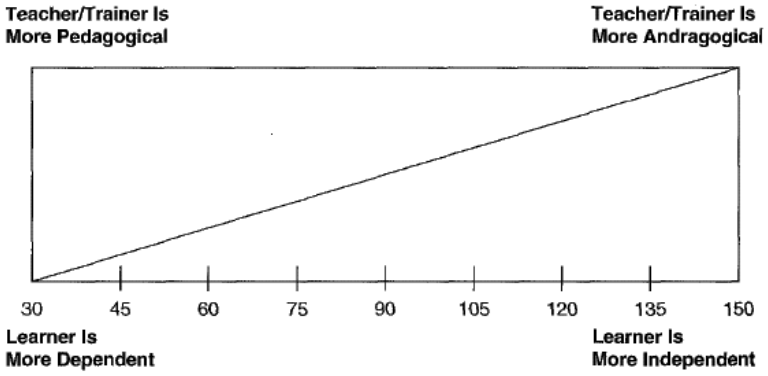

Figure 2. "Overall results: How Andragogic Am I." From "The Adult Learner: the definitive classic in adult education and human resource development (6th ed.)," by M. Knowles, 2005, p. 292. Reprinted with permission (Appendix E).

The "Overall Results: How Andragogic Am I" tool (Figure 2) provides a visual representation of the participant's inclinations towards andragogy. This tool can be used for educators/organizational trainers and adult learners. For the purpose of the research, it was used

with the educator's/corporate trainer's perspective. Cumulative score was calculated by assigning the following point values for each answer provided by the participant: "I agree fully with statement A" = 5 points; "I agree more with statement A than B" = 4 points; "I do not agree with either statement A or B" = 3 points; "I agree more with statement B than A" = 2 points; and "I agree fully with statement B" equals 1 point. Minimum possible score was 30. Maximum possible score was 150. The median possible score was 90. Participants that scored less than 90 points are considered to be more oriented towards using a pedagogical style of teaching. Participants that scored more than 90 points are considered to be more oriented in using andragogical style of teaching. Further to the extremes the score trends, the higher the orientation of the participant to utilize that perspective style of teaching.

Figure 3 demonstrates the scoring rubric that was used for analyzing individual component results. The components included: (I) learning orientation: questions 1 through 5; (II) learning design: questions 6 through 10; (III) how people learn: questions 11 through 15; (IV) learning methods: questions 16 through 20; (V) program development: questions 21 through 25; and (VI) program administration: questions 26 through 30. The tool allowed the researcher to separate the individual components that made up the overall score, which was useful to the research since only sections I, II, III, and IV dealt directly with participant's teaching orientation, while components V and VI dealt primarily with the participant's opinion in regards to the administrative role in adult education. A score of 10 or less in any of the individual components suggested a pedagogical orientation in that component. A score of 20 and over showed an andragogical orientation. Scores between 10 and 20 represented a lack of commitment by the participant to either pedagogical or andragogical orientation.

	Pedagogically Oriented	My Scores	Andragogically Oriented
I	5-10		20-25
II	5-10		20-25
III	5-10		20-25
IV	5-10		20-25
V	5-10		20-25
VI	5-10		20-25

Figure 3. "Component results: To what extent am I andragogical in each of the six areas." From "The Adult Learner: the definitive classic in adult education and human resource development (6th ed.)," by M. Knowles, 2005, p.292. Reprinted with permission (Appendix E).

Ethics, Privacy, and Confidentiality

Ethical standards, participant privacy, and data confidentiality were held to the highest standards possible by the researcher. In the invitational email, LinkedIn posting, Facebook posting, and University of Illinois' National Institute for Learning Outcomes Assessment list-server posting, the researcher explained the purpose of the study, and that the study entailed completing the three-question PATHI and a 30-question PALSI questionnaires. The researcher informed all potential participants that the individual participant does not have to participate if the participant does not wish to or felt uncomfortable with the research project.

The researcher explained that participation results would be held confidentially. Participants were told that individual participants could withdraw individual results at any time between now and publication. The researcher did not foresee any excessive risks to the participants.

Participants that chose to participate in the study were forwarded via embedded link to an online survey website that had: Personal Adult Teaching History Inventory (Appendix A), Personal Adult Learning Style Inventory (Appendix B), the Informed Consent Form (Appendix

C), and Withdrawal From Study instructions letter (Appendix D). The researcher had explained the purpose of every form on the website. Following the explanation, the researcher asked the participants to e-sign the Informed Consent Form. Once that form was signed, the participants were forwarded to the online survey. Once the participants completed the survey, participants saw the Withdrawal From Study instructions letter appear on the screen. The participants were able to print out or save that letter for the participant's own record. The survey results were recorded by Survey Monkey. After the close of the survey, the researcher downloaded the results for secure storage and analysis. Data stored on Survey Monkey servers shall been deleted upon publication of this study.

All printed materials are stored in a sealed envelope and locked in a secure file cabinet at the researcher's home. The researcher is the only person with physical access to the contents of the file cabinet, thus providing physical protection to the data from others who are not associated with the study. The results of the digital survey shall be stored for a period of three years. After which, the digital records will be physically deleted by the researcher at the researcher's premise. The digital data that will be extrapolated from the survey shall be stored in an encrypted, password-protected file on the researcher's personal computer. That file shall not be shared with anyone who is not associated with the study. That file shall be stored for a period of three years. After which, the file shall be destroyed through a permanent software-based deletion process. If any password-secured backups of the file be in existence, those files shall also be permanently deleted through the use of specialized deletion software. There will be no possibility of anyone being able to recover the data from these files once the deletion process is complete.

The participants received no monetary compensation of any kind. The researcher offered a copy of the published dissertation and/or an explanation of the individual participant's results

of the PALSI after dissertation publication to any participant that makes a request by writing participant's email address in the appropriate area of a provided form. Eighty-eight participants requested a copy of the published dissertation and 116 participants requested an explanation of the individual participant's results. The researcher will oblige those requests upon publication of this dissertation.

Data Analysis

The data collected from the survey instruments was entered into an Excel spreadsheet and then processed using SPSS version 21 software for statistical analysis. The Pearson correlation coefficient, also referred to as Pearson's r, and Spearman's rank correlation coefficient, also known as Spearman's rho, was used to show if there was a dependence between variables (Bobko, 2001; Chen & Popovich, 2002; Salkind, 2006; Vogt, 2005). The independent variables were adult educators' teaching experience and the professional/academic teaching discipline, and the dependent variable, which is the adult educators' use of andragogy practices to facilitate adult educators' knowledge transfer and exchange sessions.

According to Fraenkel, Wallen, & Hyun (2011), research dealing with education should use significance levels between .05 and .01 to determine whether the sample statistic results are a result of sampling error. Johnson & Christensen (2012) argued that a significance level of 0.05 is a practical significance level for the purpose of educational research, which corroborates the Fraenkel et al. (2011) opinions. The most common set level of significance by researchers is 0.05 (Boslaugh & Sage Publications, 2008). Any significance level over 0.1 can create a statistically large possibility for Type I or Type II error, while choosing a very small significance level like 0.001 can create statistical difficulties due to the high requirements of statistical certainty. For the purpose of this research, the researcher has decided to follow the guidance of the experts and

use the recommended significance level of 0.05. Historically, the 0.05 probability level is considered as an acceptable and reasonable choice for most research circumstances (Boslaugh & Sage Publications, 2008; Cramer & Howitt, 2004; Lewis-Beck et al., 2004).

Validity

As with any survey instrument, the threat of internal validity arises. Though a reliable survey instrument will provide a consistent result through multitudes of uses, a valid survey instrument will provide accurate results. An instrument that is reliable does not imply that it is valid. However, a valid instrument will always imply reliability (Fink, 2003).

Fink (2003) stated that the primary four types of validity threats are: content, face, criterion, and construct. Content validity threat assesses the appropriateness and the thoroughness of the instrument's ability to assess that which is being assessed. Face validity would include the language used to phrase the questions, as well as whether the proper questions were asked for the purpose of the research. Criterion validity threat encompasses predictive and concurrent validity threats. Finally, construct validity threat occurs if the instrument cannot demonstrate in an experimental fashion that there is a distinguishable difference between people who do and those who do not have certain characteristics that are being investigated by the instrument.

In order to avoid these validity threats, the researcher used a previously validated instrument with PALSI. The PALSI instrument has both design and measurement validity (Cox et al., 2014). The PATHI was surface validated through a field test, which included being read by experts for clarity.

Other issues may threaten the validity of the results. This includes the possibility of the Hawthorne effect ("The Hawthorne effect," 2006), as some of the adult educators could try to

answer the question the way the adult educators may think that the researcher would want the participant to answer, or the way the participant would wish to be perceived by the researcher. In order to mitigate such threats as much as possible, the researcher asked all of the participants to be honest with their answers. The researcher reminded all the participants that no one other than the researcher has the ability to know the participants' individual answers, and that the researcher will do everything possible to avoid linking individual participants' names to the survey results. In the highly unlikely event that some of the participants were not able to understand the questions that are being asked in the survey, the researcher made himself available to reiterate and explain the meaning of those individual questions via email, text message, or phone conversation. However, no participant contacted the researcher for such reiterations.

In a correlational study such as this one, determining if two variables are related to one another is important. In order to identify any relationships between the two variables, and, if such relationship exists, how strong that relationship is, Pearson's r calculation was used. Pearson's r assumes that the two variables that are being correlated have a linear relationship. If the relationship is nonlinear, Spearman's rho would be more appropriate. An examination of a scatterplot of the two variables could provide evidence for a linear or nonlinear relationship (Bobko, 2001; Chen & Popovich, 2002).

In addition, the validity of Pearson's r can be affected by various factors. This includes small sample size, outliers, restriction of range, and other factors (Chen & Popovich, 2002). A small sample size could distort the correlation due to chance or dirty data (Chen & Popovich, 2002; Fink, 2003). Outliers may also have similar effects, especially if the outliers are part of a relatively small sample size (Chen & Popovich, 2002; Fink, 2003; Lewis-Beck et al., 2004),

which did not occur in this study. The challenge of restriction of range could occur if the sample is homogenous or if the measuring instrument is not sensitive enough to record the minute nuances in opinions (Glass & Hopkins, 1996, in Chen & Popovich, 2002). If results show an abnormal distribution, Spearman's rho calculation would be more appropriate than the Pearson's r (Salkind, 2006).

Spearman's rho is a nonparametric measure that is appropriate when dealing with data that has abnormal distribution or significant outliers. Unlike the Pearson's r, Spearman's rho makes no assumptions about the frequency distribution of the variables. In order to be able to use Spearman's rho, variables must be quantitative in their nature and meet one of two additional requirements. Spearman's rho requirements are that the variables either depart from normal distribution or represent an ordinal scale of measurement (Salkind, 2006; Vogt, 2005). The data used in the research would allow for the use of Spearman's rho if Pearson's r became inappropriate.

When dealing with survey instruments, threats to validity will arise. It is impossible to eliminate all threats, and unwise to assume that all threats have been mitigated. However, all of the threats stated above do not discredit small sample size data as long as the researcher is cognizant of these limitations and acts appropriately (Chen & Popovich, 2002).

Summary

Chapter 3 explained the research method and design, as well as provided support for the appropriateness of the methodology and design used in this study. The ethical treatment of human subjects in this study was outlined. The sampling frame and the data collection process were also described. A detailed description demonstrated the instruments that were used to record the data, as well as an explanation to support the validity of the instrument and the data

analysis was also provided. In the next chapter, the actual data collection and the analysis of the data processes is discussed in detail.

Chapter 4

Results

The overarching purpose of this study was to answer the research question: is there any correlation between adult educators' adult teaching experience and/or the professional/academic discipline that adult educators' teach in to the adult educators' use of andragogy practices when facilitating the adult educators' knowledge transfer and exchange sessions?

This chapter provides the profiles of the 393 study participants, tabulated data based on the study participants' responses to the PALSI and PATHI survey instruments, and the statistical analysis of the collected data. Additionally, the interpretation of the results, answers to the research questions, and an explanation why none of the alternative hypotheses were accepted and the null hypotheses were not rejected is provided.

Research Question #1

The first research question asks if the adult educators' adult teaching experience relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

As Table 1 shows, the obtained correlation results show both Pearson's correlation and Spearman's rho correlation scores to be close to zero. This means that there is no statistical association between adult educators' teaching experience to the adult educators' use andragogy practices (Bobko, 2001; Cramer & Howitt, 2004; Salkind, 2006; Tacq, 2004). Additionally, the Significance value is greater than .05, which signifies that there is no statistical significant difference between the two values (Bobko, 2001; Cramer & Howitt, 2004; Salkind, 2006; Tacq, 2004). Therefore, the null hypothesis was not rejected and the alternative hypothesis was not

supported. Based on these results, it was concluded that the adult educators' adult teaching experience does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Table 1

Correlation: Adult Teaching Experience to Andragogy Practice

Pearson Correlation	-.026
Significance (2-tailed)	.602
N	393
Spearman's rho	-.057
Significance (2-tailed)	.263

Research Question #2

The second research question asks whether the adult educators' professional/academic discipline that adult educators teach in relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

As Table 2 shows, based on the Confidence Interval of 95% and the scoring guide provided by Knowles (2005) regarding the level of orientation participants may have toward the use of pedagogy versus andragogy, the data results show no association between the adult educators' professional/academic discipline that adult educators teach and the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. Therefore, the null hypothesis was not rejected and the alternative hypothesis was not supported. Based on these results, it was concluded that adult educators' professional/academic discipline that the adult educators teach in does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Table 2

PALSI overall results by Professional/Academic Discipline

Variable: Professional/Academic Discipline	Mean	95% CI	AO	Std. Err.	Med.	Std. Dev.	Min	Max
Business, Economics, Management, and related fields	113.36	[109.67, 117.05]	LC	1.86	112.50	19.88	48.00	150.00
Construction, Engineering, and related fields	107.89	[98.96, 116.81]	LC	4.40	108.50	26.38	42.00	142.00
Education, Vocational Training, and related fields	114.91	[109.44, 120.38]	CD	2.72	115.00	18.22	59.00	150.00
Healthcare, Mental Health, and related fields	108.10	[101.71, 114.48]	LC	3.19	110.00	25.35	45.00	150.00
Information Technology, Computer Science, and related fields	112.64	[105.85, 119.44]	LC	3.37	116.00	22.62	43.00	150.00
Law, Criminal Justice, Military Sciences, and related fields	112.58	[102.84, 122.31]	CD	4.78	115.00	27.44	33.00	147.00
Natural Sciences, Physical Sciences, and related fields	108.19	[90.58, 125.80]	CD	8.26	119.00	33.05	44.00	140.00
Social Sciences, Humanities, Religion, Liberal Arts, and related fields	114.63	[108.45, 120.81]	CD	3.06	116	19.59	43.00	150.00

Note. CI = confidence interval; AO = Andragogic Orientation; LC = Lack of Commitment; CD = Cannot be Determined; Std. Err. = Standard Error; Med. = Median; Std. Dev. = Standard Deviation; Min = Minimum; Max = Maximum.

When looking at the results in Table 2, it is important to note that even though 393 participants took the survey, when participants are broken into individual professional/academic disciplines, the N is significantly smaller for each individual professional/academic discipline. Smaller N value creates additional statistical uncertainty. When taking into consideration the required 95% confidence in the results, the statistical analysis shows that the professional/academic disciplines of business, economics, management, construction, engineering, healthcare, mental health, information technology, computer science, and the related fields have fallen into the Lack of Commitment area of the provided scoring rubric (Knowles, 2005). However, the professional/academic disciplines of education, vocational training, law, criminal justice, military sciences, natural sciences, physical sciences, social sciences, humanities, religion, liberal arts, and related fields cannot be determined because the upper bound of the 95% confidence interval for the mean shows Positive Andragogical Orientation, while the lower bound of the 95% confidence interval for the mean shows Lack of Commitment as the andragogical orientation as provided by the scoring rubric (Knowles, 2005).

Research Question #3

The third research question asks if the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Table 3 shows the Pearson Correlation results for each individual professional/academic discipline in relation to adult educators' teaching experience. The individual results did not deviate from the overall results. Pearson's correlation score was close to zero. This means that there is no found relationship between adult educators' teaching experience to the adult

educators' use of andragogy practices within the eight studied disciplines (Bobko, 2001; Cramer & Howitt, 2004; Salkind, 2006; Tacq, 2004). Additionally, a Significance value greater than .05 signifies that there is no statistical significant difference between the values (Bobko, 2001; Cramer & Howitt, 2004; Salkind, 2006; Tacq, 2004). Therefore, the null hypothesis was not rejected and the alternative hypothesis was not supported. Based on these results, it was concluded that the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Table 3

Correlation: Adult Teaching Experience to Andragogy Practice within disciplines

Variable: Professional/Academic Discipline	Pearson Correlation	Significance (2-tailed)	N	Correlation
Business, Economics, Management, and related fields	-0.03	0.729	114	None
Construction, Engineering, and related fields	0.04	0.80	36	None
Education, Vocational Training, and related fields	-0.04	0.81	45	None
Healthcare, Mental Health, and related fields	-0.15	0.26	63	None
Information Technology, Computer Science, and related fields	-0.50	0.74	45	None
Law, Criminal Justice, Military Sciences, and related fields	-0.12	0.52	33	None
Natural Sciences, Physical Sciences, and related fields	-0.28	0.30	16	None
Social Sciences, Humanities, Religion, Liberal Arts, and related fields	0.14	0.40	41	None

Data Collection Process

During the data collection period, 412 qualified participants filled out the survey through the online link and forty qualified participants returned the paper survey. Of the 412 electronic responses, 58 responses were either incomplete or had invalid data, and were removed from the data collection. One survey participant contacted the researcher and asked to have that participant's survey answers removed from this research. As Table 4 shows, a total of 393 survey results were deemed accurate for this study, which surpassed the 385 survey results needed to establish validity to the results.

Table 4

Reponses

	N
Total electronic responses:	412
Total paper responses:	40
Incomplete or invalid responses:	58
Responses removed by request of participant:	1
N =	393

Demographic summary

The survey participants represented all eight professional/academic disciplines that were subject to the study. However, the business, economics, management, and related fields were the most heavily represented by 29% of the respondents (Table 5). Healthcare, mental health, and related fields represented 16% of the respondents. Education, vocational training, and related fields represented 11.5% of the respondents. Information technology, computer science, and related fields were also at 11.5%. Social sciences, humanities, religion, Liberal arts, and related fields represented by 10.4% of the respondents. Construction, engineering, and related fields

represented by 9.2% of the respondents. Law, criminal justice, military sciences, and related fields or represented by 8.4% of the respondents. Natural sciences, physical sciences, and related fields represented by 4.1% of the respondents.

Table 5
Reponses by Professional/Academic Disciplines (N = 393)

	N	%
Business, Economics, Management, and related fields	114	29.0%
Healthcare, Mental Health, and related fields	63	16.0%
Education, Vocational Training, and related fields	45	11.5%
Information Technology, Computer Science, and related fields	45	11.5%
Social Sciences, Humanities, Religion, Liberal Arts, and related fields	41	10.4%
Construction, Engineering, and related fields	36	9.2%
Law, Criminal Justice, Military Sciences, and related fields	33	8.4%
Natural Sciences, Physical Sciences, and related fields	16	4.1%
	393	100.0%

Demographic Summary: Years of Experience

As Table 6 shows, years of experience educating adults based on the professional/academic discipline ranged between one and forty-seven, with the average being 12.87 years. The number of years of experience deferred from one profession/academic discipline to another. In average, social sciences were represented by the most experienced adult educators, while law had the least experienced adult-educator representatives.

Table 6

Years of Experience Educating Adults based on Professional/Academic Discipline

Variable: Professional/Academic Discipline	Mean	95% CI	Std. Err.	Med.	Std. Dev.	Min	Max
Business, Economics, Management, and related fields	12.86	[11.35, 14.37]	0.76	11.00	8.13	1.00	40.00
Construction, Engineering, and related fields	12.69	[9.86, 15.53]	1.40	10.00	8.39	3.00	31.00
Education, Vocational Training, and related fields	12.56	[10.00, 15.11]	1.27	10.00	8.52	2.00	40.00
Healthcare, Mental Health, and related fields	12.29	[10.15, 14.42]	1.07	9.00	8.49	1.00	32.00
Information Technology, Computer Science, and related fields	11.36	[9.01, 13.70]	1.16	10.00	7.80	1.00	31.00
Law, Criminal Justice, Military Sciences, and related fields	10.91	[8.23, 13.60]	1.32	9.00	7.56	2.00	36.00
Natural Sciences, Physical Sciences, and related fields	13.19	[6.81, 19.56]	2.99	9.00	11.96	2.00	43.00
Social Sciences, Humanities, Religion, Liberal Arts, and related fields	17.44	[13.27, 21.60]	2.06	13.00	13.21	1.00	47.00

Note. CI = confidence interval; Std. Err. = Standard Error; Med. = Median; Std. Dev. = Standard Deviation; Min = Minimum; Max = Maximum.

Setting

The PATHI asked the survey participants to best describe the settings where they educate adults. The participants had three options. The options were

1. As a faculty, full-time or adjunct, in an institution of higher learning.
2. As an organizational trainer. This is my primary or secondary work responsibility within my organization.
3. Other settings.

Taking into consideration the setting in which the adult educator educates, as described in Table 7, it becomes evident that adult education experience varied greatly between different roles for some professions/academic disciplines such as education but not in others like business.

Table 7

Years of Adult Teaching Experience subdivided by Professional/Academic Discipline and Setting

Variable	Years
Business, Economics, Management, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	14.34
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	12.20
Other settings.	15.80
Construction, Engineering, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	11.89
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	12.04
Other settings.	13.38
Education, Vocational Training, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	19.06
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	10.86
Other settings.	12.00

(continued)

Variable	Years
Healthcare, Mental Health, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	12.33
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	11.08
Other settings.	15.53
Information Technology, Computer Science, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	12.10
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	9.36
Other settings.	9.23
Law, Criminal Justice, Military Sciences, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	13.23
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	16.44
Other settings.	12.25
Natural Sciences, Physical Sciences, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	14.56
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	12.50
Other settings.	12.00
Social Sciences, Humanities, Religion, Liberal Arts, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	13.88
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	13.04
Other settings.	9.13

The participants were allowed to make multiple selections.

As table 8 shows, 152 of the participants described themselves as faculty, full-time or adjunct, in an institution of higher learning. 213 of the participants described themselves as an organizational trainer, being it a primary or secondary work responsibility within the participant's organization, and124 participants chose other settings. Though other settings were

not predefined, they may have included teaching adults in private or public organizational setting that were not institutions of higher learning or within the organization that the participant defined him or herself as an employee. Of the 393 total participants, 85 of the participants made multiple selections, while 308 participants chose only one setting.

Table 8

Setting within a Professional/Academic Discipline

	# of Participants
Business, Economics, Management, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	64
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	60
Other settings.	25
Construction, Engineering, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	2
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	20
Other settings.	16
Education, Vocational Training, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	16
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	20
Other settings.	16
Healthcare, Mental Health, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	21
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	31
Other settings.	25

(continued)

	# of Participants
Information Technology, Computer Science, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	5
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	32
Other settings.	12
Law, Criminal Justice, Military Sciences, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	9
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	24
Other settings.	9
Natural Sciences, Physical Sciences, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	7
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	12
Other settings.	5
Social Sciences, Humanities, Religion, Liberal Arts, and related fields	
As a faculty, full-time or adjunct, in an institution of higher learning.	28
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	14
Other settings.	16
Overall	
As a faculty, full-time or adjunct, in an institution of higher learning.	152
As an organizational trainer. This is my primary or secondary work responsibility within my organization.	213
Other settings.	124
Chose multiple settings	85

PALSI Results

Figure 3 in Chapter 3 demonstrated the scoring rubric that was used for analyzing individual component results. The components included: (I) learning orientation: questions 1 through 5; (II) learning design: questions 6 through 10; (III) how people learn: questions 11 through 15; (IV) learning methods: questions 16 through 20; (V) program development: questions 21 through 25; and (VI) program administration: questions 26 through 30. The tool

separated the individual components that made up the overall score, which was useful to the research since only sections I, II, III, and IV dealt directly with participant's teaching orientation, while components V and VI dealt primarily with the participant's opinion in regards to the administrative role in adult education. A score of 10 or less in any of the individual components suggested a pedagogical orientation in that component. A score of 20 and over showed an andragogical orientation. Scores between 10 and 20 represented a lack of commitment by the participant to either pedagogical or andragogical orientation. Summarily, a cumulative score of 60 or less in all of the individual components suggested a pedagogical orientation. A cumulative score of 120 and over showed an andragogical orientation. Scores between 60 and 120 represented a lack of commitment by the participant to either pedagogical or andragogical orientation (Knowles, 2005).

There were fifteen participants (3.8%) out of the 393 adult educators who scored below 61 points on the PALSI, classifying them as Pedagogical Oriented on the Knowles' rubric (Figure 2). There were 155 participants (39.4%) who scored over 120 points classifying them as Andragogical Oriented on the Knowles' rubric (Figure 2). The remaining 223 participants (56.7%) were classified as showing Lack of Commitment to an andragogical or pedagogical orientation on the Knowles' rubric (Figure 2).

Table 9 shows the mean scores and mean orientation for each component based on the professional/academic discipline that the adult educator teaches in, based on survey results. It is very important to note that these numbers only represent average results based on professional/academic discipline, and do not take into consideration any margins of error.

Table 9

PALSI Component 1 and 2 based on Professional/Academic Discipline

	Component #1 Mean Score	Component #1 Mean Orientation	Component #2 Mean Score	Component #2 Mean Orientation
Business, Economics, Management, and related fields (N=114)	19.80	Lack of Commitment	19.23	Lack of Commitment
Construction, Engineering, and related fields (N=36)	18.67	Lack of Commitment	18.53	Lack of Commitment
Education, Vocational Training, and related fields (N=45)	19.33	Lack of Commitment	19.69	Lack of Commitment
Healthcare, Mental Health, and related fields (N=63)	19.07	Lack of Commitment	19.06	Lack of Commitment
Information Technology, Computer Science, and related fields (N=45)	18.16	Lack of Commitment	18.09	Lack of Commitment
Law, Criminal Justice, Military Sciences, and related fields (N=33)	20.15	Andragogical	20.21	Andragogical
Natural Sciences, Physical Sciences, and related fields (N=16)	17.69	Lack of Commitment	17.13	Lack of Commitment
Social Sciences, Humanities, Religion, Liberal Arts, and related fields (N=41)	19.25	Lack of Commitment	19.18	Lack of Commitment

(continued)

	Component #3 Mean Score	Component #3 Mean Orientation	Component #4 Mean Score	Component #4 Mean Orientation
Business, Economics, Management, and related fields (N=114)	18.83	Lack of Commitment	19.25	Lack of Commitment
Construction, Engineering, and related fields (N=36)	18.69	Lack of Commitment	18.78	Lack of Commitment
Education, Vocational Training, and related fields (N=45)	19.18	Lack of Commitment	18.44	Lack of Commitment
Healthcare, Mental Health, and related fields (N=63)	18.96	Lack of Commitment	18.78	Lack of Commitment
Information Technology, Computer Science, and related fields (N=45)	18.07	Lack of Commitment	17.56	Lack of Commitment
Law, Criminal Justice, Military Sciences, and related fields (N=33)	19.97	Lack of Commitment	19.79	Lack of Commitment
Natural Sciences, Physical Sciences, and related fields (N=16)	16.94	Lack of Commitment	17.19	Lack of Commitment
Social Sciences, Humanities, Religion, Liberal Arts, and related fields (N=41)	18.43	Lack of Commitment	18.40	Lack of Commitment

(continued)

	Component #5 Mean Score	Component #5 Mean Orientation	Component #6 Mean Score	Component #6 Mean Orientation
Business, Economics, Management, and related fields (N=114)	18.83	Lack of Commitment	17.42	Lack of Commitment
Construction, Engineering, and related fields (N=36)	18.83	Lack of Commitment	17.72	Lack of Commitment
Education, Vocational Training, and related fields (N=45)	18.78	Lack of Commitment	17.67	Lack of Commitment
Healthcare, Mental Health, and related fields (N=63)	18.47	Lack of Commitment	17.64	Lack of Commitment
Information Technology, Computer Science, and related fields (N=45)	17.42	Lack of Commitment	17.35	Lack of Commitment
Law, Criminal Justice, Military Sciences, and related fields (N=33)	19.55	Lack of Commitment	17.94	Lack of Commitment
Natural Sciences, Physical Sciences, and related fields (N=16)	16.56	Lack of Commitment	16.75	Lack of Commitment
Social Sciences, Humanities, Religion, Liberal Arts, and related fields (N=41)	18.70	Lack of Commitment	16.80	Lack of Commitment

Summary

In this chapter, the research questions were answered. The descriptive statistics regarding the collection of responses was provided. A demographic summary demonstrated the breakdown

of the different professional/academic disciplines as a percentage of the total study, and the statistical breakdown off the settings in which knowledge transfer occurred being represented was also provided. Finally, descriptive statistics and correlational analysis was provided to show the relationships between the dependent and independent variables. The results showed no correlation between adult educators experience in the use of andragogy practices. The results also showed that the correlational or statistical relationship between adult educators' professional/academic discipline that adult educators teach in and the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions could not be established or derived; therefore, the results were deemed inconclusive.

Chapter 5 shall discuss the conclusions and recommendations based on the findings in this study. Additional suggestions for further research will also be covered.

Chapter 5

Conclusions, Implications, and Recommendations

The researcher of this quantitative correlational study collected data from 393 adult educators, who represented eight different professional/academic disciplines and between one and forty-seven years of adult teaching experience. The data was thoroughly analyzed through the use of SPSS software version 21. Statistical relationships were sought between adult educators' experience teaching adults, the adult educators' professional/academic discipline in which the adult educators teach, and the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. The data analysis and the answers to the individual research questions were provided in Chapter 4.

It is very important to note that the PALSI only measured opinions of the adult educators, and it did not evaluate the actual behavior of those adult educators when they are teaching adults. It is possible that the teaching style that the study participants demonstrate in the classroom is different from the one that the same participants revealed in this study. Further research would be necessary to resolve this overarching limitation.

Conclusions

The first research question asks if the adult educators' adult teaching experience relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. It was concluded that the adult educators' adult teaching experience does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

The second research question asks whether the adult educators' professional/academic discipline that adult educators teach in relate to the adult educators' use of andragogy practices to

facilitate the adult educators' knowledge transfer and exchange sessions. Based on the results described in Chapter 4, it was concluded that adult educators' professional/academic discipline that the adult educators teach in does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

The third research question asks if the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. It was concluded that the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Though the results did not confirm the originally sought statistical relationships between the two independent variables and the dependent variable, significant amount of data can be extrapolated from the results for in-depth analysis. Additionally, what the data did not show can also be considered valuable.

The in-depth analysis of the data showed that the adult educators, when segmented into the various professional/academic disciplines, fell into either the Lack of Commitment category or were in between the Lack of Commitment and the Andragogically Oriented categories. It is important to note that the data did not show any of the professional/academic disciplines falling into the Pedagogically Orientated category.

As a collective group, the participants have shown within the predefined statistical certainty their inclination against utilizing pedagogical methods when it comes to teaching

adults. It can be extrapolated that the adult educators who have completed the PALSI appreciate the uniqueness that the challenge of teaching adults brings.

Implications

First research question. The first research question asks if the adult educators' adult teaching experience relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. It was concluded that the adult educators' adult teaching experience does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Limitations. The study's limitations may have impacted the results and the interpretation of results. The limitation of relatively small sample size compared to the overall population may have skewed the results. Slavin & Smith (2009) state that systematic reviews of research that had sample sizes smaller than 250 tended to have a larger positive effect than studies with larger sample size. Though this study relied on a sample size of 393, this potential limitation should still be considered.

The lack of ability to assign truly random participants may have impacted the results (Chen & Popovich, 2002; B. Johnson & Christensen, 2012; Salkind, 2006; Vogt, 2005). Those participants who chose to take the survey may not be a true representative of the targeted population as only a small number of potential participants who were invited to take the survey actually took the survey. It could be argued that those participants that chose to participate may have answered differently from the general targeted population who chose not to participate in this study.

The process of inviting participants to take the survey also relied on common technologies such as LinkedIn, Facebook, email, and a university list server, that were not

available to all members of the target population. Not all members of the target population had access to such technologies, and therefore were unable to receive an invitation to take the survey.

Findings. The lack of positive or negative correlation between years of experience of teaching adults and the adoption of andragogy practices is significant. Had there been a positive correlation, where adult educators with more adult teaching experience showed higher adoption of andragogy practices, it could have been assumed that andragogy practices are naturally learned and adopted through adult teaching experience. Therefore, throughout the years of adult teaching experience, effective andragogic strategies would be learned and duplicated while ineffective strategies would naturally be rejected by the adult educator. The fact that such correlation was not established may signify that andragogy adoption does not come naturally, and that andragogical techniques need to be taught to the adult educators continuously throughout the adult educators' active careers. The andragogical training would have to be systemic, and built upon previous andragogic training and individual adult educators' knowledge.

The lack of negative correlation between years of experience teaching adults and the adoption of andragogy practices is also significant. A negative correlation would have shown that people with lesser adult teaching experience, which might have been then correlated to the age of the adult educator, were more naturally prone to utilizing andragogical techniques than their more experienced peers. This could have also signified that the more experienced, and possibly older, adult educators would benefit more from being trained in andragogical practices than their lesser experienced, and possibly younger, peers.

The lack of any found relationship between years of experience teaching adults in the adoption of andragogy practices signifies to the trainers of adult educators that they cannot

assume that the adult educators under the trainer's tutelage, regardless of adult educator' adult teaching experience, will naturally adopt or utilize andragogy practices. It becomes very important for trainers of adult educators to initially find out just where their particular pupils stand when it comes to the adoption of andragogy practices, and then use that knowledge to customize trainers of adult educators' own training materials. The utilization of PALSI is one method that the trainers of adult educators can use to get some kind of a feel for their learners' adoption of andragogical practices.

These findings lend support to the current literature. As previously stated in Chapter 2, the use of andragogy theory and approaches to train organizational employees has been studied in numerous industries (Birzer, 2003; Fornaciari & Lund Dean, 2014; Kessels & Poell, 2004; Martin & Woodside, 2009). The authors generally found that training the employees within the andragogical philosophical approach provided better results when measured by individual learners' satisfactions and utilization of the learned materials (Birzer, 2003; Kessels & Poell, 2004; Martin & Woodside, 2009). Additionally, those employees who were not only trained in the andragogical philosophical model framework but also were allowed to train others utilizing the andragogical framework have reported higher rates of success in knowledge transfer between employees (Fornaciari & Lund Dean, 2014; Kessels & Poell, 2004; Slayton & Mathis, 2010; Taylor & Laros, 2014). It therefore can be derived that human resource development trainers that educate adult educators may find it beneficial to continuously measure the adoption of andragogical principles by their adult educators, regardless of the adult educators' teaching experiences. It could be detrimental to the organization for the human resource development trainers to assume that any employee who has completed andragogical training and has experience educating adults has adopted andragogical principles. Therefore, it would be up to

the human resource development trainers to develop evaluative tools to measure the andragogic adoption by the organizational staff whose responsibility includes educating other adults.

Second research question. The second research question asks whether the adult educators' professional/academic discipline that adult educators teach in relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. Based on the results described in Chapter 4, it was concluded that adult educators' professional/academic discipline that the adult educators teach in does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Limitations. The study's limitations may have impacted the results and the interpretation of results of the second research question. Slavin & Smith (2009) state that systematic reviews of research that had sample sizes smaller than 250 tended to have a larger positive effect than studies with larger sample size. Since the sample size of each individual category of the adult educators' professional/academic discipline was smaller than 250, this limitation may have been affected by this reported tendency. However, there is no way of knowing whether it was actually affected.

As with the previous research question, the lack of ability to assign truly random participants may have impacted the results (Chen & Popovich, 2002; B. Johnson & Christensen, 2012; Salkind, 2006; Vogt, 2005). Those participants who chose to take the survey may not be a true representative of the targeted population as only a small number of those who were invited to take the survey actually took the survey. It is possible that those participants who have chosen to participate may have chosen to answer the survey questions differently than the general target population would have chosen. Additionally, the process of inviting participants to take the

survey also relied on common technologies such as LinkedIn, Facebook, email, and a university list server, that were not available to all members of the target population.

Findings. The data in Table 2 showed an undeniable similarity of scores between all eight different professional/academic disciplines. The fact that the data did not show any major outliers between the different professional/academic disciplines may possibly indicate that there is no single profession that is more likely to adapt andragogical, or pedagogical, practices than the others. For human resource development trainers responsible for training adult educators, this could mean that it is important to assume that no professional/academic disciplines are more andragogically oriented than others. A professional bias by the human resource development trainer could be detrimental. The findings show the importance for human resource development trainers to develop and utilize evaluative tools to measure the andragogic adoption by the organizational staff whose responsibility includes educating other adults, irrespective of the staff members' professional/academic disciplines.

These findings support and provide confirmation to the current literature regarding the importance of evaluating and training adult (Frey & Overfield, 2002; Gray, 2014; Hoq et al., 2010; Hyounae Min et al., 2013; Jackson, 2008; Kucsera & Svinicki, 2010; Woodard, 2007), educators without bias for the adult educators' professional/academic discipline. This finding is particularly valuable for organizations, such as institutions of higher learning, which employ significant number of external adult educators who educate adults in various professional/academic disciplines. As stated in Chapter 2, the literature has shown the external adult educators have become a mainstay in traditional and nontraditional institutions of higher learning (Caprio et al., 1998; Morton, 2012; Pearch & Marutz, 2005). In 2011, it was estimated that around half of all faculty members teaching at institutions of higher learning were adjunct

faculty (National Center for Education Statistics, 2011). While in community colleges and for-profit universities, adjunct faculty represent the vast majority of the teaching faculty (Caprio et al., 1998).

Third research question. The third research question asks if the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. It was concluded that the adult educators' professional/academic discipline that adult educators teach in, in conjunction with the adult educators' adult teaching experience, does not relate to the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions.

Limitations. As this research question is a conjunction of the first two research questions, its limitations include the combination of all of the previous two research questions limitations. This includes, but not limited to, small sample size and a not truly random sample.

Findings. As Table 3 showed, there was no relationship between the years of teaching experience and the use of andragogy practices when looking at each individual profession/academic discipline. This finding was to be expected since each of the two independent variables previously showed no relationship to the dependent variable. This finding supports the idea that has been discussed in the literature of the importance of human resources trainers to continuously provide andragogic training to the adult educators (Armstrong-Stassen & Templer, 2005; Bergmann, 2011; Beverly Geber, 1988; Birzer, 2004; Chan, 2010; Drew & Woodside, 2009; Frey & Overfield, 2002; Gigerenzer, 2004; Knowles, 2005; Minter, 2009; Moreillon, 2003; J. P. Murray, 2002; Sandlin, 2010; Tough & Knowles, 1985). This research

adds to the literature by showing that the andragogic training should be provided regardless of the adult educators' professional/academic discipline and years of experience teaching adults.

Recommendations for Organizational Leaders

The importance of understanding and appreciating the differences in learning styles of adults versus children, andragogy versus pedagogy, has been thoroughly discussed in previously published research (Drew & Woodside, 2009; Forrest III & Peterson, 2006; Knowles, 2005, 2005). Though andragogy, as a theory or practical approach to adult education, has its opponents (Geber, 1988; Kessels & Poell, 2004; Knowles, 2005; Wilson, 2004), there seems to be no disagreement about the importance of having an effective method of educating adults. Though not universally accepted, andragogy has significant support in the education and organizational training communities (Bambrick-Santoyo, 2013; Birzer, 2003; Butterworth, 1988; Filipe, Silva, Stulting, & Golnik, 2014; Fornaciari & Lund Dean, 2014; Kaupins, 1997; Kessels & Poell, 2004; Knowles, 2005; Martin & Woodside, 2009; Sandlin, 2010; Tough & Knowles, 1985). Though new theories regarding effectively training or educating adults arise (Bruer, 1999; Cranton, 1994; Kolb, 1981; Tough & Knowles, 1985), andragogy continues to present itself as one of the effective approaches to adult training or education (Birzer, 2004; Hatcher & Cutler-White, 2009; Knowles, 2005; Tough & Knowles, 1985).

Several generalizable recommendations can be made for organizational leaders who are responsible for employee development, or for training adults who are responsible for training or educating other adults, based on the results of this study. The first recommendation is to appreciate the fact that andragogy, just like other similar skills, needs continuous training in order to improve. It is recommended that Organizational leaders make sure that the organization provides andragogy training to the organizational trainers in a continuous fashion. On-the-job

experience does not seem to replace actual hands-on training when it comes to andragogy. It is recommended that organizational leaders not be blinded to the trainers' professional longevity, or assume that the trainer has already the necessary andragogy skills to be effective as a trainer or educator of adults. Continuous system of adult educators' performance oversight would be recommended.

The second recommendation to organizational leaders is to not assume that certain professions or academic disciplines are naturally prone to using andragogic theory or practices when compared to other professions or academic disciplines. Such bias towards or against a professional or academic discipline can lead to undesired results or a waste in limited organizational resources. It is recommended that organizational leaders systematically observe the trainers' usage of andragogic practices without prejudice or bias, as a form of quality control, in order to make sure that the trainers do utilize the necessary practices.

The third recommendation to organizational leaders is to make sure that andragogy is part of the general training curriculum for all new and veteran employees, and not just for those whose official job responsibilities includes training other employees or adults. Adults who are introduced to the andragogic principles are more likely to accept andragogic style of their own trainer during adult's own training (Birzer, 2003; Knowles, 2005; Wilson, 2004). Additionally, employees can unexpectedly find themselves in the position of an organizational trainer or adult educator through the course of employment without previously being provided with any additional andragogy training or guidance.

Recommendations for Future Research

The topic of development of adult educators is rich and dynamic in its nature. This study has added new findings that will hopefully benefit human resource development specialists

whose responsibility is to develop adult educators. This study's limited breadth and scope provided some answers, but it is humbled and overshadowed by the number of new questions that it raises that still need to be answered by future researchers.

It is recommended that future researchers research andragogic practices of each individual professional/academic discipline stated in this research. By increasing the population size of each individual group, clearer answers may become evident regarding acceptance of andragogical techniques and practices by each of the individual professional/academic discipline.

It is recommended that future researchers research the question of if there is any correlation between an adult educators' age, not just adult teaching experience, and their use of andragogic practices. This may shine a light if social elements such as generational experiences relate to an educator's adoption of andragogical practices.

This study did not filter out cultural background or social experience to the adoption of andragogy practices. It is recommended that future researchers consider researching whether adult educators of different cultural backgrounds, in different countries, or in specific setting such as prisons or hospitals have different rates of adoption of andragogy practices.

Summary

The effectiveness and importance of using andragogical practices when teaching, mentoring, or training adults has been researched extensively. The benefits of using andragogical practices by adult educators for the purpose of knowledge transfer between adults in organizational environments have been well-established. However, there are still significant gaps in literature when it comes to organizational educators' andragogical theory adoption. The researcher of this study strived to fill in a little bit of those gaps in the literature.

The challenges for organizational leaders to train adult educators who will then go on to train other adults has been established in the prior chapters. Though this research study does not attempt to remediate those challenges, it provides organizational leaders with data collection tools like the PALSI and PATHI. Additionally, this research provided valuable insight to organizational and human resource development leaders in that there is no found relationship among the adult educators' professional/academic discipline that adult educators teach in, the adult educators' adult teaching experience, and the adult educators' use of andragogy practices to facilitate the adult educators' knowledge transfer and exchange sessions. Organizational and human resource development leaders should consider these findings when evaluating their own individual organization's current training strategies for the organization's employees whose responsibility include transferring knowledge to other adults in an organizational setting.

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Appendix A: Personal Adult Teaching History Inventory

Personal Adult Teaching History Inventory

1) In which professional/academic discipline do you primarily teach, train, or coach? (Choose one.)

A. Business, Economics, Management, and related fields
B. Construction, Engineering, and related fields
C. Education, Vocational Training, and related fields
D. Healthcare, Mental Health, and related fields
E. Information Technology, Computer Science, and related fields
F. Law, Criminal Justice, Military Sciences, and related fields
G. Natural Sciences, Physical Sciences, and related fields
H. Social Sciences, Humanities, Religion, Liberal Arts, and related fields

If you are not sure which professional/academic discipline you primarily teach in, click here for a full description of each classification and its sub-classifications.

2) Approximately how many years have you been educating adults in a corporate, university or college, or any other type of organizational setting? _____

3) In what setting do you educate adults? (Choose all that apply.)

A. As a faculty, full-time or adjunct, in an institution of higher learning.
B. As an organizational trainer. This is my primary or secondary work responsibility within my organization.
C. Other settings.

Appendix B: Personal Adult Learning Style Inventory

Personal Adult Learning Style Inventory
Developed by Dr. Malcolm S. Knowles

(Author's note: This survey shall be administered online via Survey Monkey.)
Directions: Click on the one answer that best represents your opinion to each set of statements.

		I agree fully with statement A	**I agree more with statement A than B**	**I do not agree with either statement A or B**	**I agree more with statement B than A**	**I agree fully with statement B**	
	Statement A						**Statement B**
1	There are a number of important differences between the youths and adults as learners that can relate to the learning process.	O	O	O	O	O	For the most part adults and youths do not differ greatly in terms of the learning process.
2	Effective learning/training design puts equal weight on content and process plans.	O	O	O	O	O	Effective learning/training design is concerned with content first and process second.
3	Effective facilitator/trainers model self-directed learning in their own behavior, both within and outside the learning sessions.	O	O	O	O	O	Effective facilitator/trainers show learners that they, the facilitator/trainers, are content experts, with the knowledge and skills to be "in the driver's seat."
4	Effective learning/training is based on sound methods for involving learners in assessing their own learning needs.	O	O	O	O	O	Effective learning/training rests on the trainer's use of standard, valid methods for assessing learners' needs.
5	Client system representatives must be involved in the planning of learning/training programs.	O	O	O	O	O	It is the program developer's responsibility to provide clients with clear and detailed plans.
6	Program administrators must plan, work and shared decision-making with client system members	O	O	O	O	O	Program administrators must have full responsibility and be held accountable for their plans and decisions.

7	The role of the facilitator/trainer is best seen as that of a facilitator and resource person for self-directed learners.	O	O	O	O	O	The role of the facilitator/trainer is to provide the most current and accurate information possible to the learners.
8	Effective learning designs take into account individual differences among learners.	O	O	O	O	O	Effective learning designs are those that apply broadly to most or all learners.
9	Effective facilitator/trainers are able to create a variety of learning experiences for helping trainees develop self-directed learning skills.	O	O	O	O	O	Effective facilitator/trainers concentrate on preparing learning/training sessions that effectively convey specific content.
10	Successful learning/training designs incorporate a variety of experiential learning methods.	O	O	O	O	O	Successful learning/training designs are grounded in carefully developed formal presentations.
11	Client systems members should be involved in developing needs assessment instruments and procedures that provide the data for program planning.	O	O	O	O	O	Learning/training program developers are responsible for designing and using sound needs assessment instruments and procedures to generate valid data for program planning.
12	Program administrators must involve their clients in defining, modifying and applying financial policies and practices related to learning/training programs.	O	O	O	O	O	Program administrators must be able to explain clearly to their clients their financial policies and practices related to learning/training programs.
13	Effective facilitator/trainers must take into account recent research findings concerning the unique characteristics of adults as learners.	O	O	O	O	O	Effective facilitator/trainers must use the respected, traditional learning theories as they apply to all learners.

14	Effective learning requires a physical and physiological climate of mutual respect, trust, openness, supportiveness and security.	O	O	O	O	O	Effective learning depends on learners recognizing and relying on the expert knowledge and skills of the trainer.
15	It is important to help learners understand the difference between didactic instruction and self-directed learning.	O	O	O	O	O	Learners should concentrate on the content of learning/training rather than the method or methods of instruction.
16	Effective facilitator/trainers are able to get learners involved in the learning/training.	O	O	O	O	O	Effective facilitator/trainers are able to get, focus and maintain the learners' attention.
17	Client system representatives need to be involved in revising and adapting learning/training programs, based on continual needs assessment.	O	O	O	O	O	Learning/training program developers must develop and use ongoing needs assessment data, to revise and adapt programs to better meet client needs.
18	Program administrators must involve organizational decision-makers in interpreting and applying modern approaches to adult education and learning/training.	O	O	O	O	O	Program administrators must be able to explain clearly and convincingly modern approaches to adult education and learning/training to organizational policy makers.
19	Effective learning requires the facilitator/trainer to assess and control the effects that factors such as groups, organizations and cultures have on the learners.	O	O	O	O	O	Effective learning requires the facilitator/trainer to isolate learners from the possible effect of outside factors such as groups, organizations or cultures.
20	Effective learning/training design engages the learners in a responsible self-diagnosis of their learning needs.	O	O	O	O	O	Effective learning/training can take place only after experts have diagnosed the real learning needs of learners.

21	Effective facilitator/trainers involve learners in planning, implementing and evaluating their own learning activities.	O	O	O	O	O	Effective facilitator/trainers accept responsibility for the planning, implementation and evaluation of the learning activities they direct.
22	Use of group dynamics principles and small group discussion techniques is critical for effective learning.	O	O	O	O	O	Effective learning centers on one-to-one relationship between the facilitator/trainer and the learner.
23	Program developers must help design and use program planning mechanisms such as client system advisory committees, task forces and others.	O	O	O	O	O	Effective program planning is the result of the program developer's efforts to interpret and to use the client system data they collect.
24	Program administrators must collaborate with organizational members to experiment with program innovations, jointly assessing outcomes and effectiveness.	O	O	O	O	O	Program administrators must take the initiative to experiment with program innovations and assess their outcomes and effectiveness.
25	In preparing a learning/training activity the facilitator/trainer should review those theories of learning relevant for particular adult learning situations.	O	O	O	O	O	In preparing a learning/training activity, the facilitator/trainer should rely on certain basic assumptions about the learning process that have been proven to be generally true.
26	Effective learning/training engages learners in formulating objectives that are meaningful to them.	O	O	O	O	O	Effective learning/training requires that the facilitator/trainer clearly defined goals that learners are expected to attain.
27	Effective facilitator/trainers begin the learning process by engaging adult learners in self-diagnosis of their own learning needs.	O	O	O	O	O	Effective facilitator/trainers start by making a careful diagnosis of the participants learning needs.
28	Learners must be involved in planning and developing evaluation instruments and procedures and in carrying	O	O	O	O	O	Program developers are responsible for designing and implementing sound evaluation plans.

	out the evaluation of learning processes and outcomes.						
29	Program developers must involve client system members in designing and using learning/training program evaluation plans.	O	O	O	O	O	Program developers are responsible for designing and implementing sound evaluation plans.
30	Program administrators must work with organizational members and decision-makers to analyze and interpret legislation affecting organizational learning/training programs.	O	O	O	O	O	Program administrators are responsible for making and presenting to organizational authorities analysis of legislation that affects organizational learning/training programs.

Appendix C: Informed Consent Form

Informed Consent Form

INFORMED CONSENT: PARTICIPANTS 18 YEARS OF AGE AND OLDER (E-SIGNATURE)

Dear participant,
My name is Eugene Kaufman and I am a student at the University of Phoenix working on a Doctor of Management degree. I am doing a research study entitled CORRELATION STUDY OF ADULT EDUCATORS' FACILITATION EXPERIENCE, PROFESSIONAL/ACADEMIC DISCIPLINE, AND ANDRAGOGY PRACTICES. The purpose of the research study is to research the use of andragogy theory amongst professionals who are responsible to educate or train other adults.

Your participation will involve two surveys. Those surveys are: (a) three question Personal Teaching History survey that was created by the researcher, and (b) Personal Adult Learning Style Inventory that has 30 questions. Total time commitment is expected to be less than 8 minutes. Once you start, you can withdraw from the study at any time without any penalty or loss of benefits. The results of the research study may be published but your identity will remain confidential and your name will not be made known to any outside party.

In this research, there are no foreseeable risks to you.

Although there may be no direct benefit to you, a possible benefit from your being part of this study is receiving an electronic copy of my completed published dissertation and an explanation of the findings of your individual survey results.

If you have any questions about the research study, please call me at 702-622-5628 or email me at ekaufman@email.phoenix.edu. For questions about your rights as a study participant, or any concerns or complaints, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

As a participant in this study, you should understand the following:

1. You may decide not to be part of this study or you may want to withdraw from the study at any time. If you want to withdraw, you can do so by contacting me by email at ekaufman@email.phoenix.edu.
2. Your identity will be kept confidential.
3. Eugene Kaufman, the researcher, has fully explained the nature of the research study and has answered all of your questions and concerns.
4. Data will be kept in a secure and locked area. The data will be kept for three years, and then destroyed.

5. The results of this study may be published.

By signing this form, you agree that you understand the nature of the study, the possible risks to you as a participant, and how your identity will be kept confidential. When you sign this form, this means that you are 18 years old or older and that you give your permission to volunteer as a participant in the study that is described here.

Entering your name in this field with be considered as "original" e-signature of the research participant. _____

INFORMED CONSENT: PARTICIPANTS 18 YEARS OF AGE AND OLDER (WET SIGNATURE)

Dear participant,
My name is Eugene Kaufman and I am a student at the University of Phoenix working on a Doctor of Management degree. I am doing a research study entitled Correlation study of adult educators' facilitation experience, professional/academic discipline, and andragogy practices. The purpose of the research study is to research the use of andragogy theory amongst professionals who are responsible to educate or train other adults.

Your participation will involve two surveys. Those surveys are: (a) three question Personal Teaching History survey that was created by the researcher, and (b) Personal Adult Learning Style Inventory that has 30 questions. Total time commitment is expected to be less than 8 minutes. Once you start, you can withdraw from the study at any time without any penalty or loss of benefits. The results of the research study may be published but your identity will remain confidential and your name will not be made known to any outside party.

In this research, there are no foreseeable risks to you.

Although there may be no direct benefit to you, a possible benefit from your being part of this study is receiving an electronic copy of my completed published dissertation and an explanation of the findings of your individual survey results.

If you have any questions about the research study, please call me at 702-622-5628 or email me at ekaufman@email.phoenix.edu. For questions about your rights as a study participant, or any concerns or complaints, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

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5. The results of this study may be published.

By signing this form, you agree that you understand the nature of the study, the possible risks to you as a participant, and how your identity will be kept confidential. When you sign this form, this means that you are 18 years old or older and that you give your permission to volunteer as a participant in the study that is described here.

Signature of the research participant _____ #: _____

Signature of the researcher _____ Date _____

Appendix D: Withdrawal From Study Instructions Letter

Withdrawal From Study Instructions

Dear Study Participant,

Participation in this study is completely voluntary. If at any time you wish to have your survey answers be withdrawn from this study, you may withdraw at any time for any reason. There are no penalties for withdrawing.

You may submit to have your survey results withdrawn by either:

1) Sending an email to: ekau[redacted]
2) Calling: (702) 6[redacted]
3) Sending a text message to: (702) 62[redacted]

Please state the following in your message: "Withdraw from study. [Your name.]"

Thank you,
Eugene Kaufman
Study Researcher

Appendix E: Permission to use PALSI

CHAPTER 17

Personal Adult Learning Style Inventory

Developed by Dr. Malcolm S. Knowles

Use the following key:

A = I agree fully with statement A
A>B = I agree more with statement A than B
NANB = I do not agree with either statement A or B
B>A = I agree more with statement B than A
B = I agree fully with statement B

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Note: Permission is granted to use this inventory without limitation.

Appendix F: Integrated Postsecondary Education Data System (IPEDS) classifications

Primary classifications key

B	Business, Economics, Management, and related fields.
C	Construction, Engineering, and related fields.
E	Education, Vocational Training, and related fields.
H	Healthcare, Mental Health, and related fields.
I	Information Technology, Computer Science, and related fields.
L	Law, Criminal Justice, Military Sciences, and related fields.
N	Natural Sciences, Physical Sciences, and related fields.
S	Social Sciences, Humanities, Religion, Liberal Arts, and related fields.

US Department of Education: National Center for Education Statistics' Classification of Instructional Programs

S	Area, Ethnic, Cultural, Gender, and Group Studies.
E	Basic Skills and Developmental/Remedial Education.
H	Biological and Biomedical Sciences.
B	Business, Management, Marketing, and Related Support Services.
S	Citizenship Activities.
S	Communication, Journalism, and Related Programs.
I	Communications Technologies/Technicians and Support Services.
I	Computer and Information Sciences and Support Services.
C	Construction Trades.
E	Education.
C	Engineering Technologies and Engineering-Related Fields.
C	Engineering.
S	English Language and Literature/Letters.
H	Family and Consumer Sciences/Human Sciences.
S	Foreign Languages, Literatures, and Linguistics.
H	Health Professions and Related Programs.
H	Health-Related Knowledge and Skills.
E	High School/Secondary Diplomas and Certificates.
S	History.
L	Homeland Security, Law Enforcement, Firefighting and Related Protective Services.
S	Interpersonal and Social Skills.
L	Legal Professions and Studies.
S	Leisure and Recreational Activities.
S	Liberal Arts and Sciences, General Studies and Humanities.
S	Library Science.

I	Mathematics and Statistics.
E	Mechanic and Repair Technologies/Technicians.
L	Military Science, Leadership and Operational Art.
L	Military Technologies and Applied Sciences.
S	Parks, Recreation, Leisure, and Fitness Studies.
E	Personal and Culinary Services.
E	Personal Awareness and Self-Improvement.
S	Philosophy and Religious Studies.
N	Physical Sciences.
C	Precision Production.
H	Psychology.
S	Public Administration and Social Service Professions.
E	Science Technologies/Technicians.
S	Social Sciences.
S	Theology and Religious Vocations.
C	Transportation and Materials Moving.
S	Visual and Performing Arts.